

RESEARCH AND EXPERIMENTAL DEVELOPMENT AUSTRALIA

HIGHER EDUCATION ORGANISATIONS

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INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Kirsty Rothenbury on Perth (08) 9360 5382.

NOTES

CHANGES IN THIS ISSUE Extensive changes have been made to the format and content of this publication.

Cross-classifications of data included in previous issues may be available on request.

DATA QUALITY When interpreting the results in this publication it is important to take into account

factors that may affect the reliability of estimates. These factors are described in the

Technical Note.

Data presented in this publication may subsequently be revised.

ABBREVIATIONS \$'000 thousand dollars

\$m million dollars

ABS Australian Bureau of Statistics

ACT Australian Capital Territory

Aust. Australia

GDP gross domestic product

GSP gross state product

HERD higher education expenditure on R&D

NSW New South Wales

NT Northern Territory

OECD Organisation for Economic Co-operation and Development

PYE person years of effort

Qld Queensland

R&D research and experimental development

RFCD research fields, courses and disciplines

SA South Australia

SEO socio-economic objective

Tas. Tasmania

Vic. Victoria

WA Western Australia

Dennis Trewin

Australian Statistician

MAIN FEATURES

EXPENDITURE ON
RESEARCH AND
EXPERIMENTAL
DEVELOPMENT (R&D)

Higher education expenditure on R&D (HERD) in Australia in 2004 was 4,283 million. This represented an increase of 24.9% in current price terms over 2002 and 18.0% in chain volume terms.

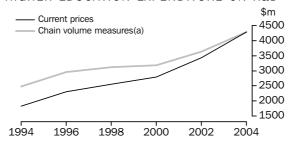
RESOURCES DEVOTED TO R&D

• • • • • • • • • • • • • • • • • • • •	• • • • •	• • • • • • •	• • • • • •	• • • • • • •		• • • • • • •	• • • • • •
		1994	1996	1998	2000	2002	2004
Expenditure on R&D							
Current prices	\$m	1 830	2 308	2 555	2 790	3 430	4 283
Chain volume measures(a)	\$m	2 480	2 962	3 121	3 179	3 631	4 283
Human resources devoted to R&D	PYE	40 096	42 739	45 502	46 287	49 612	56 809

⁽a) The reference year for chain volume measures is 2004. See paragraph 14 of the Explanatory Notes for details.

Over the ten years to 2004, HERD increased at an average annual rate of 13.4% in current price terms and 7.3% in chain volume terms.

HIGHER EDUCATION EXPENDITURE ON R&D

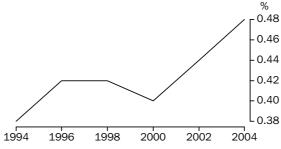


(a) Reference year for chain volume measures is 2004. See paragraph 14 of the Explanatory Notes for details.

Proportion of GDP

HERD as a proportion of gross domestic product (GDP) increased from 0.44% in 2002 to 0.48% in 2004.

HERD AS A PROPORTION OF GDP(a)



(a) See paragraph 2 of the Explanatory Notes for details.

Proportion of GDP continued

The following table shows HERD/GDP ratios for selected OECD countries.

HERD/GDP RATIOS OF OECD COUNTRIES

	2000	2001	2002	2003	2004
	%	%	%	%	%
Sweden	na	0.85	na	0.88	na
Canada	0.55	0.59	0.65	0.69	0.73
Finland	0.60	0.61	0.66	0.67	na
Switzerland	0.59	na	0.64	na	na
Iceland	0.45	0.58	0.51	0.63	na
Denmark	0.45	0.45	0.58	0.60	na
Netherlands	0.53	0.51	0.52	na	na
Norway	na	0.41	0.45	0.48	na
Australia	0.40	na	0.44	na	0.48
Japan	0.43	0.44	0.43	0.43	na
Turkey	0.39	0.43	0.43	na	na
Germany	0.39	0.40	0.42	0.43	0.41
France	0.40	0.42	0.42	0.42	0.41
United Kingdom	0.38	0.40	0.42	0.40	na
Belgium	0.41	0.42	0.40	0.40	na
Italy	0.33	0.36	0.38	na	na
United States of America	0.31	0.33	0.36	0.37	0.36
New Zealand	na	0.35	na	0.33	na
Spain	0.27	0.28	0.29	0.32	na
Ireland	0.23	0.24	0.25	0.30	0.33
Portugal	0.30	0.31	0.30	0.30	na
Greece	na	0.29	na	0.30	na
Korea	0.27	0.27	0.26	0.27	na
Hungary	0.19	0.24	0.26	0.26	0.22
Czech Republic	0.18	0.19	0.19	0.19	0.19
Poland	0.21	0.21	0.20	0.18	na
Mexico	0.11	0.12	na	na	na
Slovak Republic	0.06	0.06	0.05	0.08	0.11

na not available

Source: Main Science and Technology Indicators, 2005/2, OECD, Paris, 2005

Type of expenditure

In 2004, HERD was comprised of \$4,007.7 million in Current expenditure and \$275.1 million in Capital expenditure. As in 2002, the largest component of HERD in 2004 was Labour costs, which totalled \$1789.2 million (41.8% of HERD).

Source of funds

The majority of HERD in 2004 was sourced from General university funds (\$2,964.6 million or 69.2% of HERD) and Australian competitive research grants (\$739.6 million or 17.3%). These were also the major sources of funds in 2002.

Type of activity

In 2004, 40.8% of HERD (\$1745.6 million) was directed towards Applied research, 28.7% (\$1229.8 million) to Pure basic research, and 22.9% (\$978.8 million) to Strategic basic research. The remaining 7.7% of HERD (\$328.6 million) was comprised of Experimental development. The distribution of HERD across types of activity was largely unchanged from 2002.

Research fields

Almost half (46.9%) of HERD in 2004 was devoted to research in the fields of Medical and health sciences (\$1,082.4 million), Engineering and technology (\$473.9 million) and Biological sciences (\$451.0 million).

MAIN FEATURES continued

Socio-economic objectives

More than a quarter (27.9% or \$1,197.0 million) of HERD in 2004 was directed at Health related socio-economic objectives (SEOs). This included the understanding and treatment of clinical diseases and conditions and the provision of public health services.

The next most prevalent SEO was Non-oriented research, which accounted for 20.0% (\$855.3 million) of HERD. This included R&D contributing to the general advancement of knowledge without having a specific application.

There was little change in the distribution of expenditure across SEOs between 2002 and 2004.

State and territory

As in previous years, the majority of HERD (69.1%) in 2004 was located in New South Wales (\$1,192.8 million), Victoria (\$1,052.6) and Queensland (\$715.6 million).

Between 2002 and 2004, New South Wales recorded the largest growth HERD in absolute terms (up \$200.9 million or 20.3%), while Western Australia recorded the fastest rate of growth (up 49.4% or \$146.2 million). All states and territories recorded increases in their expenditure on R&D as a proportion of gross state product (GSP).

HERD AS A PROPORTION OF GSP(a), by location

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT
	%	%	%	%	%	%	%	%
2002	0.36	0.44	0.43	0.48	0.35	0.50	0.30	2.18
2004	0.39	0.47	0.45	0.54	0.44	0.52	0.32	2.39

⁽a) See paragraph 2 of the Explanatory Notes for details.

HUMAN RESOURCES DEVOTED TO R&D Australian higher education organisations devoted a total of 56,809 person years of effort to R&D in 2004, up 14.5% from 49,612 in 2002. Most of the human resources devoted to R&D in 2004 were Postgraduate students (57.2%) and Academic staff (26.8%), with the remainder being Other staff who directly supported R&D.

As with HERD, New South Wales, Victoria and Queensland accounted for the majority (71.8%) of person years of effort devoted to R&D in 2004.

${\tt EXPENDITURE\ ON\ R\&D,\ by\ location-by\ type\ of\ expenditure}$

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
			200	4					
Capital expenditure									
Land, buildings & other structures	3 635	8 937	37 068	1 216	16 942	315	966	21 924	91 003
Other	50 640	44 737	36 351	15 013	18 318	5 483	1 063	12 455	184 059
Total	54 275	53 674	73 419	16 229	35 259	5 798	2 029	34 379	275 062
Current expenditure									
Labour costs	518 900	430 282	302 008	122 460	181 527	46 825	12 553	174 603	1 789 158
Scholarships	108 942	73 851	48 861	20 943	21 193	8 577	3 188	30 283	315 839
Other	510 699	494 803	291 286	165 751	204 303	22 473	15 252	198 155	1 902 723
Total	1 138 542	998 936	642 155	309 154	407 023	77 874	30 994	403 041	4 007 719
Total	1 192 817	1 052 611	715 574	325 383	442 283	83 672	33 022	437 420	4 282 781
•••••	• • • • • • • •	• • • • • • • • •	• • • • • • • •	• • • • • • • •	• • • • • • • • •	• • • • • • • •	• • • • • • •	• • • • • • • •	• • • • • • • •
	• • • • • • • • •	• • • • • • • •	200	2	• • • • • • • •	• • • • • • •	• • • • • • •	• • • • • • • •	• • • • • • • •
Capital expenditure	• • • • • • • • •		200	2		• • • • • • •	•••••		• • • • • • • •
Capital expenditure Land, buildings & other structures	5 893	18 652	200 87 353	718	5 446	1 199	740	11 217	131 220
·	5 893 47 571	18 652 41 220			5 446 22 090	1 199 3 688	740 1 109	11 217 12 098	131 220 176 696
Land, buildings & other structures			87 353	718					
Land, buildings & other structures Other	47 571	41 220	87 353 38 767	718 10 154	22 090	3 688	1 109	12 098	176 696
Land, buildings & other structures Other Total	47 571	41 220	87 353 38 767	718 10 154	22 090	3 688	1 109	12 098	176 696
Land, buildings & other structures Other Total Current expenditure	47 571 53 464	41 220 59 872	87 353 38 767 126 120	718 10 154 10 872	22 090 27 535	3 688 4 887	1 109 1 849	12 098 23 315	176 696 307 916
Land, buildings & other structures Other Total Current expenditure Labour costs	47 571 53 464 427 959	41 220 59 872 359 941	87 353 38 767 126 120 202 193	718 10 154 10 872	22 090 27 535 140 587	3 688 4 887 38 210	1 109 1 849 10 201	12 098 23 315 154 665	176 696 307 916 1 436 779
Land, buildings & other structures Other Total Current expenditure Labour costs Scholarships	47 571 53 464 427 959 72 236	41 220 59 872 359 941 70 119	87 353 38 767 126 120 202 193 36 906	718 10 154 10 872 103 023 16 954	22 090 27 535 140 587 14 697	3 688 4 887 38 210 7 150	1 109 1 849 10 201 3 439	12 098 23 315 154 665 15 786	176 696 307 916 1 436 779 237 286
Land, buildings & other structures Other Total Current expenditure Labour costs Scholarships Other	47 571 53 464 427 959 72 236 438 225	41 220 59 872 359 941 70 119 373 242	87 353 38 767 126 120 202 193 36 906 209 065	718 10 154 10 872 103 023 16 954 127 107	22 090 27 535 140 587 14 697 113 298	3 688 4 887 38 210 7 150 17 467	1 109 1 849 10 201 3 439 11 840	12 098 23 315 154 665 15 786 157 370	176 696 307 916 1 436 779 237 286 1 447 615

${\tt EXPENDITURE~ON~R\&D,~by~location-by~type~of~expenditure:} \ {\tt proportions}$

						_			_
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	%	%	%	%	%	%	%	%	%
		2	004						
		_							
Capital expenditure									
Land, buildings & other structures	0.3	0.8	5.2	0.4	3.8	0.4	2.9	5.0	2.1
Other	4.2	4.3	5.1	4.6	4.1	6.6	3.2	2.8	4.3
Total	4.6	5.1	10.3	5.0	8.0	6.9	6.1	7.9	6.4
Current expenditure									
Labour costs	43.5	40.9	42.2	37.6	41.0	56.0	38.0	39.9	41.8
Scholarships	9.1	7.0	6.8	6.4	4.8	10.3	9.7	6.9	7.4
Other .	42.8	47.0	40.7	50.9	46.2	26.9	46.2	45.3	44.4
Total	95.4	94.9	89.7	95.0	92.0	93.1	93.9	92.1	93.6
Tatal	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0		• • • • •	100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0		100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Capital expenditure	100.0		• • • • •	100.0	100.0	100.0	100.0	100.0	100.0
•••••	100.0 0.6		• • • • •	0.3	1.8	1.8	100.0 2.7	3.2	3.8
Capital expenditure	• • • • •	2	002	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • •
Capital expenditure Land, buildings & other structures	0.6	2.2	15.2	0.3	1.8	1.8	2.7	3.2	3.8
Capital expenditure Land, buildings & other structures Other Total	0.6 4.8	2.2 4.8	15.2 6.8	0.3	1.8 7.5	1.8 5.4	2.7 4.1	3.2 3.4	3.8 5.2
Capital expenditure Land, buildings & other structures Other Total Current expenditure	0.6 4.8 5.4	2.2 4.8 6.9	15.2 6.8 22.0	0.3 3.9 4.2	1.8 7.5 9.3	1.8 5.4 7.2	2.7 4.1 6.8	3.2 3.4 6.6	3.8 5.2 9.0
Capital expenditure Land, buildings & other structures Other Total Current expenditure Labour costs	0.6 4.8 5.4	2.2 4.8 6.9	15.2 6.8 22.0	0.3 3.9 4.2	1.8 7.5 9.3	1.8 5.4 7.2	2.7 4.1 6.8	3.2 3.4 6.6	3.8 5.2 9.0
Capital expenditure Land, buildings & other structures Other Total Current expenditure Labour costs Scholarships	0.6 4.8 5.4 43.1 7.3	2.2 4.8 6.9 41.7 8.1	15.2 6.8 22.0 35.2 6.4	0.3 3.9 4.2 39.9 6.6	1.8 7.5 9.3 47.5 5.0	1.8 5.4 7.2 56.4 10.6	2.7 4.1 6.8 37.3 12.6	3.2 3.4 6.6 44.0 4.5	3.8 5.2 9.0 41.9 6.9
Capital expenditure Land, buildings & other structures Other Total Current expenditure Labour costs Scholarships Other	0.6 4.8 5.4 43.1 7.3 44.2	2.2 4.8 6.9 41.7 8.1 43.2	15.2 6.8 22.0 35.2 6.4 36.4	0.3 3.9 4.2 39.9 6.6 49.3	1.8 7.5 9.3 47.5 5.0 38.3	1.8 5.4 7.2 56.4 10.6 25.8	2.7 4.1 6.8 37.3 12.6 43.3	3.2 3.4 6.6 44.0 4.5 44.8	3.8 5.2 9.0 41.9 6.9 42.2
Capital expenditure Land, buildings & other structures Other Total Current expenditure Labour costs Scholarships	0.6 4.8 5.4 43.1 7.3	2.2 4.8 6.9 41.7 8.1	15.2 6.8 22.0 35.2 6.4	0.3 3.9 4.2 39.9 6.6	1.8 7.5 9.3 47.5 5.0	1.8 5.4 7.2 56.4 10.6	2.7 4.1 6.8 37.3 12.6	3.2 3.4 6.6 44.0 4.5	3.8 5.2 9.0 41.9 6.9



EXPENDITURE ON R&D, by location—by source of funds

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
	• • • • • • • •	• • • • • • • •				• • • • • • •			
			2004	ļ					
Australian competitive grants									
Commonwealth schemes	188 694	173 887	96 286	62 279	97 284	17 277	4 096	64 894	704 698
Other schemes	8 684	16 742	415	2 893	4 171	542	1 094	397	34 939
Total	197 378	190 629	96 702	65 172	101 455	17 819	5 191	65 292	739 637
rotar	137 370	130 023	30 702	03 172	101 400	17 013	3 131	00 202	100 001
General university funds(a)	842 047	689 471	511 917	216 032	270 963	54 257	26 111	353 822	2 964 619
State & local government	24 757	37 950	31 038	16 052	28 421	4 821	1 654	3 432	148 124
Business	65 552	84 926	44 756	16 424	22 445	5 038	25	4 003	243 169
Donations, bequests & foundations	12 837	16 777	14 461	4 897	3 013	1 338	_	863	54 185
Other Australian	262	4 114	2	_	_	36	_	264	4 679
Overseas	49 984	28 744	16 698	6 807	15 986	363	42	9 745	128 368
Total	4 400 04=					00.000			
iotai	1 192 817	1 052 611	715 574	325 383	442 283	83 672	33 022	437 420	4 282 781
iotai	1 192 817	1 052 611	715 574	325 383	442 283	83 672	33 022	437 420	4 282 781
	1 192 817	1 052 611	715 574 2002	• • • • • • • •	442 283	83 672	33 022	437 420	4 282 781
Australian competitive grants	1 192 817	1 052 611		• • • • • • • •	442 283	83 672	33 022	437 420	4 282 781
• • • • • • • • • • • • • • • • • • • •	139 355	137 531		• • • • • • • •	442 283 58 387	83 672 	4 400	437 420 32 742	507 405
Australian competitive grants	• • • • • • •	• • • • • • • •	2002		• • • • • •	• • • • • •		• • • • • •	• • • • • • •
Australian competitive grants Commonwealth schemes	139 355	137 531	2002	58 064	58 387	15 646	4 400	32 742	507 405
Australian competitive grants Commonwealth schemes Other schemes Total	139 355 4 308 143 663	137 531 5 551 143 082	2002 61 280 456 61 736	58 064 501 58 565	58 387 1 317 59 704	15 646 97 15 743	4 400 5 4 405	32 742 279 33 021	507 405 12 514 519 919
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a)	139 355 4 308 143 663 716 444	137 531 5 551 143 082 587 346	2002 61 280 456 61 736 427 957	58 064 501 58 565 158 185	58 387 1 317 59 704 182 193	15 646 97 15 743 40 696	4 400 5 4 405 21 572	32 742 279 33 021 296 094	507 405 12 514 519 919 2 430 488
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government	139 355 4 308 143 663 716 444 18 117	137 531 5 551 143 082 587 346 25 699	2002 61 280 456 61 736 427 957 17 797	58 064 501 58 565 158 185 11 019	58 387 1 317 59 704 182 193 23 100	15 646 97 15 743 40 696 6 288	4 400 5 4 405 21 572 113	32 742 279 33 021 296 094 2 360	507 405 12 514 519 919 2 430 488 104 494
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government Business	139 355 4 308 143 663 716 444 18 117 38 175	137 531 5 551 143 082 587 346 25 699 65 132	2002 61 280 456 61 736 427 957 17 797 28 089	58 064 501 58 565 158 185 11 019 19 970	58 387 1 317 59 704 182 193 23 100 11 318	15 646 97 15 743 40 696 6 288 2 950	4 400 5 4 405 21 572 113 1 240	32 742 279 33 021 296 094 2 360 7 219	507 405 12 514 519 919 2 430 488 104 494 174 093
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government Business Donations, bequests & foundations	139 355 4 308 143 663 716 444 18 117 38 175 10 710	137 531 5 551 143 082 587 346 25 699 65 132 17 746	2002 61 280 456 61 736 427 957 17 797 28 089 19 373	58 064 501 58 565 158 185 11 019 19 970 4 070	58 387 1 317 59 704 182 193 23 100 11 318 939	15 646 97 15 743 40 696 6 288	4 400 5 4 405 21 572 113	32 742 279 33 021 296 094 2 360 7 219 1 236	507 405 12 514 519 919 2 430 488 104 494 174 093 55 475
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government Business Donations, bequests & foundations Other Australian	139 355 4 308 143 663 716 444 18 117 38 175 10 710 7 284	137 531 5 551 143 082 587 346 25 699 65 132 17 746 2 929	2002 61 280 456 61 736 427 957 17 797 28 089 19 373 5 434	58 064 501 58 565 158 185 11 019 19 970 4 070 366	58 387 1 317 59 704 182 193 23 100 11 318 939 13 976	15 646 97 15 743 40 696 6 288 2 950 1 401	4 400 5 4 405 21 572 113 1 240	32 742 279 33 021 296 094 2 360 7 219 1 236 510	507 405 12 514 519 919 2 430 488 104 494 174 093 55 475 30 499
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government Business Donations, bequests & foundations	139 355 4 308 143 663 716 444 18 117 38 175 10 710	137 531 5 551 143 082 587 346 25 699 65 132 17 746	2002 61 280 456 61 736 427 957 17 797 28 089 19 373	58 064 501 58 565 158 185 11 019 19 970 4 070	58 387 1 317 59 704 182 193 23 100 11 318 939	15 646 97 15 743 40 696 6 288 2 950	4 400 5 4 405 21 572 113 1 240	32 742 279 33 021 296 094 2 360 7 219 1 236	507 405 12 514 519 919 2 430 488 104 494 174 093 55 475

nil or rounded to zero (including null cells)

Includes other Commonwealth government funding not covered by the Australian competitive grants scheme.

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	%	%	%	%	%	%	%	%	%
				• • • • • •	• • • • • •	• • • • •		• • • • • •	• • • • •
		- 2	2004						
Australian competitive grants									
Commonwealth schemes	15.8	16.5	13.5	19.1	22.0	20.6	12.4	14.8	16.5
Other schemes	0.7	1.6	0.1	0.9	0.9	0.6	3.3	0.1	0.8
Total	16.5	18.1	13.5	20.0	22.9	21.3	15.7	14.9	17.3
General university funds(a)	70.6	65.5	71.5	66.4	61.3	64.8	79.1	80.9	69.2
State & local government	2.1	3.6	4.3	4.9	6.4	5.8	5.0	0.8	3.5
Business	5.5	8.1	6.3	5.0	5.1	6.0	0.1	0.9	5.7
Donations, bequests & foundations	1.1	1.6	2.0	1.5	0.7	1.6	_	0.2	1.3
Other Australian	_	0.4	_	_	_	_	_	0.1	0.1
Overseas	4.2	2.7	2.3	2.1	3.6	0.4	0.1	2.2	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0	• • • • •		100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0	• • • • •	100.0 2002	100.0	100.0	100.0	100.0	100.0	100.0
Total Australian competitive grants	100.0	• • • • •		100.0	100.0	100.0	100.0	100.0	100.0
•••••	100.0 14.0	• • • • •		22.5	19.7	23.1	16.1	9.3	14.8
Australian competitive grants	• • • • •		2002	• • • • •	••••	••••		• • • • • •	
Australian competitive grants Commonwealth schemes	14.0	15.9	10.7	22.5	19.7	23.1	16.1	9.3	14.8
Australian competitive grants Commonwealth schemes Other schemes	14.0 0.4	15.9 0.6	2002 10.7 0.1	22.5 0.2	19.7 0.4	23.1 0.1	16.1	9.3 0.1	14.8
Australian competitive grants Commonwealth schemes Other schemes Total	14.0 0.4 14.5	15.9 0.6 16.6	10.7 0.1 10.8	22.5 0.2 22.7	19.7 0.4 20.2	23.1 0.1 23.2	16.1 — 16.1	9.3 0.1 9.4	14.8 0.4 15.2
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government Business	14.0 0.4 14.5 72.2 1.8 3.8	15.9 0.6 16.6 68.0 3.0 7.5	10.7 0.1 10.8 74.5 3.1 4.9	22.5 0.2 22.7 61.3 4.3 7.7	19.7 0.4 20.2 61.5 7.8 3.8	23.1 0.1 23.2 60.1 9.3 4.4	16.1 — 16.1 78.9	9.3 0.1 9.4 84.3 0.7 2.1	14.8 0.4 15.2 70.9 3.0 5.1
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government Business Donations, bequests & foundations	14.0 0.4 14.5 72.2 1.8	15.9 0.6 16.6 68.0 3.0	10.7 0.1 10.8 74.5 3.1	22.5 0.2 22.7 61.3 4.3 7.7 1.6	19.7 0.4 20.2 61.5 7.8	23.1 0.1 23.2 60.1 9.3	16.1 — 16.1 78.9 0.4	9.3 0.1 9.4 84.3 0.7	14.8 0.4 15.2 70.9 3.0
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government Business Donations, bequests & foundations Other Australian	14.0 0.4 14.5 72.2 1.8 3.8 1.1 0.7	15.9 0.6 16.6 68.0 3.0 7.5 2.1 0.3	10.7 0.1 10.8 74.5 3.1 4.9 3.4 0.9	22.5 0.2 22.7 61.3 4.3 7.7 1.6 0.1	19.7 0.4 20.2 61.5 7.8 3.8 0.3 4.7	23.1 0.1 23.2 60.1 9.3 4.4 2.1	16.1 — 16.1 78.9 0.4 4.5	9.3 0.1 9.4 84.3 0.7 2.1 0.4 0.1	14.8 0.4 15.2 70.9 3.0 5.1 1.6 0.9
Australian competitive grants Commonwealth schemes Other schemes Total General university funds(a) State & local government Business Donations, bequests & foundations	14.0 0.4 14.5 72.2 1.8 3.8 1.1	15.9 0.6 16.6 68.0 3.0 7.5 2.1	10.7 0.1 10.8 74.5 3.1 4.9 3.4	22.5 0.2 22.7 61.3 4.3 7.7 1.6	19.7 0.4 20.2 61.5 7.8 3.8 0.3	23.1 0.1 23.2 60.1 9.3 4.4 2.1	16.1 ———————————————————————————————————	9.3 0.1 9.4 84.3 0.7 2.1 0.4	14.8 0.4 15.2 70.9 3.0 5.1 1.6

nil or rounded to zero (including null cells)

⁽a) Includes other Commonwealth government funding not covered by the Australian competitive grants scheme.



EXPENDITURE ON R&D, by location—by type of activity

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
			2	004					
			_	004					
Pure basic research	402 982	285 441	130 961	83 204	108 478	18 151	778	199 801	1 229 796
Strategic basic research	235 953	255 164	161 784	73 862	108 684	19 593	1 923	121 846	978 809
Applied research	441 239	445 916	361 374	147 365	181 252	41 713	29 937	96 803	1 745 599
Experimental development	112 643	66 089	61 455	20 952	43 869	4 215	384	18 971	328 578
Total	1 192 817	1 052 611	715 574	325 383	442 283	83 672	33 022	437 420	4 282 781
			• • • • • • •						
			2	002					
Pure basic research	309 484	216 680	141 817	75 829	61 374	12 413	737	156 951	975 286
Strategic basic research	188 446	219 104	141 898	57 049	79 832	18 440	1 905	96 208	802 881
Applied research	410 069	357 189	244 259	103 633	141 793	33 965	24 276	75 522	1 390 706
Experimental development	83 885	70 202	46 312	21 445	13 117	2 897	411	22 455	260 725
Total	991 884	863 174	574 285	257 957	296 117	67 714	27 329	351 136	3 429 597



${\tt EXPENDITURE\ ON\ R\&D,\ by\ location-by\ type\ of\ activity:\ \textbf{proportions}}$

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	%	%	%	%	%	%	%	%	%
• • • • • • • • • • • • • • • • • • • •		• • • • •	• • • • •	• • • • • •	• • • • •				• • • • •
			200	4					
Pure basic research	33.8	27.1	18.3	25.6	24.5	21.7	2.4	45.7	28.7
Strategic basic research	19.8	24.2	22.6	22.7	24.6	23.4	5.8	27.9	22.9
Applied research	37.0	42.4	50.5	45.3	41.0	49.9	90.7	22.1	40.8
Experimental development	9.4	6.3	8.6	6.4	9.9	5.0	1.2	4.3	7.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			200	2					
Pure basic research	31.2	25.1	24.7	29.4	20.7	18.3	2.7	44.7	28.4
Strategic basic research	19.0	25.4	24.7	22.1	27.0	27.2	7.0	27.4	23.4
Applied research	41.3	41.4	42.5	40.2	47.9	50.2	88.8	21.5	40.6
Experimental development	8.5	8.1	8.1	8.3	4.4	4.3	1.5	6.4	7.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0



EXPENDITURE ON R&D, by location—by research field(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
• • • • • • • • • • • • • • • • • • • •	• • • • • • • •	• • • • • • • •	2004	• • • • • • •	• • • • • • •	• • • • • •	• • • • • •	• • • • • • •	• • • • • • • •
			2001						
Mathematical sciences	36 057	19 847	9 325	5 108	4 016	454	70	14 857	89 734
Physical sciences	40 540	30 897	11 741	5 464	17 530	854	815	42 962	150 803
Chemical sciences	46 612	42 508	36 907	13 968	21 050	2 487	892	21 425	185 850
Earth sciences	22 077	29 024	11 428	7 623	20 273	7 074	141	30 555	128 196
Biological sciences	100 832	77 046	113 946	32 831	60 099	12 382	2 128	51 691	450 955
Info., computing & communication sciences	58 750	60 611	31 527	9 600	22 164	2 969	224	18 198	204 042
Engineering & technology	149 940	120 750	93 003	33 754 33 316	50 475	5 501	553 10 837	19 893	473 870
Agricultural, veterinary & environ. sciences Architecture, urban environ. & building	71 211 11 353	51 245 10 552	54 537 2 718	3 728	43 670 2 597	15 512 1 003	21	11 518 419	291 847 32 391
Medical & health sciences	300 093	307 521	161 003	116 913	110 341	11 736	3 556	71 279	1 082 442
Education	46 794	37 902	23 713	11 616	18 688	4 888	3 987	2 835	150 423
Economics	21 092	34 385	11 746	2 840	12 692	485	494	19 484	103 218
Commerce, management, tourism & services	56 761	54 537	39 715	11 471	14 024	2 677	2 120	11 659	192 965
Policy & political science	17 459	13 660	8 804	1 595	2 080	1 589	1 019	30 456	76 661
Studies in human society	38 427	36 091	23 414	12 827	7 244	3 565	3 654	19 304	144 525
Behavioural & cognitive sciences	52 050	35 573	27 814	9 310	10 707	1 806	750	10 275	148 285
Law, justice & law enforcement	25 269	22 332	11 851	2 313	4 650	1 907	316	16 319	84 956
Journalism, librarianship & curatorial studies	4 329	3 047	5 302	1 989	750	111	145	1 895	17 567
The arts	31 112	17 512	15 354	1 890	8 161	2 607	425	10 314	87 376
Language & culture	29 456	21 042	12 278	2 482	4 323	1 606	166	11 291	82 643
History & archaeology	19 559	19 971	6 161	3 258	6 138	1 619	684	16 851	74 242
Philosophy & religion	13 043	6 557	3 287	1 487	611	838	24	3 939	29 787
, , ,									
Total	1 192 817	1 052 611	715 574	325 383	442 283	83 672	33 022	437 420	4 282 781
Total	1 192 817								
Total	1 192 817								
	• • • • • • •	1 052 611	715 574	325 383	442 283	83 672	33 022	437 420	4 282 781
Mathematical sciences	22 472	1 052 611 17 049	715 574 2002 7 457	325 383 3 215	442 283 2 488	83 672 349	33 022	437 420 10 972	4 282 781 64 002
Mathematical sciences Physical sciences	22 472 35 561	1 052 611 17 049 24 138	715 574 2002 7 457 8 117	325 383 3 215 6 098	442 283 2 488 9 678	83 672 349 1 009	33 022 	437 420 10 972 43 477	4 282 781 64 002 129 350
Mathematical sciences Physical sciences Chemical sciences	22 472 35 561 38 902	1 052 611 17 049 24 138 33 327	715 574 2002 7 457 8 117 34 736	3 215 6 098 13 574	2 488 9 678 11 013	349 1 009 2 109	33 022 	10 972 43 477 20 797	64 002 129 350 155 227
Mathematical sciences Physical sciences Chemical sciences Earth sciences	22 472 35 561	1 052 611 17 049 24 138	715 574 2002 7 457 8 117	325 383 3 215 6 098	442 283 2 488 9 678	83 672 349 1 009	33 022 	437 420 10 972 43 477	4 282 781 64 002 129 350
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences	22 472 35 561 38 902 24 878	17 049 24 138 33 327 21 640	715 574 2002 7 457 8 117 34 736 14 500	3 215 6 098 13 574 6 608	2 488 9 678 11 013 16 325	349 1 009 2 109 6 521	33 022 	10 972 43 477 20 797 23 539	64 002 129 350 155 227 114 108
Mathematical sciences Physical sciences Chemical sciences Earth sciences	22 472 35 561 38 902 24 878 82 117	17 049 24 138 33 327 21 640 69 397	715 574 2002 7 457 8 117 34 736 14 500 126 938	3 215 6 098 13 574 6 608 38 797	2 488 9 678 11 013 16 325 30 915	349 1 009 2 109 6 521 9 642	33 022 	10 972 43 477 20 797 23 539 51 509	64 002 129 350 155 227 114 108 410 155
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences	22 472 35 561 38 902 24 878 82 117 38 509	1 052 611 17 049 24 138 33 327 21 640 69 397 44 413	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297	3 215 6 098 13 574 6 608 38 797 6 217	2 488 9 678 11 013 16 325 30 915 15 298	349 1 009 2 109 6 521 9 642 1 566	33 022 	10 972 43 477 20 797 23 539 51 509 10 469	64 002 129 350 155 227 114 108 410 155 144 133
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology	22 472 35 561 38 902 24 878 82 117 38 509 119 984	17 049 24 138 33 327 21 640 69 397 44 413 104 915	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553	3 215 6 098 13 574 6 608 38 797 6 217 18 694	2 488 9 678 11 013 16 325 30 915 15 298 42 087	349 1 009 2 109 6 521 9 642 1 566 3 383	33 022 	10 972 43 477 20 797 23 539 51 509 10 469 15 503	64 002 129 350 155 227 114 108 410 155 144 133 374 546
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635	33 022 	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380	33 022 	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781	33 022 	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251 710	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200 46 159	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747 39 801	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340 25 997	3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356 7 913	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900 9 019	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251 710 1 229	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340 1 511	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195 5 597	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788 137 227
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200 46 159 12 338 31 308 41 340	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747 39 801 8 562 24 593 26 820	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340 25 997 5 403 19 776 17 041	3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356 7 913 2 456 7 512 11 203	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900 9 019 2 737 5 514 8 259	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251 710 1 229 990 1 555 1 233	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340 1 511 298	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195 5 597 20 745 19 929 6 888	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788 137 227 53 529 111 448 113 275
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200 46 159 12 338 31 308 41 340 23 231	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747 39 801 8 562 24 593 26 820 16 173	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340 25 997 5 403 19 776 17 041 8 417	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356 7 913 2 456 7 512 11 203 2 607	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900 9 019 2 737 5 514 8 259 4 944	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251 710 1 229 990 1 555	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340 1 511 298 1 261	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195 5 597 20 745 19 929 6 888 8 620	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788 137 227 53 529 111 448 113 275 65 764
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200 46 159 12 338 31 308 41 340 23 231 4 871	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747 39 801 8 562 24 593 26 820 16 173 1 951	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340 25 997 5 403 19 776 17 041 8 417 2 898	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356 7 913 2 456 7 512 11 203 2 607 1 321	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900 9 019 2 737 5 514 8 259 4 944 1 390	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251 710 1 229 990 1 555 1 233	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340 1 511 298 1 261 490	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195 5 597 20 745 19 929 6 888 8 620 370	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788 137 227 53 529 111 448 113 275 65 764 12 834
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies The arts	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200 46 159 12 338 31 308 41 340 23 231 4 871 26 219	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747 39 801 8 562 24 593 26 820 16 173 1 951 13 374	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340 25 997 5 403 19 776 17 041 8 417 2 898 9 856	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356 7 913 2 456 7 512 11 203 2 607 1 321 3 010	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900 9 019 2 737 5 514 8 259 4 944 1 390 2 718	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 710 1 229 990 1 555 1 233 1 322 34 2 051	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340 1 511 298 1 261 490 449 — 557	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195 5 597 20 745 19 929 6 888 8 620 370 8 471	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788 137 227 53 529 111 448 113 275 65 764 12 834 66 256
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies The arts Language & culture	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200 46 159 12 338 31 308 41 340 23 231 4 871 26 219 23 848	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747 39 801 8 562 24 593 26 820 16 173 1 951 13 374 15 638	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340 25 997 5 403 19 776 17 041 8 417 2 898 9 856 5 832	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356 7 913 2 456 7 512 11 203 2 607 1 321 3 010 5 930	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900 9 019 2 737 5 514 8 259 4 944 1 390 2 718 4 247	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251 710 1 229 990 1 555 1 233 1 322 34 2 051 856	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340 1 511 298 1 261 490 449 — 557 118	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195 5 597 20 745 19 929 6 888 8 620 370 8 471 7 660	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788 137 227 53 529 111 448 113 275 65 764 12 834 66 256 64 129
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies The arts Language & culture History & archaeology	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200 46 159 12 338 31 308 41 340 23 231 4 871 26 219 23 848 15 498	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747 39 801 8 562 24 593 26 820 16 173 1 951 13 374 15 638 11 936	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340 25 997 5 403 19 776 17 041 8 417 2 898 9 856 5 832 4 537	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356 7 913 2 456 7 512 11 203 2 607 1 321 3 010 5 930 4 237	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900 9 019 2 737 5 514 8 259 4 944 1 390 2 718 4 247 1 658	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251 710 1 229 990 1 555 1 233 1 322 34 2 051 856 1 384	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340 1 511 298 1 261 490 449 — 557 118 758	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195 5 597 20 745 19 929 6 888 8 620 370 8 471 7 660 15 489	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788 137 227 53 529 111 448 113 275 65 764 12 834 66 256 64 129 55 499
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environ. & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies The arts Language & culture	22 472 35 561 38 902 24 878 82 117 38 509 119 984 58 766 8 834 261 520 43 892 20 200 46 159 12 338 31 308 41 340 23 231 4 871 26 219 23 848	17 049 24 138 33 327 21 640 69 397 44 413 104 915 45 351 6 073 276 278 32 246 23 747 39 801 8 562 24 593 26 820 16 173 1 951 13 374 15 638	715 574 2002 7 457 8 117 34 736 14 500 126 938 27 297 67 553 38 615 2 146 116 188 20 314 8 340 25 997 5 403 19 776 17 041 8 417 2 898 9 856 5 832	325 383 3 215 6 098 13 574 6 608 38 797 6 217 18 694 24 381 2 092 74 504 12 801 2 356 7 913 2 456 7 512 11 203 2 607 1 321 3 010 5 930	2 488 9 678 11 013 16 325 30 915 15 298 42 087 33 788 823 74 778 11 272 6 900 9 019 2 737 5 514 8 259 4 944 1 390 2 718 4 247	349 1 009 2 109 6 521 9 642 1 566 3 383 16 635 380 10 781 3 251 710 1 229 990 1 555 1 233 1 322 34 2 051 856	33 022 1 274 770 95 839 363 2 427 10 493 82 2 920 2 195 340 1 511 298 1 261 490 449 — 557 118	10 972 43 477 20 797 23 539 51 509 10 469 15 503 7 161 80 46 847 2 387 21 195 5 597 20 745 19 929 6 888 8 620 370 8 471 7 660	64 002 129 350 155 227 114 108 410 155 144 133 374 546 235 190 20 509 863 816 128 357 83 788 137 227 53 529 111 448 113 275 65 764 12 834 66 256 64 129

nil or rounded to zero (including null cells)

⁽a) See paragraph 11 of the Explanatory Notes for details.



	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	%	%	%	%	%	%	%	%	%
• • • • • • • • • • • • • • • • • • • •	• • • • • •	2004	• • • • • • 4	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •
Mathematical acionasa	2.0			1.0	0.0	0.5	0.0	2.4	0.4
Mathematical sciences	3.0	1.9	1.3	1.6	0.9	0.5	0.2	3.4	2.1
Physical sciences	3.4	2.9	1.6	1.7	4.0	1.0	2.5	9.8	3.5
Chemical sciences	3.9	4.0	5.2	4.3	4.8	3.0	2.7	4.9	4.3
Earth sciences	1.9	2.8	1.6	2.3	4.6	8.5	0.4	7.0	3.0
Biological sciences	8.5	7.3	15.9	10.1	13.6	14.8	6.4	11.8	10.5
Info., computing & communication sciences	4.9	5.8	4.4	3.0	5.0	3.5	0.7	4.2	4.8
Engineering & technology	12.6	11.5	13.0	10.4	11.4	6.6	1.7	4.5	11.1
Agricultural, veterinary & environ. sciences	6.0	4.9	7.6	10.2	9.9	18.5	32.8	2.6	6.8
Architecture, urban environment & building	1.0	1.0	0.4	1.1	0.6	1.2	0.1	0.1	0.8
Medical & health sciences	25.2	29.2	22.5	35.9	24.9	14.0	10.8	16.3	25.3
Education	3.9	3.6	3.3	3.6	4.2	5.8	12.1	0.6	3.5
Economics	1.8	3.3	1.6	0.9	2.9	0.6	1.5	4.5	2.4
Commerce, management, tourism & services	4.8	5.2	5.6	3.5	3.2	3.2	6.4	2.7	4.5
Policy & political science	1.5	1.3	1.2	0.5	0.5	1.9	3.1	7.0	1.8
Studies in human society	3.2	3.4	3.3	3.9	1.6	4.3	11.1	4.4	3.4
Behavioural & cognitive sciences	4.4	3.4	3.9	2.9	2.4	2.2	2.3	2.3	3.5
Law, justice & law enforcement	2.1	2.1	1.7	0.7	1.1	2.3	1.0	3.7	2.0
Journalism, librarianship & curatorial studies	0.4	0.3	0.7	0.6	0.2	0.1	0.4	0.4	0.4
The arts	2.6	1.7	2.1	0.6	1.8	3.1	1.3	2.4	2.0
Language & culture	2.5	2.0	1.7	0.8	1.0	1.9	0.5	2.6	1.9
History & archaeology	1.6	1.9	0.9	1.0	1.4	1.9	2.1	3.9	1.7
Philosophy & religion	1.1	0.6	0.5	0.5	0.1	1.0	0.1	0.9	0.7
, , ,									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0	• • • • • •	• • • • •	100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0	100.0 2002	• • • • •	100.0	100.0	100.0	100.0	100.0	100.0
Total Mathematical sciences	2.3	• • • • • •	• • • • •	100.0 1.2	0.8	0.5	100.0	3.1	1.9
• • • • • • • • • • • • • • • • • • • •	• • • • • •	2002	2	• • • • •	• • • • •	• • • • •	• • • • •	••••	••••
Mathematical sciences	2.3	2002	1.3	1.2	0.8	0.5	_	3.1	1.9
Mathematical sciences Physical sciences	2.3 3.6	2002 2.0 2.8	1.3 1.4	1.2 2.4	0.8 3.3	0.5 1.5		3.1 12.4	1.9
Mathematical sciences Physical sciences Chemical sciences	2.3 3.6 3.9	2002 2.0 2.8 3.9	1.3 1.4 6.0	1.2 2.4 5.3	0.8 3.3 3.7	0.5 1.5 3.1	— 4.7 2.8	3.1 12.4 5.9	1.9 3.8 4.5
Mathematical sciences Physical sciences Chemical sciences Earth sciences	2.3 3.6 3.9 2.5	2002 2.0 2.8 3.9 2.5	1.3 1.4 6.0 2.5	1.2 2.4 5.3 2.6	0.8 3.3 3.7 5.5	0.5 1.5 3.1 9.6	- 4.7 2.8 0.3	3.1 12.4 5.9 6.7	1.9 3.8 4.5 3.3
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences	2.3 3.6 3.9 2.5 8.3	2002 2.0 2.8 3.9 2.5 8.0	1.3 1.4 6.0 2.5 22.1	1.2 2.4 5.3 2.6 15.0	0.8 3.3 3.7 5.5 10.4	0.5 1.5 3.1 9.6 14.2	 4.7 2.8 0.3 3.1	3.1 12.4 5.9 6.7 14.7	1.9 3.8 4.5 3.3 12.0
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences	2.3 3.6 3.9 2.5 8.3 3.9	2002 2.0 2.8 3.9 2.5 8.0 5.1	1.3 1.4 6.0 2.5 22.1 4.8	1.2 2.4 5.3 2.6 15.0 2.4	0.8 3.3 3.7 5.5 10.4 5.2	0.5 1.5 3.1 9.6 14.2 2.3		3.1 12.4 5.9 6.7 14.7 3.0	1.9 3.8 4.5 3.3 12.0 4.2
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9	2002 2.0 2.8 3.9 2.5 8.0 5.1 12.2	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7	1.2 2.4 5.3 2.6 15.0 2.4 7.2	0.8 3.3 3.7 5.5 10.4 5.2 14.2	0.5 1.5 3.1 9.6 14.2 2.3 5.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4	1.9 3.8 4.5 3.3 12.0 4.2 10.9
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9	2002 2.0 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4	2002 2.0 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4	2002 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0	2002 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7 2.4
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7	2002 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3 3.0	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7 2.4 4.0
Mathematical sciences Physical sciences Chemical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2	2002 2.0 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.3 25.3 3.8 2.3 3.0 0.9	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6 5.9	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 6.9 25.2 3.7 2.4 4.0 1.6
Mathematical sciences Physical sciences Chemical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2 3.2	200 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0 2.8	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5 0.9 3.4	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0 2.9	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3 3.0 0.9 1.9	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0 1.8 1.5 2.3		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6 5.9 5.7	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 25.2 3.7 2.4 4.0 1.6 3.2
Mathematical sciences Physical sciences Chemical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2 3.2 4.2	2000 2.0 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0 2.8 3.1	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5 0.9 3.4 3.0	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0 2.9 4.3	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 3.8 2.3 3.0 0.9 1.9 2.8	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0 1.8 1.5 2.3 1.8		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6 5.9 5.7 2.0	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 6.9 25.2 3.7 2.4 4.0 1.6 3.2 3.3
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2 3.2 4.2 2.3	2000 2.0 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0 2.8 3.1	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5 0.9 3.4 3.0 1.5	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0 2.9 4.3 1.0	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3 3.0 0.9 1.9 2.8 1.7	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0 1.8 1.5 2.3 1.8 2.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6 5.9 5.7 2.0 2.5	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7 2.4 4.0 1.6 3.2 3.3 1.9
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2 3.2 4.2 2.3 0.5	2000 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0 2.8 3.1 1.9	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5 0.9 3.4 3.0 1.5	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0 2.9 4.3 1.0 0.5	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3 3.0 0.9 1.9 2.8 1.7 0.5	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0 1.8 1.5 2.3 1.8 2.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6 5.9 5.7 2.0 2.5 0.1	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7 2.4 4.0 1.6 3.2 3.3 1.9 0.4
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies The arts	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2 3.2 4.2 2.3 0.5 2.6	2000 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0 2.8 3.1 1.9 0.2	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5 0.9 3.4 3.0 1.5 0.5	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0 2.9 4.3 1.0 0.5 1.2	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3 3.0 0.9 1.9 2.8 1.7 0.5 0.9	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0 1.8 1.5 2.3 1.8 2.0 0.1 3.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6 5.9 5.7 2.0 2.5 0.1 2.4	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7 2.4 4.0 1.6 3.2 3.3 1.9 0.4
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies The arts Language & culture	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2 3.2 4.2 2.3 0.5 2.6 2.4	2003 2.0 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0 2.8 3.1 1.9 0.2	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5 0.9 3.4 3.0 1.5 0.5 1.7	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0 2.9 4.3 1.0 0.5 1.2 2.3	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3 3.0 0.9 1.9 2.8 1.7 0.5 0.9 1.4	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.5 2.3 1.8 2.0 0.1 3.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6 5.9 5.7 2.0 2.5 0.1 2.4 2.2	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7 2.4 4.0 1.6 3.2 3.3 1.9 0.4
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies The arts Language & culture History & archaeology	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2 3.2 4.2 2.3 0.5 2.6 2.4 1.6	2003 2.0 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0 2.8 3.1 1.9 0.2 1.5 1.8	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5 0.9 3.4 3.0 1.5 0.5 1.7	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0 2.9 4.3 1.0 0.5 1.2 2.3 1.6	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3 3.0 0.9 1.9 2.8 1.7 0.5 0.9 1.4 0.6	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.0 1.8 2.3 1.8 2.0 0.1 3.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 5.9 5.7 2.0 2.5 0.1 2.4 2.2 4.4	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7 2.4 4.0 1.6 3.2 3.3 1.9 0.4 1.9 1.6
Mathematical sciences Physical sciences Chemical sciences Earth sciences Biological sciences Info., computing & communication sciences Engineering & technology Agricultural, veterinary & environ. sciences Architecture, urban environment & building Medical & health sciences Education Economics Commerce, management, tourism & services Policy & political science Studies in human society Behavioural & cognitive sciences Law, justice & law enforcement Journalism, librarianship & curatorial studies The arts Language & culture	2.3 3.6 3.9 2.5 8.3 3.9 12.1 5.9 0.9 26.4 4.4 2.0 4.7 1.2 3.2 4.2 2.3 0.5 2.6 2.4	2003 2.0 2.8 3.9 2.5 8.0 5.1 12.2 5.3 0.7 32.0 3.7 2.8 4.6 1.0 2.8 3.1 1.9 0.2	1.3 1.4 6.0 2.5 22.1 4.8 11.8 6.7 0.4 20.2 3.5 1.5 4.5 0.9 3.4 3.0 1.5 0.5 1.7	1.2 2.4 5.3 2.6 15.0 2.4 7.2 9.5 0.8 28.9 5.0 0.9 3.1 1.0 2.9 4.3 1.0 0.5 1.2 2.3	0.8 3.3 3.7 5.5 10.4 5.2 14.2 11.4 0.3 25.3 3.8 2.3 3.0 0.9 1.9 2.8 1.7 0.5 0.9 1.4	0.5 1.5 3.1 9.6 14.2 2.3 5.0 24.6 0.6 15.9 4.8 1.5 2.3 1.8 2.0 0.1 3.0		3.1 12.4 5.9 6.7 14.7 3.0 4.4 2.0 — 13.3 0.7 6.0 1.6 5.9 5.7 2.0 2.5 0.1 2.4 2.2	1.9 3.8 4.5 3.3 12.0 4.2 10.9 6.9 0.6 25.2 3.7 2.4 4.0 1.6 3.2 3.3 1.9 0.4

nil or rounded to zero (including null cells)

⁽a) See paragraph 11 of the Explanatory Notes for details.



${\tt EXPENDITURE\ ON\ R\&D,\ by\ location-by\ socio-economic\ objective(a)}$

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aus
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'00
	• • • • • • •	• • • • • • • •	2004	• • • • • • •	• • • • • • •	• • • • • •	• • • • • •	• • • • • •	• • • • • •
efence conomic development	3 780	7 207	3 170	3 969	496	717	24	9 494	28 85
Plant prod. & plant primary products	37 516	9 767	26 143	21 375	28 001	9 865	257	12 770	145 69
Animal prod. & animal primary products	24 936	20 714	13 351	5 666	15 203	7 101	373	775	88 12
Mineral resources (excl. energy)	7 018	3 328	22 988	7 223	14 222	2 453	_	4 873	62 1
Energy resources	8 199	12 405	2 881	3 005	13 929	94	_	595	41 1
Energy supply	15 500	7 897	3 553	2 736	3 245	1 206	897	5 018	40 0
Manufacturing	89 064	68 992	44 107	22 682	20 118	2 411	201	15 233	262 8
Construction	26 321	21 834	9 320	2 960	5 295	696	_	1 135	67 5
Transport	4 806	9 158	12 536	5 014	1 448	1 587	61	1 064	35 6
Info. & communication services Commercial services & tourism	63 780 23 567	60 739 18 514	37 684 14 445	14 940 4 170	11 468 6 217	2 107 843	126 1 218	21 683 2 849	212 5 71 8
Economic framework	52 453	69 388	29 129	13 559	19 250	1 920	683	2 649	216 0
Total	353 160	302 737	25 125	103 330	138 397	30 282	3 817	95 626	1 243 4
Total	333 100	302 131	210 137	103 330	130 391	30 202	3 617	93 020	1 243 4
ciety									
Health	323 152	335 133	185 402	111 258	128 933	13 561	3 997	95 559	1 196 9
Education & training	52 002	47 883	25 944	16 851	20 724	5 740	4 355	21 628	195 1
Social develop. & community services	158 254	84 254	71 989	25 086	26 300	11 140	6 093	82 929	466 0
Total	533 408	467 270	283 336	153 194	175 957	30 441	14 445	200 116	1 858 1
vironment									
Environ. policy frameworks & other aspects	13 645	8 930	5 040	1 249	2 041	1 462	166	6 910	39 4
Environmental management	56 549	31 211	54 241	22 477	44 720	12 164	12 891	23 314	257 5
Total	70 193	40 141	59 281	23 726	46 762	13 627	13 057	30 224	297 0
on-oriented research	232 275	235 257	153 650	41 164	80 671	8 605	1 679	101 959	855 2
tal	1 192 817	1 052 611	715 574	325 383	442 283	83 672	33 022	437 420	4 282 7
• • • • • • • • • • • • • • • • • • • •		• • • • • • • •		• • • • • • •	• • • • • • •	• • • • • •	• • • • • •	• • • • • • •	• • • • • •
			2002						
fence	873	3 527	113	1 154	1 303	69	_	3 904	10 9
onomic development								6 558	115 7
Plant prod. & plant primary products	23 747	11 084	19 905	24 358	23 662	6 346	119		
Plant prod. & plant primary products Animal prod. & animal primary products	23 588	19 366	10 580	3 796	9 017	9 635	283	384	76 6
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy)	23 588 8 100	19 366 3 114	10 580 20 306	3 796 5 220	9 017 15 000	9 635 2 624	283 —	384 4 460	76 6 58 8
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources	23 588 8 100 8 610	19 366 3 114 11 234	10 580 20 306 2 525	3 796 5 220 2 949	9 017 15 000 9 100	9 635 2 624 131	283 — —	384 4 460 483	76 6 58 8 35 0
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply	23 588 8 100 8 610 14 327	19 366 3 114 11 234 7 480	10 580 20 306 2 525 4 724	3 796 5 220 2 949 2 767	9 017 15 000 9 100 2 752	9 635 2 624 131 586	283 — — 3 403	384 4 460 483 4 528	76 6 58 8 35 0 40 5
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing	23 588 8 100 8 610 14 327 62 434	19 366 3 114 11 234 7 480 67 175	10 580 20 306 2 525 4 724 31 570	3 796 5 220 2 949 2 767 11 010	9 017 15 000 9 100 2 752 12 906	9 635 2 624 131 586 1 957	283 — — 3 403 4	384 4 460 483 4 528 13 572	76 6 58 8 35 0 40 5 200 6
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction	23 588 8 100 8 610 14 327 62 434 24 698	19 366 3 114 11 234 7 480 67 175 18 379	10 580 20 306 2 525 4 724 31 570 12 581	3 796 5 220 2 949 2 767 11 010 2 174	9 017 15 000 9 100 2 752 12 906 3 019	9 635 2 624 131 586 1 957 466	283 — — 3 403 4 82	384 4 460 483 4 528 13 572 733	76 6 58 8 35 0 40 5 200 6 62 1
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport	23 588 8 100 8 610 14 327 62 434 24 698 2 884	19 366 3 114 11 234 7 480 67 175 18 379 10 000	10 580 20 306 2 525 4 724 31 570 12 581 9 966	3 796 5 220 2 949 2 767 11 010 2 174 2 395	9 017 15 000 9 100 2 752 12 906 3 019 754	9 635 2 624 131 586 1 957 466 909	283 — — 3 403 4 82 28	384 4 460 483 4 528 13 572 733 1 602	76 6 58 8 35 0 40 5 200 6 62 1 28 5
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction	23 588 8 100 8 610 14 327 62 434 24 698	19 366 3 114 11 234 7 480 67 175 18 379	10 580 20 306 2 525 4 724 31 570 12 581	3 796 5 220 2 949 2 767 11 010 2 174	9 017 15 000 9 100 2 752 12 906 3 019	9 635 2 624 131 586 1 957 466	283 — — 3 403 4 82	384 4 460 483 4 528 13 572 733	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285	9 635 2 624 131 586 1 957 466 909 1 006	283 — — 3 403 4 82 28 584	384 4 460 483 4 528 13 572 733 1 602 14 817	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684	9 635 2 624 131 586 1 957 466 909 1 006 390	283 — 3 403 4 82 28 584 616	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632	283 — 3 403 4 82 28 584 616 220	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632	283 — 3 403 4 82 28 584 616 220	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3 991 8
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total ciety Health	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391 279 779	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674 259 060	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972 171 212	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055 77 051	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135 104 316	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632 25 681	283 — 3 403 4 82 28 584 616 220 5 339	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233 69 407	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3 991 8
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total ciety	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391 279 779	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674 259 060	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972 171 212	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055 77 051	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135 104 316	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632 25 681	283 — 3 403 4 82 28 584 616 220 5 339	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233 69 407	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3 991 8 970 3 160 8 342 9
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total ciety Health Education & training Social develop. & community services	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391 279 779 282 282 50 768	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674 259 060	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972 171 212	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055 77 051	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135 104 316	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632 25 681 11 819 4 029	283 — 3 403 4 82 28 584 616 220 5 339 2 449 2 469	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233 69 407	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3 991 8 970 3 160 8 342 9
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total ciety Health Education & training Social develop. & community services Total	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391 279 779 282 282 50 768 121 719	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674 259 060 295 738 38 397 65 010	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972 171 212 134 341 19 698 43 730	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055 77 051 90 918 18 066 22 411	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135 104 316 84 058 14 940 17 039	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632 25 681 11 819 4 029 6 443	283 — 3 403 4 82 28 584 616 220 5 339 2 449 2 469 4 046	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233 69 407 68 794 12 474 62 587	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3 991 8 970 3 160 8 342 9
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total ciety Health Education & training Social develop. & community services Total vironment	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391 279 779 282 282 50 768 121 719 454 769	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674 259 060 295 738 38 397 65 010 399 145	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972 171 212 134 341 19 698 43 730 197 769	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055 77 051 90 918 18 066 22 411 131 395	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135 104 316 84 058 14 940 17 039 116 037	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632 25 681 11 819 4 029 6 443 22 292	283 — 3 403 4 82 28 584 616 220 5 339 2 449 2 469 4 046 8 963	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233 69 407 68 794 12 474 62 587 143 855	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3 991 8 970 3 160 8 342 9 1 474 2
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total ciety Health Education & training Social develop. & community services Total vironment Environ. policy frameworks & other aspects	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391 279 779 282 282 50 768 121 719	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674 259 060 295 738 38 397 65 010	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972 171 212 134 341 19 698 43 730	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055 77 051 90 918 18 066 22 411	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135 104 316 84 058 14 940 17 039	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632 25 681 11 819 4 029 6 443	283 — 3 403 4 82 28 584 616 220 5 339 2 449 2 469 4 046	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233 69 407 68 794 12 474 62 587	76 6 58 8 35 0 40 5 200 6 21 28 5 161 7 42 5 169 3 991 8 970 3 160 8 342 9 1 474 2 34 3
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total ciety Health Education & training Social develop. & community services Total vironment	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391 279 779 282 282 50 768 121 719 454 769	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674 259 060 295 738 38 397 65 010 399 145	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972 171 212 134 341 19 698 43 730 197 769	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055 77 051 90 918 18 066 22 411 131 395	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135 104 316 84 058 14 940 17 039 116 037	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632 25 681 11 819 4 029 6 443 22 292	283 — 3 403 4 82 28 584 616 220 5 339 2 449 2 469 4 046 8 963	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233 69 407 68 794 12 474 62 587 143 855	76 6 58 8 35 0 40 5 200 6 21 28 5 161 7 42 5 169 3 991 8 970 3 342 9 1 474 2 34 3 186 7
Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total ciety Health Education & training Social develop. & community services Total vironment Environ. policy frameworks & other aspects Environmental management	23 588 8 100 8 610 14 327 62 434 24 698 2 884 43 490 16 510 51 391 279 779 282 282 50 768 121 719 454 769	19 366 3 114 11 234 7 480 67 175 18 379 10 000 45 682 12 872 52 674 259 060 295 738 38 397 65 010 399 145	10 580 20 306 2 525 4 724 31 570 12 581 9 966 30 139 5 944 22 972 171 212 134 341 19 698 43 730 197 769 4 284 39 360	3 796 5 220 2 949 2 767 11 010 2 174 2 395 10 794 533 11 055 77 051 90 918 18 066 22 411 131 395 588 15 568	9 017 15 000 9 100 2 752 12 906 3 019 754 15 285 2 684 10 135 104 316 84 058 14 940 17 039 116 037	9 635 2 624 131 586 1 957 466 909 1 006 390 1 632 25 681 11 819 4 029 6 443 22 292 1 085 10 751	283 — 3 403 4 82 28 584 616 220 5 339 2 449 2 469 4 046 8 963 305 10 747	384 4 460 483 4 528 13 572 733 1 602 14 817 3 037 19 233 69 407 68 794 12 474 62 587 143 855 7 623 19 111	76 6 58 8 35 0 40 5 200 6 62 1 28 5 161 7 42 5 169 3 991 8 970 3 160 8 342 9

nil or rounded to zero (including null cells)

⁽a) See paragraph 11 of the Explanatory Notes for details.



	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	%	%	%	%	%	%	%	%	%
2004									
Defence	0.3	0.7	0.4	1.2	0.1	0.9	0.1	2.2	0.7
Economic development	0.5	0.7	0.4	1.2	0.1	0.9	0.1	2.2	0.7
Plant prod. & plant primary products	3.1	0.9	3.7	6.6	6.3	11.8	0.8	2.9	3.4
Animal prod. & animal primary products	2.1	2.0	1.9	1.7	3.4	8.5	1.1	0.2	2.1
Mineral resources (excl. energy)	0.6	0.3	3.2	2.2	3.2	2.9	_	1.1	1.5
Energy resources	0.7	1.2	0.4	0.9	3.1	0.1	_	0.1	1.0
Energy supply	1.3	0.8	0.5	0.8	0.7	1.4	2.7	1.1	0.9
Manufacturing Construction	7.5 2.2	6.6 2.1	6.2 1.3	7.0 0.9	4.5 1.2	2.9 0.8	0.6	3.5 0.3	6.1 1.6
Transport	0.4	0.9	1.8	1.5	0.3	1.9	0.2	0.2	0.8
Info. & communication services	5.3	5.8	5.3	4.6	2.6	2.5	0.4	5.0	5.0
Commercial services & tourism	2.0	1.8	2.0	1.3	1.4	1.0	3.7	0.7	1.7
Economic framework	4.4	6.6	4.1	4.2	4.4	2.3	2.1	6.8	5.0
Total	29.6	28.8	30.2	31.8	31.3	36.2	11.6	21.9	29.0
Society									
Health	27.1	31.8	25.9	34.2	29.2	16.2	12.1	21.8	27.9
Education & training	4.4	4.5	3.6	5.2	4.7	6.9	13.2	4.9	4.6
Social develop. & community services	13.3	8.0	10.1	7.7	5.9	13.3	18.5	19.0	10.9
Total	44.7	44.4	39.6	47.1	39.8	36.4	43.7	45.7	43.4
Environment								4.0	
Environ. policy frameworks & other aspects	1.1	0.8	0.7	0.4	0.5	1.7	0.5	1.6	0.9
Environmental management Total	4.7 5.9	3.0 3.8	7.6 8.3	6.9 7.3	10.1 10.6	14.5 16.3	39.0 39.5	5.3 6.9	6.0 6.9
Total	5.9	3.0	0.3	1.3	10.0	10.3	39.3	0.9	0.9
Non-oriented research	19.5	22.3	21.5	12.7	18.2	10.3	5.1	23.3	20.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	100.0		• • • • •	100.0		100.0	100.0	100.0	100.0
••••••		• • • • •	• • • • •			0.1	100.0	1.1	0.3
	• • • • •	2002	• • • • •	• • • • •	• • • • •	• • • • •	100.0		• • • • •
Defence	• • • • •	2002	• • • • •	• • • • •	• • • • •	• • • • •	100.0		• • • • •
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products	0.1	2002	2 —	0.4	0.4 8.0 3.0	0.1	_	1.1	0.3
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy)	0.1 2.4 2.4 0.8	2002 0.4 1.3 2.2 0.4	3.5 1.8 3.5	0.4 9.4 1.5 2.0	0.4 8.0 3.0 5.1	0.1 9.4 14.2 3.9	- 0.4 1.0	1.1 1.9 0.1 1.3	0.3 3.4 2.2 1.7
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources	0.1 2.4 2.4 0.8 0.9	2002 0.4 1.3 2.2 0.4 1.3	3.5 1.8 3.5 0.4	0.4 9.4 1.5 2.0 1.1	0.4 8.0 3.0 5.1 3.1	0.1 9.4 14.2 3.9 0.2	0.4 1.0	1.1 1.9 0.1 1.3 0.1	0.3 3.4 2.2 1.7 1.0
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply	0.1 2.4 2.4 0.8 0.9 1.4	2002 0.4 1.3 2.2 0.4 1.3 0.9	3.5 1.8 3.5 0.4 0.8	0.4 9.4 1.5 2.0 1.1 1.1	0.4 8.0 3.0 5.1 3.1 0.9	0.1 9.4 14.2 3.9 0.2 0.9	0.4 1.0 — — 12.5	1.1 1.9 0.1 1.3 0.1 1.3	0.3 3.4 2.2 1.7 1.0 1.2
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing	0.1 2.4 2.4 0.8 0.9 1.4 6.3	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8	3.5 1.8 3.5 0.4 0.8 5.5	0.4 9.4 1.5 2.0 1.1 1.1 4.3	0.4 8.0 3.0 5.1 3.1 0.9 4.4	0.1 9.4 14.2 3.9 0.2 0.9 2.9	 0.4 1.0 12.5	1.1 1.9 0.1 1.3 0.1 1.3 3.9	0.3 3.4 2.2 1.7 1.0 1.2 5.8
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1	3.5 1.8 3.5 0.4 0.8 5.5 2.2	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7	- 0.4 1.0 - 12.5 - 0.3	1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8 0.9	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3		1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2 0.5	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1	3.5 1.8 3.5 0.4 0.8 5.5 2.2	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7	- 0.4 1.0 - 12.5 - 0.3	1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8 0.9 4.2	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5		1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2 0.5 4.2	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3 1.5	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2 1.0	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8 0.9 4.2 0.2	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2 0.9	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5 0.6		1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2 0.5 4.2 0.9	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4 1.7 5.2	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3 1.5 6.1	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2 1.0 4.0	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8 0.9 4.2 0.2 4.3	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2 0.9 3.4	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5 0.6 2.4		1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2 0.5 4.2 0.9 5.5	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7 1.2 4.9
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4 1.7 5.2	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3 1.5 6.1	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2 1.0 4.0	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8 0.9 4.2 0.2 4.3	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2 0.9 3.4	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5 0.6 2.4		1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2 0.5 4.2 0.9 5.5	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7 1.2 4.9
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total Society	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4 1.7 5.2 28.2	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3 1.5 6.1 30.0	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2 1.0 4.0 29.8	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8 0.9 4.2 0.2 4.3 29.9	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2 0.9 3.4 35.2	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5 0.6 2.4 37.9	0.4 1.0 — 12.5 — 0.3 0.1 2.1 2.3 0.8 19.5	1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2 0.5 4.2 0.9 5.5 19.8	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7 1.2 4.9 28.9
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total Society Health	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4 1.7 5.2 28.2	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3 1.5 6.1 30.0	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2 1.0 4.0 29.8	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8 0.9 4.2 0.2 4.3 29.9	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2 0.9 3.4 35.2	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5 0.6 2.4 37.9		1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2 0.5 4.2 0.9 5.5 19.8	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7 1.2 4.9 28.9
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total Society Health Education & training	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4 1.7 5.2 28.2	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3 1.5 6.1 30.0	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2 1.0 4.0 29.8	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.8 0.9 4.2 0.2 4.3 29.9	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2 0.9 3.4 35.2 28.4 5.0	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5 0.6 2.4 37.9		1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.2 0.5 4.2 0.9 5.5 19.8	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7 1.2 4.9 28.9
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total Society Health Education & training Social develop. & community services Total Environment	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4 1.7 5.2 28.2 28.5 5.1 12.3 45.8	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3 1.5 6.1 30.0	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2 1.0 4.0 29.8 23.4 3.4 7.6 34.4	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.9 4.2 0.2 4.3 29.9 35.2 7.0 8.7 50.9	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2 0.9 3.4 35.2 28.4 5.0 5.8 39.2	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5 0.6 2.4 37.9 17.5 6.0 9.5 32.9		1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.5 4.2 0.9 5.5 19.8 19.6 3.6 17.8 41.0	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7 1.2 4.9 28.9 28.3 4.7 10.0 43.0
Defence Economic development Plant prod. & plant primary products Animal prod. & animal primary products Mineral resources (excl. energy) Energy resources Energy supply Manufacturing Construction Transport Info. & communication services Commercial services & tourism Economic framework Total Society Health Education & training Social develop. & community services Total Environment Environ. policy frameworks & other aspects	0.1 2.4 2.4 0.8 0.9 1.4 6.3 2.5 0.3 4.4 1.7 5.2 28.2 28.5 5.1 12.3 45.8	2002 0.4 1.3 2.2 0.4 1.3 0.9 7.8 2.1 1.2 5.3 1.5 6.1 30.0 34.3 4.4 7.5 46.2	3.5 1.8 3.5 0.4 0.8 5.5 2.2 1.7 5.2 1.0 4.0 29.8 23.4 7.6 34.4 0.7	0.4 9.4 1.5 2.0 1.1 1.1 4.3 0.9 4.2 0.2 4.3 29.9 35.2 7.0 8.7 50.9	0.4 8.0 3.0 5.1 3.1 0.9 4.4 1.0 0.3 5.2 0.9 3.4 35.2 28.4 5.0 5.8 39.2	0.1 9.4 14.2 3.9 0.2 0.9 2.9 0.7 1.3 1.5 0.6 2.4 37.9 17.5 6.0 9.5 32.9	0.4 1.0 — 12.5 — 0.3 0.1 2.1 2.3 0.8 19.5 9.0 9.0 14.8 32.8	1.1 1.9 0.1 1.3 0.1 1.3 3.9 0.5 4.2 0.9 5.5 19.8 19.6 3.6 17.8 41.0	0.3 3.4 2.2 1.7 1.0 1.2 5.8 1.8 0.8 4.7 1.2 4.9 28.9 28.3 4.7 10.0 43.0
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nil or rounded to zero (including null cells)
 (a) See paragraph 11 of the Explanatory Notes for details.

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	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	PYE	PYE	PYE	PYE	PYE	PYE	PYE	PYE	PYE
• • • • • • • • • • • • • • • • • • • •									
			20	04					
Academic staff	4 239	4 115	2 415	1 030	1 569	535	177	1 145	15 226
Other staff	2 576	1 492	1 804	484	1 599	123	21	977	9 075
Postgraduate students	10 165	8 660	5 295	2 442	3 317	730	155	1 742	32 508
Total	16 981	14 267	9 514	3 957	6 486	1 389	352	3 864	56 809
• • • • • • • • • • • • • • • • • • • •									
			20	02					
Academic staff	3 662	3 751	1 840	912	1 220	413	91	927	12 817
Other staff	2 288	957	1 129	493	757	98	16	1 094	6 832
Postgraduate students	9 536	7 961	5 083	2 155	3 121	672	130	1 304	29 963
Total	15 487	12 670	8 052	3 561	5 098	1 183	237	3 324	49 612

${\tt HUMAN\ RESOURCES\ DEVOTED\ TO\ R\&D,\ by\ location-by\ type\ of\ resource:\ \textbf{proportions}}$

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
	%	%	%	%	%	%	%	%	%
• • • • • • • • • • • • • • • • • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •
			20	0 4					
Academic staff	25.0	28.8	25.4	26.0	24.2	38.5	50.1	29.6	26.8
Other staff	15.2	10.5	19.0	12.2	24.7	8.9	5.8	25.3	16.0
Postgraduate students	59.9	60.7	55.7	61.7	51.2	52.6	44.0	45.1	57.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
• • • • • • • • • • • • • • • • • • • •		• • • • •	• • • • •	• • • • •	• • • • •	• • • • •			
			20	02					
Academic staff	23.6	29.6	22.9	25.6	23.9	34.9	38.5	27.9	25.8
Other staff	14.8	7.6	14.0	13.9	14.8	8.3	6.6	32.9	13.8
Postgraduate students	61.6	62.8	63.1	60.5	61.2	56.8	54.9	39.2	60.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

DATA SOURCES

- **1** The statistics presented in this publication have been compiled from data collected from universities in the Survey of Research and Experimental Development in respect of the year ended 31 December 2004.
- **2** GDP and GSP figures used to derive HERD/GDP and HERD/GSP ratios are current at the time of manuscript finalisation and are referenced in the tables below.

GROSS DOMESTIC PRODUCT

1994-95 1996-97 1998-99 2000-01 2002-03 2004-05 \$m \$m \$m \$m \$m \$m \$m \$m\$

GDP 486 578 545 736 607 863 689 340 782 798 893 704

Source: National Income, Expenditure and Product, March Quarter 2006 (cat. no. 5206.0)

GROSS STATE PRODUCT

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
2002–03 2004–05	275 358 305 437	197 266 222 022	132 432 158 506		85 470 100 900	13 502 16 114	9 042 10 418	16 091 18 306

Source: Australian National Accounts, State Accounts (cat. no. 5220.0)

- **3** Financial year GDP and GSP data are used to ensure consistency with ratios published in *Research and Experimental Development, All Sector Summary, Australia* (cat. no. 8112.0).
- **4** R&D as collected by the ABS is defined in accordance with the OECD standard as comprising 'creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications'.
- **5** Types of R&D activity comprise pure basic research, strategic basic research, applied research and experimental development. See the Glossary for further details. Data in this classification are subjectively allocated by data providers at the time of reporting, using OECD/ABS definitions. The ABS makes every effort to ensure correct and consistent interpretation and reporting of these data and applies consistent processing methodologies. Analysts using these data should bear the original subjectivity in mind.
- **6** For a more comprehensive interpretation of the definition of R&D activity, see the Australian Standard Research Classification (ASRC), 1998 (cat. no. 1297.0) or refer to the OECD publication Proposed Standard Practice for Surveys on Research and Experimental Development (Frascati Manual 2002), OECD, Paris 2003.

SCOPE AND COVERAGE

DEFINITIONS

- **7** The OECD definition of the higher education sector encompasses universities and other institutions of post-secondary education regardless of their source of finance or legal status.
- **8** The ABS R&D survey of the higher education sector covers Australian universities but excludes other higher education institutions, such as colleges of Technical and Further Education. All research performed by universities in the reference period irrespective of the source of funds is in scope, including research performed:
 - as a participant in unincorporated Cooperative Research Centres (CRCs); and
 - on contract for other legal entities (such as private business or incorporated CRCs).

16

EXPLANATORY NOTES continued

SCOPE AND COVERAGE continued

9 R&D performed on a university campus by other legal entities or their employees is excluded from the survey. For example, R&D performed by incorporated CRCs, university controlled entities or employees of other organisations. The R&D performed by these entities and their employees will be in scope of the relevant R&D sector (Business, Government or Private non-profit).

LOCATION OF R&D

10 Data shown in this publication represent the main campus or head office location of the reporting University, with the exception of the Australian Defence Force Academy (ADFA) which is shown against the Australian Capital Territory.

SOCIO-ECONOMIC OBJECTIVE (SEO) AND RESEARCH FIELDS, COURSES AND DISCIPLINES (RFCD)

11 Statistics classified by SEO and RFCD have been collected and presented in this publication. Data are subjectively allocated by universities at the time of reporting. See the Technical Note on Reliability of Statistics for further detail. For more information on these classifications, see the *Australian Standard Research Classification (ASRC)*, *1998* (cat. no. 1297.0).

DERIVED DATA

- **12** In compiling their R&D statistics, universities were asked to provide data on:
 - direct staff inputs (i.e. staff directly performing R&D);
 - direct expenditure (i.e. expenses directly attributable to R&D); and
 - other staff and resources supporting, but not directly performing, R&D.
- **13** To obtain the total cost of the R&D undertaken, indirect (overhead) expenditure needs to be added to direct expenditure on R&D. As some universities included an estimate of overheads in reported data, no further estimation was required. In cases where data did not include overheads, an estimate was calculated by either:
- the university identifying the value of R&D related overhead costs to be apportioned across relevant projects/schools; or
- the ABS, using a methodology agreed to by the universities and the Australian Vice-Chancellors' Committee. For more information contact the ABS.

CHAIN VOLUME MEASURES

14 The chain volume measures appearing in this publication are annually reweighted chain Laspeyres indexes referenced to the current price values in a chosen reference year (currently 2004). They can be thought of as current price values re-expressed in (i.e. based on) the prices of the previous year and linked together to form continuous time series. They are formed in a multi-stage process of which the major steps are described in Section 15 of the information paper *Introduction of Chain Volume Measures in the Australian National Accounts* (cat. no. 5248.0).

RELATED PUBLICATIONS

- **15** Users may also wish to refer to the following publications:
 - Australian Bureau of Statistics 1998, *Australian Standard Research Classification* (ASRC), cat. no. 1297.0, ABS, Canberra
 - Australian Bureau of Statistics 2004, *Research and Experimental Development, All Sector Summary, Australia, 2002–03*, cat. no. 8112.0, ABS, Canberra
 - Australian Bureau of Statistics 2005, *Research and Experimental Development, Businesses, Australia, 2003–04*, cat. no. 8104.0, ABS, Canberra
 - Australian Bureau of Statistics 2004, Research and Experimental Development, Government and Private Non-Profit Organisations, Australia, 2002–03, cat. no. 8109.0, ABS, Canberra
 - Organisation for Economic Co-operation and Development 2005, *Main Science and Technology Indicators 2005/2*, OECD, Paris
 - Organisation for Economic Co-operation and Development 2003, *Proposed Standard Practice for Surveys on Research and Experimental Development (Frascati Manual' 2002*), OECD, Paris.

EXPLANATORY NOTES continued

RELATED	PUBLICATIONS
continued	

16 Current publications and other products released by the ABS are listed in the *Catalogue of Publications and Products* cat. no. 1101.0. The Catalogue is available from any ABS office or the ABS web site http://www.abs.gov.au. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

ABS DATA AVAILABLE ON REQUEST

17 As well as the statistics included in this and related publications, the ABS may have other relevant data available on request. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

ROUNDING

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

TECHNICAL NOTE DATA QUALITY

NON-SAMPLING ERROR

- **1** Non-sampling errors may arise as a result of errors in the reporting or processing of data. These errors can be introduced through inadequacies in the collection instrument, treatment of non-response, inaccurate reporting by providers, errors in the application of survey procedures, incorrect recording of answers and errors in data capture and processing.
- **2** The extent to which non-sampling error affects the results is difficult to measure. Every effort is made to minimise non-sampling error by careful design and testing of the collection instrument, the use of efficient operating procedures and systems, and the use of appropriate methodologies.

Reliability of Statistics

- **3** When interpreting the statistics in this publication, the reliability of the estimates may be affected by the following specific non-sampling errors:
 - Many universities provided estimates due to a lack of separately recorded data on R&D activity.
 - Data were subjectively classified, by universities, to Research fields, Socio-economic objectives and Type of activity at the time of reporting. Some universities may have experienced difficulty in classifying their R&D projects. The ABS makes every effort to ensure correct and consistent interpretation and reporting of these data by applying consistent processing methodologies.
 - Estimation of overhead R&D expenditure varied across universities.

GLOSSARY

Applied research Original work undertaken primarily to acquire new knowledge with a specific application

in view. It is undertaken either to determine possible uses for the findings of basic research or to determine new methods or ways of achieving some specific and

predetermined objectives.

Capital expenditure
Expenditure on the acquisition of fixed tangible assets such as land, buildings, vehicles,

plant, machinery and equipment attributable to R&D activity.

Current expenditure Expenditure on direct labour costs, scholarships, materials, fuels, rent and hiring, repairs

and maintenance, data processing, etc. and the proportion of expenditure on general

services and overheads which is attributable to R&D activity.

Experimental development Systematic work, using existing knowledge gained from research or practical experience

for the purpose of creating new or improved products/processes.

Human resources devoted to The effort of researchers, technicians and other staff directly involved with R&D activity.

Overhead staff (e.g. administrative and general service employees such as personnel officers, janitors, etc.) whose work indirectly supports R&D, are excluded.

Labour costs Expenditure relating to: wages and salaries; overtime earnings; penalty payments; shift

allowances; employer contributions into superannuation; fringe benefits and payroll taxes; severance, termination and redundancy payments; workers' compensation premiums/costs; provisions for employee entitlements; salaries and fees of directors and executives; retainers and commissions of persons who received a retainer; bonuses;

annual and other types of paid leave.

Other staff Technicians, skilled/unskilled craftpersons, secretarial and clerical staff directly involved

in R&D activity.

Person years of effort
One person year of effort is equal to a full time employee whose time is wholly devoted

to R&D for a whole year.

looking for long term benefits other than the advancement of knowledge.

R&D activity Systematic investigation or experimentation involving innovation or technical risk, the

outcome of which is new knowledge, with or without a specific practical application, or new or improved products, processes, materials, devices or services. R&D activity extends to modifications to existing products/processes. R&D activity ceases and

pre-production begins when work is no longer experimental.

Research field Reflects the field of research in which the R&D activity was performed. The RFCD

classification is primarily structured around disciplines or activities. It describes the

nature of the R&D which is being examined.

Scholarships Comprises expenditure by the university on scholarships for research higher degrees.

Socio-economic objective Reflects the purpose of the R&D as perceived by the data provider. The SEO

classification consists of discrete economic, social, technological or scientific domains for

identifying the principal purpose of the R&D.

Strategic basic research Experimental and theoretical work undertaken to acquire new knowledge directed into

specified broad areas in the expectation of useful discoveries. It provides the broad base

of knowledge for the solution of recognised practical problems.

Type of R&D activity This classification allows R&D activity to be categorised according to the type of research

effort, namely, pure basic research, strategic basic research, applied research and

experimental development.

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2004 (Reissue)

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ISSN 0729 171X

RRP \$24.00