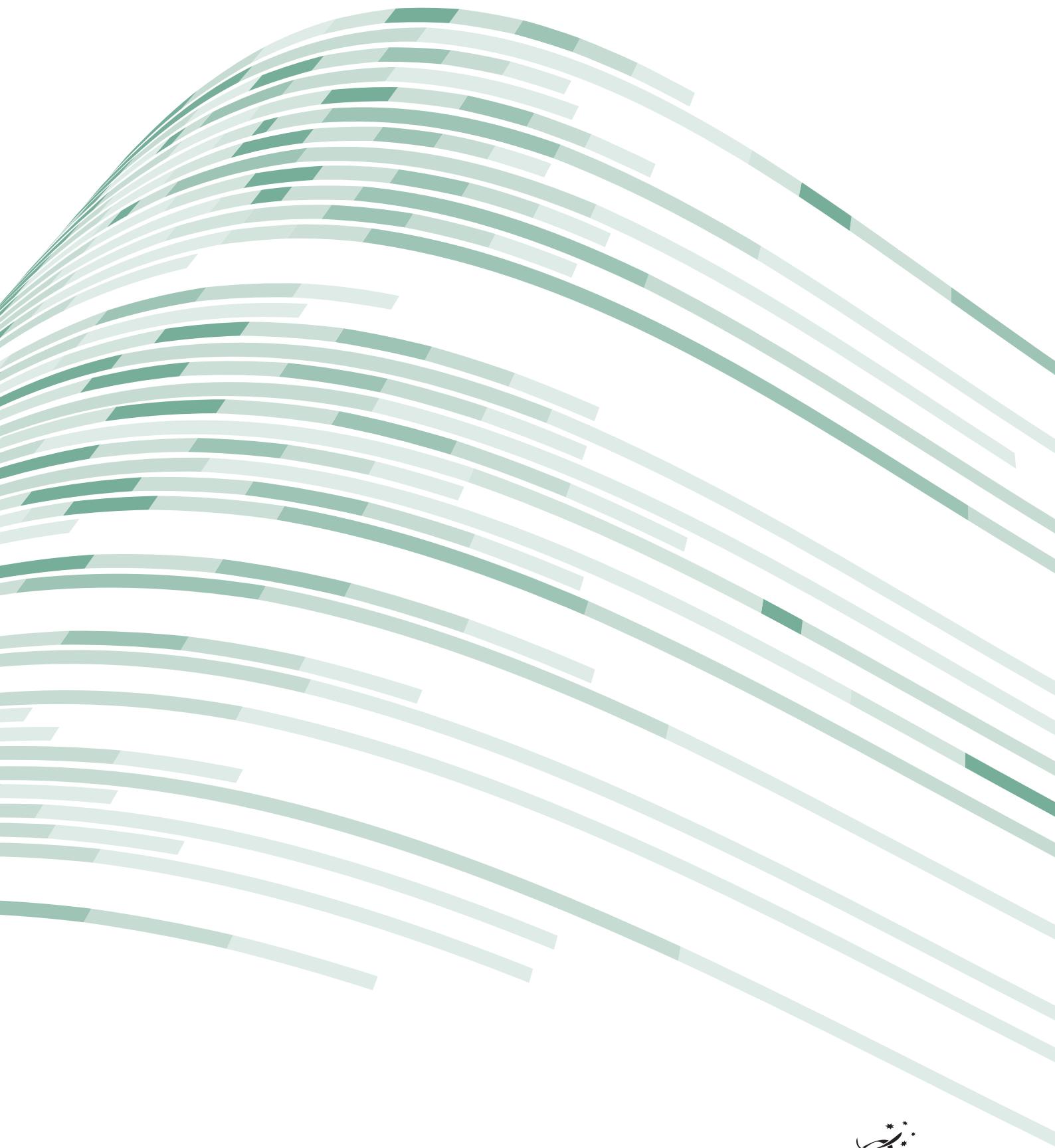


GRADUATE SALARIES 2010

A report on the earnings of new Australian
graduates in their first full-time employment



Graduate Salaries 2010

A REPORT ON THE EARNINGS OF NEW AUSTRALIAN
GRADUATES IN THEIR FIRST FULL-TIME EMPLOYMENT

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INTRODUCTION

Welcome to Graduate Salaries 2010, the 25th edition of the annual report of the salaries of recent Australian higher education graduates. This series of reports (in a new condensed format for 2010) presents baseline information regarding the median starting salaries of bachelor degree graduates

aged less than 25 and in their first full-time employment in Australia, along with comparative salary figures from other cohorts

Our new condensed format is less text-heavy and retains only the most popular and relevant tables and figures from the original. The full gamut of tables and figures

from previous editions of the Graduate Salaries reports for 2010 are available for download in Microsoft Excel format from the Graduate Careers Australia website at www.graduatecareers.com.au/Research/ResearchReports/GraduateSalaries.

A number of these tables and figures are discussed but not presented in this report. These supplementary tables and figures have been labelled accordingly within this report, and contain hyperlinks to the corresponding web page containing these tables and figures.

When interpreting the figures contained within this report it is important to keep in mind that graduate salaries may potentially be influenced by domestic labour market

forces as well as national and global economic trends, and are therefore not necessarily reflective of the quality of graduates in terms of their academic results or employability skills.

It should also be noted that first-year starting salaries are not necessarily indicative of graduates earning potential in later years of their careers, as longer-term salary growth in different sectors of employment may be influenced by labour market and other economic factors, career choices or opportunities, geographical factors and, for graduates in certain fields, professional accreditation or registration requirements. A longer-term investigation of graduate salary growth is presented in *Beyond Graduation 2009*, a detailed investigation conducted by GCA into the activities and outcomes of graduates from Australian higher education institutions approximately three years after the completion of their studies (GCA 2010a).

This report does not attempt to provide a cost-benefit analysis of obtaining a higher education qualification¹. A purely financial assessment of undertaking higher education would need to account for a wide range of costs, such as course fees, textbooks, living expenses, transport and childcare, as well as the opportunity costs resulting from the income forgone whilst studying. Moreover, such an analysis would fail to account for the personal growth and fulfilment stemming from a higher education that may be, to some individuals, a more powerful motivator to study than any potential for financial benefit or labour market advantage.

Throughout this report, we refer often to “Explanatory Notes”. These notes both act as a guide to some of the discussion contained within this report and as a glossary to some of the terms and concepts,

including of the use of Male Average Weekly Earning (MAWE), interpretation of the statistical significance tests, fields of education and the methodology of the Australian Graduate Survey (AGS). The “Explanatory Notes” can be found at: www.graduatecareers.com.au/Research/ResearchReports/GraduateSalaries

References to Australian Bureau of Statistics (ABS) publications are included throughout this report to provide comparative population benchmarks of salary growth; they should not be interpreted as prescriptive explanations of graduate salary levels. As in previous editions of this report, MAWE is used as the primary long-term benchmark of salary levels in the wider Australian population. (Average weekly earnings figures for females have only been collected by the ABS since 1981.) When appropriate, annualised average weekly earnings figures for males, females and all persons are included separately to permit more detailed comparisons between graduate salaries and earnings in the wider Australian population.

While the AGS is conducted as a census, whereby every graduate from an Australian higher education institution is approached for the purposes of data collection, the extent of non-response to the survey² means that it is reasonable, and indeed prudent, to use statistical methods to analyse the resulting sample of responses. Statistical significance tests are included in tables which examine whether key salary indicators, such as median salaries, working hours and hourly pay rates differ significantly between groups of interest.

¹ Recent studies have estimated that the average private rate of return of a university education in Australia is anywhere from 9.4 per cent (Chapman & Salvage 1997) to 14.5 per cent (Borland 2002), although this can vary considerably based on both the level and field of education of the qualification obtained.

² Overall, 39.2 per cent of the Australian resident graduates surveyed did not respond to the Graduate Destination Survey (GDS) component of the 2009 AGS (GCA 2010b).

1.0

GRADUATE STARTING SALARIES

In 2010, the median starting salary for bachelor degree graduates aged less than 25 and in their first full-time employment rose to \$49,000 from \$48,000 in 2009.

- The median starting salary for male graduates remained at \$50,000 for 2010.
- The median starting salary for female graduates increased by \$1,000 to \$48,000 (see *Table 1* on page 3).
- Dentistry remained the highest-paid field of education at \$75,000, followed by:
 - optometry (\$70,000)
 - engineering (\$56,000)
 - medicine (\$55,000).
- The largest growth in median starting salary between 2009 and 2010 was observed in the fields of:
 - optometry (\$5,500)
 - dentistry (\$5,000)
 - paramedical studies (\$3,000).

When examining differences in median graduate starting salary (GSS) by sex, statistically significant differences¹ were observed in 4 of the 23 fields of education under examination, all of which showed a male pay advantage (although in the case of paramedical studies graduates this pay advantage was negligible).

- Architecture and building graduates exhibited the largest (statistically significant) difference, with males earning a median starting salary \$5,000 greater than their female counterparts, followed by:
 - economics and business graduates (\$4,700)
 - law graduates (\$2,600)
 - paramedical studies (\$500).

When examining differences in median GSS by sector of employment, statistically significant differences were observed in 15 of

the 23 fields of education under examination. Within these fields there was evidence of some very wide salary ranges, with 10 of these fields exhibiting median salary ranges of at least \$10,000 between the lowest and highest ranked sector of employment.

- The widest median salary range was observed for humanities graduates (\$14,700), with graduates employed in the industry and commerce sector earning the lowest humanities median starting salary (\$39,000) and graduates employed in the schools sector earning the highest (\$53,700).
- Art and design, medicine and social work graduates all exhibited salary ranges of \$14,000 between their lowest and highest starting salaries.

Considerable differences were also observed when examining median GSS for graduates from particular sectors of employment within different fields of education (although this is hardly surprising considering that, in many cases, different fields of education lead to substantially different occupational pathways).

- In the Australian government sector, engineering graduates earned the highest median starting salary at \$56,000. Physical sciences graduates earned the lowest median starting salary in this sector (\$48,000), although this figure is based on a relatively small number of responses (n = 15) and should therefore be interpreted with a degree of caution.
- Law graduates earned the highest median starting salary in the state government sector (\$55,000), followed closely by

¹ A statistically significant result is unlikely to have occurred by chance. As such, a statistically significant difference observed in the AGS sample can be reliably inferred to exist in the overall graduate population. For more information, please see explanatory notes at www.graduatecareers.com.au/Research/ResearchReports/GraduateSalaries

In 2010, the median starting salary for bachelor degree graduates aged less than 25 and in their first full-time employment rose to \$49,000 from \$48,000 in 2009.

Overall, graduates employed in the schools sector again earned the highest median starting salary (\$53,000) in 2010...

engineering graduates (\$54,400). Social sciences graduates earned the lowest median starting salary (\$45,000), although this was again based on a small number of responses (n = 13).

- Dentistry graduates had, by a sizeable margin, the highest median starting salary in the public health sector (\$63,000). Humanities graduates earned the lowest median starting salary (\$46,000), although this was also again based on a small number of responses (n = 13).
- Dentistry graduates also earned the highest median starting salary in the professional practice sector (\$80,000). This was the highest median starting salary for any field of education within any sector of employment. Architecture and building graduates earned the lowest median starting salary in this sector (\$35,000).
- In the industry and commerce sector, engineering graduates earned the highest median starting salary at \$57,000. Pharmacy graduates earned the lowest median starting salary (\$35,000), which was also the lowest median starting salary

for any field of education within any sector of employment.

- Psychology graduates had the highest median starting salaries in the schools sector (\$54,000). Economics and business graduates earned the lowest median starting salary (\$41,000).
- Psychology graduates also earned the highest median starting salary in the tertiary education sector (\$52,000), although this was again based on a small number of responses (n = 10). Humanities graduates earned the lowest median starting salary (\$46,500) in this sector.

Overall, graduates employed in the schools sector again earned the highest median starting salary (\$53,000) in 2010, followed by the Australian government sector (\$51,400) and the state government (\$51,000). These sectors were also the highest paying in 2009 and 2008. Also, as was also the case in recent years, graduates employed in the industry and commerce sector earned the lowest median starting salary (\$45,000).

t1: Median starting salaries of bachelor degree graduates in first full-time employment and aged less than 25, by field of education and sector of employment, 2010 (\$, '000, n)^{a†}

	Sector of employment									Sig. (Sector)	Sex		
	Aust. Govt	State Govt	Public Health	#Total Govt	Prof. Pract.	Ind./ Com.	Schools	Tert. Ed.	Total Ed.		M	F	Sig.
Accounting	51.0	47.0	†	50.0	45.0	45.0	49.0	†	49.0	**	45.0	45.0	45.0
	21	13	†	51	551	365	11	†	15		1,007	470	537
Agricultural Science	†	†	†	48.3	†	45.0	†	†	†		45.0	44.0	45.0
	†	†	†	13	†	99	†	†	†		137	66	71
Architecture & Building	†	†	†	53.0	35.0	45.0	†	†	†	**	45.0	45.0	40.0
	†	†	†	44	119	186	†	†	†		353	223	130
Art & Design	†	†	†	†	†	36.0	50.0	†	50.0	**	38.5	39.0	38.0
	†	†	†	†	†	179	49	†	50		257	85	172
Biological Sciences	†	46.9	50.0	50.0	42.0	40.0	53.0	50.0	52.0	**	45.0	44.5	45.0
	†	12	28	62	45	254	60	32	92		498	163	335
Computer Science	53.0	†	†	52.0	46.0	49.5	50.5	50.0	50.0		50.0	50.0	50.0
	21	†	†	42	20	249	18	13	31		361	311	50
Dentistry	†	†	63.0	61.0	80.0	†	†	†	†		75.0	71.5	75.0
	†	†	30	31	331	†	†	†	†		71	26	45
Earth Sciences	†	†	†	50.4	†	55.0	†	†	†		54.0	56.0	51.0
	†	†	†	14	†	71	†	†	†		97	65	32
Economics, Business	52.0	48.0	46.5	50.0	46.0	43.0	41.0	47.7	45.5	**	45.0	47.2	42.5
	88	43	14	196	229	1,467	29	28	57		2,072	843	1,229
Education	†	†	†	51.0	†	43.0	53.0	†	53.0	**	53.0	53.0	53.0
	†	†	†	14	†	66	1,180	†	1,186		1,305	223	1,082
Engineering	56.0	54.4	†	55.7	55.0	57.0	†	50.8	50.4	**	56.0	56.0	57.0
	66	33	†	135	298	641	†	13	16		1,117	929	188
Humanities	49.9	50.0	46.0	49.6	50.0	39.0	53.7	46.5	53.0	**	42.0	45.0	42.0
	70	32	13	155	96	573	94	28	117		1,039	261	778
Law	51.4	55.0	†	51.0	47.5	47.0	†	†	†	*	48.4	50.0	47.4
	27	11	†	72	184	79	†	†	†		360	104	256
Mathematics	†	†	†	†	†	52.0	†	†	†		52.0	52.0	52.0
	†	†	†	†	†	43	†	†	†		67	37	30
Medicine	†	†	55.0	55.0	†	41.0	†	†	†	**	55.0	55.5	55.0
	†	†	306	308	†	17	†	†	†		332	118	214
Optometry	†	†	†	†	70.0	†	†	†	†		70.0	70.0	70.0
	†	†	†	†	29	†	†	†	†		33	13	20
Paramedical Studies	†	52.4	50.0	50.0	50.0	48.0	50.0	50.6	50.0	**	50.0	50.0	49.5
	†	16	1,369	1,401	228	477	37	14	51		2,287	314	1,973
Pharmacy	†	†	48.0	48.0	†	35.0	†	†	†	**	36.0	35.0	36.0
	†	†	89	89	†	267	†	†	†		361	132	229
Physical Sciences	48.0	†	†	50.0	†	50.0	52.5	†	52.0		50.0	50.0	52.5
	15	†	†	25	†	46	12	†	19		101	61	40
Psychology	49.0	†	51.4	50.0	44.0	43.5	54.0	52.0	53.0	**	47.7	45.5	48.0
	10	†	22	56	19	115	33	10	43		290	38	252
Social Sciences	49.0	45.0	†	49.1	†	40.0	†	†	47.5	**	43.7	44.0	43.7
	12	13	†	46	†	52	†	†	12		130	40	90
Social Work	†	†	51.0	51.0	†	37.0	†	†	†	**	46.9	†	46.9
	†	†	21	34	†	12	†	†	†		140	8	132
Veterinary Science	†	†	†	†	45.0	†	†	†	†		45.0	†	44.0
	†	†	†	†	62	†	†	†	†		71	9	62
TOTAL	51.4	51.0	50.0	50.0	48.0	45.0	53.0	50.0	53.0		49.0	50.0	48.0
	364	226	1,904	2,804	1,953	5,268	1,549	172	1,721		12,486	4,539	7,947
Males	52.0	54.0	51.8	52.0	50.0	48.5	52.0	50.0	52.0				
	192	88	322	745	867	2,379	286	63	349				
Females	50.3	50.0	50.0	50.0	46.0	42.0	53.0	48.0	53.0				
	172	138	1,582	2,059	1,086	2,889	1,263	109	1,372				

^a See Graduate Salaries 2010 Explanatory Notes.

† Blank cells contain no, or fewer than 10 respondents.

‡ Total Gov't includes local government, which is not listed separately.

§ TOTAL includes the category/other employers not elsewhere indicated (including non-profit employers), which is not listed separately.

* = difference statistically significant at 5 per cent level; ** = difference statistically significant at 1 per cent level

2.0

GRADUATE STARTING SALARIES AND AVERAGE WEEKLY EARNINGS

The annual rate of Male Average Weekly Earnings (MAWE) is used throughout this report as a population benchmark against which to compare movements in median graduate starting salaries (GSS)¹. At the time of the 2010 Graduate Destination Survey (GDS):

- Australian resident bachelor degree graduates who were aged less than 25 and in their first full-time employment in Australia earned a median starting salary of \$49,000.

◦ this was 79.8 per cent of MAWE in 2010 (\$61,400 - ABS 2010b) (*see Table 2*).

Since this series began in 1977, median GSS has fluctuated considerably relative to MAWE (*see Table 2*)².

- From the mid 1970s through to the mid 1990s, the median GSS declined steadily relative to MAWE.
- From the mid 1990s through to 2001, median GSS (relative to MAWE) experienced growth, peaking at 85.8 per cent in 2001 before declining to 79.7 per cent in 2006.
- From 2007, median GSS began to grow steadily again relative to MAWE; a trend which persisted through to the 2009 figure of 83.0 per cent.
- In 2010, this figure again declined to 79.8 per cent.

The 2010 median GSS of \$49,000 represented a 2.1 per cent (\$1,000) increase relative to the 2009 median GSS of \$48,000. Over the same period, MAWE grew by 6.2 per cent (\$3,600) which was more than the increase in median GSS in both nominal and percentage terms.

t2: Annual rate of male average weekly earnings (MAWE) and median starting salaries for all bachelor degree graduates aged less than 25 and in first full-time employment (GSS), 1977-2010 (\$,'000)^{a†}

	Annual rate of MAWE	Median GSS (All)	GSS (All) as % of MAWE
1977	9.6	9.6	100.0
1979	11.3	10.9	96.5
1980	12.5	11.8	94.4
1981	14.1	13.2	93.6
1982	16.5	14.9	90.3
1983	17.8	15.9	89.3
1984	19.6	17.2	87.8
1985	20.5	18.2	88.8
1986	22.1	19.8	89.6
1987	23.3	20.9	89.7
1988	24.9	23.0	92.4
1989	26.8	24.0	89.6
1990	28.7	24.9	86.8
1991	30.0	25.3	84.3
1992	31.1	25.7	82.6
1993	31.8	25.5	80.2
1994	32.5	26.0	80.0
1995	33.9	27.0	79.6
1996	34.8	28.0	80.5
1997	35.7	29.0	81.2
1998	37.2	30.0	80.6
1999	38.0	31.0	81.6
2000	39.2	33.0	84.2
2001	40.8	35.0	85.8
2002	42.9	35.5	82.7
2003	45.1	37.0	82.0
2004	46.6	38.0	81.6
2005	48.9	40.0	81.8
2006	51.2	40.8	79.7
2007	53.7	43.0	80.1
2008	55.6	45.0	80.9
2009	57.8	48.0	83.0
2010	61.4	49.0	79.8

^a See *Graduate Salaries 2010 Explanatory Notes*.

[†] Data from 1978 are incompatible with those from other years and have been excluded from the series.

1 See *Explanatory Notes* for a detailed discussion of the calculation and interpretation of MAWE figures.

2 In 1977, GSS was identical to MAWE (\$9,600).

When these figures are examined over time, the average annual increase in MAWE since 1977 has been 6.0 per cent, compared with an average annual increase in median GSS of 4.9 per cent. This shows that, over the long term, the growth in median GSS is lower than the growth in MAWE. This being said, it is important to note that average weekly earnings (for males and females) may be positively affected over time as the proportion of higher education graduates in the workforce increases. As the salaries of higher education graduates grow over time, average weekly earnings increase accordingly.

GSS AND AWE BY SEX

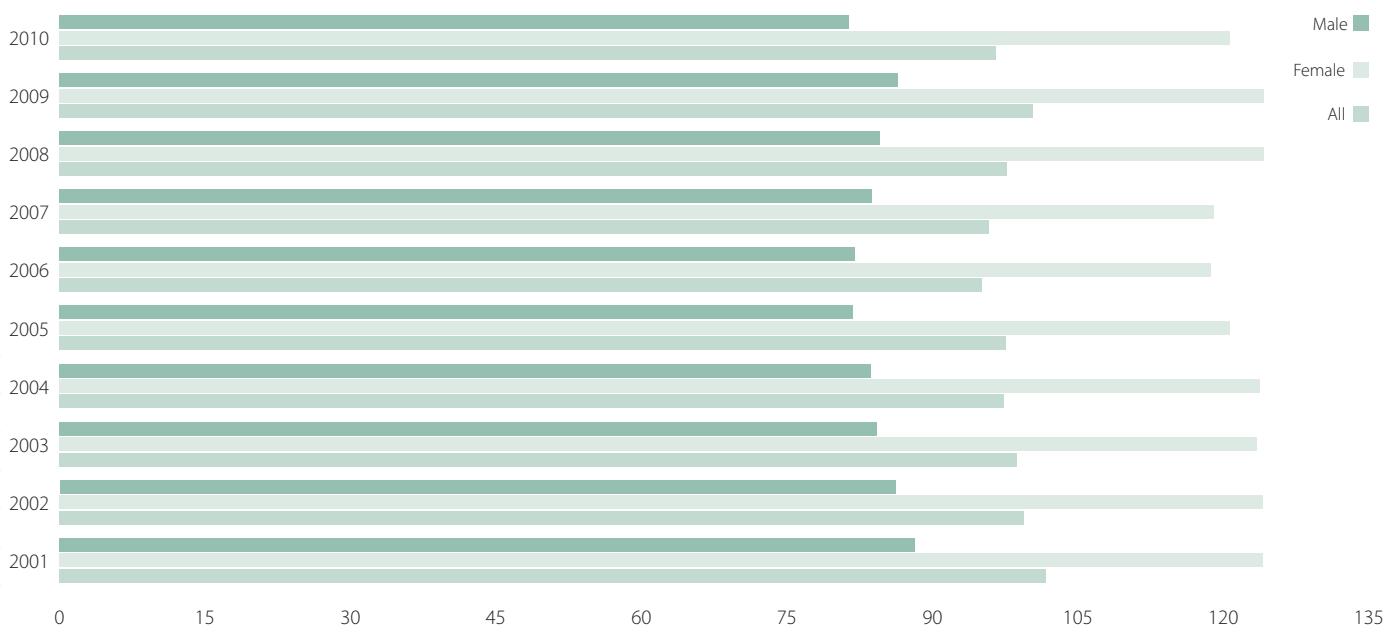
Expressing the median starting salary for females as a percentage of MAWE, we

note that the 2010 figure of 78.2 per cent represents a 3.1 percentage point decrease from 2009 (81.3 per cent). The 2010 median starting salary for males, expressed as a percentage of MAWE (81.4 per cent) was a notable decrease of 5.1 percentage points from the 2009 figure of 86.5 per cent (*see Supplementary Table B in Graduate Salaries 2010 Tables and Figures*).

When we examine the median GSS for females as a percentage of Female Average Weekly Earnings (FAWE), we see that the median female GSS was equal to 120.7 per cent of FAWE, down from 124.2 per cent in 2009 and 2008 (*see Figure 1*).

The median male GSS, as shown above, was equal to 81.4 per cent of MAWE, the lowest point in the past 10 years.

An examination of GSS and gender specific AWE over the past decade (*see Supplementary Figure C in Graduate Salaries 2010 Tables and Figures*) reveals that while median starting salaries for male graduates aged less than 25 and in their first full-time employment are considerably lower than average earnings for male employees in the wider Australian population, the situation is reversed for female graduates with median starting salaries for female graduates aged less than 25 and in their first full-time employment considerably higher than average earnings for female employees in the wider Australian population.



f1: Median starting salary for bachelor degree graduates aged less than 25 and in first full-time employment (GSS) as a percentage of average weekly earnings (AWE) by sex, 2001-10

3.0

IMPACT OF AGE AND EMPLOYMENT EXPERIENCE ON GRADUATE STARTING SALARIES

Older graduates (i.e. aged 25 and over) can be seen to be a different, much less homogenous cohort than those graduates aged less than 25 who went directly from secondary school to higher education with little or no previous full-time employment experience. They may be returning to study in order to gain qualifications that will allow them to advance within their current employment, or they may be returning to study with the intention of changing to a different job or a different career path altogether. Additionally, graduates aged 25 years and over and in their first full-time employment are likely to have been previously engaged only in part-time or casual employment.

EMPLOYMENT EXPERIENCE AND STARTING SALARIES

Median salaries for graduates aged 25 and over with previous full-time employment experience are typically higher than those for graduates aged less than 25 and in their first full-time employment (see Table 3). However, a direct comparison of salary levels between older graduates with previous full-time employment experience and younger graduates in their first full-time employment is confounded by the fact that it is unclear whether age or previous full-time employment experience is responsible for higher salary levels.

When comparing the salary levels of graduates aged 25 and over, both with and without previous full-time employment

experience, it is clear that while graduates with previous full-time employment experience do tend to earn higher median starting salaries than their counterparts in their first full-time employment, the differences tend to be minor.

As shown in Table 3:

- the median salary of those graduates aged 25 and over with previous full-time employment experience was \$2,000 (or 3.8 per cent) higher than the comparative group of graduates in their first full-time employment in 2010
- the pay advantage was more pronounced for males, with previous full-time employment experience earning male graduates aged 25 and over a \$5,000 premium in their median salary

t3: Summary of median salaries for bachelor degree graduates aged less than 25, and 25 and over, in first full-time employment and with previous full-time employment experience, 2001-10 (\$, '000)^a

	Aged 25 and over with previous full-time employment			Aged 25 and over in first full-time employment			Aged less than 25 and in first full-time employment		
	Male	Female	All	Male	Female	All	Male	Female	All
2001	40.0	36.5	38.0	40.0	35.0	37.5	36.0	34.0	35.0
2002	42.4	38.0	40.0	40.0	38.0	39.0	37.0	35.0	35.5
2003	42.0	40.0	40.0	42.0	38.6	40.0	38.0	36.3	37.0
2004	45.0	40.0	41.5	43.0	40.0	41.0	39.0	38.0	38.0
2005	45.5	42.0	43.0	43.0	40.1	42.0	40.0	39.0	40.0
2006	47.6	43.0	45.0	45.0	43.0	43.5	42.0	40.0	40.8
2007	50.0	45.0	46.4	46.0	43.0	45.0	45.0	42.0	43.0
2008	51.0	47.5	50.0	50.0	46.0	48.0	47.0	45.0	45.0
2009	55.0	50.0	52.0	52.0	48.8	50.0	50.0	47.0	48.0
2010	58.0	52.0	54.0	53.0	50.0	52.0	50.0	48.0	49.0

^a See Graduate Salaries 2010 Explanatory Notes.

- previous full-time employment experience earned female graduates aged 25 and over a \$2,000 premium in their median salary.

The majority of bachelor degree graduates aged 25 and over who are in full-time employment at the time of the GDS have some previous full-time employment experience behind them at the time of their survey (*see Supplementary Table D in Graduate Salaries 2010 Tables and Figures*).

In 2010:

- 74.2 per cent of full-time employed graduates aged 25 and over were not in their first full-time employment.
- female graduates aged 25 and over were more likely than their male counterparts to have previous full-time employment experience (75.4 per cent and 72.6 per cent respectively; a difference of 2.8 percentage points) (*see supplementary Table E in Graduate Salaries 2010 Tables and Figures*).

When examining the median salaries of graduates aged 25 and over by field of education, statistically significant differences based on their level of previous full-time employment experience were observed in only 12 of the 23 fields under examination, 11 of which revealed a definite pay advantage for graduates who had some previous full-time employment experience (*see supplementary Table D in Graduate Salaries 2010 Tables and Figures*).

- The largest difference based on previous full-time employment experience was observed for mathematics graduates, where those with previous full-time employment experience earned a median starting salary \$11,500 higher than those without previous experience, followed by:
 - economics and business, and architecture and building (\$10,000)
 - accounting (\$9,000).

A notable pay advantage, which paradoxically favoured graduates in their first full-time employment, was observed for dentistry graduates (\$6,200), but

this difference was not significant (*see supplementary Table D in Graduate Salaries 2010 Tables and Figures*).

While these salary figures alone are not sufficient to confirm a definite salary advantage for graduates with full-time employment experience, they do suggest that previous full-time employment experience is associated with higher median salaries for graduates from certain fields of education. It should also be noted that graduate salaries are likely to be influenced by a range of factors additional to previous employment experience (including, for example, the graduate's skills and abilities, the level of responsibility inherent in the role and fixed pay grades for particular roles within certain organisations) and that previous full-time experience in a field not directly relevant to their current employment may not provide graduates with a pay advantage relative to those graduates with no full-time employment experience.

When examining the median salaries of graduates aged 25 and over and with previous full-time employment experience by field of education (*see supplementary Table E in Graduate Salaries 2010 Tables and Figures*), statistically significant gender differences were observed in 11 of the 23 fields under examination. All of these significant differences revealed a male pay advantage (although in the case of education graduates this was negligible).

AGE AND STARTING SALARIES

By comparing the median starting salaries of bachelor degree graduates aged less than 25 and in their first full-time employment with those bachelor degree graduates aged 25 and over and also in their first full-time employment, any potential labour market advantage gained from prior full-time employment experience is largely negated. This permits any differences in median GSS to be investigated in relation to the age group of the graduate. It should be noted that the cohort of graduates aged 25

and over and with no previous full-time employment experience is relatively small ($n = 2,571$), which limits the number of field of education comparisons that can be made.

On average, it appears that older graduates do tend to earn higher median starting salaries than their younger counterparts, with graduates aged 25 and over and in their first full-time employment earning a median starting salary \$3,000 higher than their younger counterparts (*see supplementary Table E in Graduate Salaries 2010 Tables and Figures*).

This suggests that having previous full-time employment experience and being older can have a positive impact on median starting salaries for graduates from a number of fields of education. Graduates aged less than 25 who commenced their higher education immediately after completing secondary school may not have had the life experience, both professionally and personally, that older graduates possess. Moreover, graduates who returned to study at an older age may be more outcomes focused than their younger counterparts. Factors such as these are not easily quantifiable; however they may contribute to some older graduates securing higher median starting salaries.

Similar findings were observed in a longitudinal study of higher education graduates in the United Kingdom (Purcell, Wilton & Elias 2003), with graduates aged less than 25 typically earning less in their first full-time job after graduation than their older counterparts. When these same graduates were re-surveyed seven years later the situation was reversed: the cohort of 'younger' graduates were earning more than their older counterparts. This suggests that, while older graduates tend to earn a higher median starting salary, this does not necessarily guarantee that they will maintain this salary advantage throughout their careers. This would likely be affected by their job performance, professional development, long-term career choices and a range of other factors outside the scope of the GDS.

4.0

SALARIES BY LOCATION

In 2010, median starting salaries for bachelor degree graduates aged less than 25 and in their first full-time employment varied by up to \$2,500 based on the Australian State or Territory in which their employment was based (see Table 4). This represents a considerable decrease of \$4,500 from the 2009 median starting salary gap between States and Territories of \$7,000.

Graduates employed in New South Wales, Western Australia, Northern Territory and the Australian Capital Territory earned the highest median starting salaries of the Australian States and Territories in 2010 (\$50,000). This was followed by Queensland and South Australia (both on \$49,000) and Victoria (\$48,000).

Graduates employed in Tasmania again earned the lowest median starting salary (\$47,500).

Differences in median GSS between States and Territories may be attributable to a range of factors, including economic forces, such as the resources boom and the global economic downturn, as well as the availability of courses in particular geographic locations. For instance, the typically higher-paying fields of medicine and dentistry are not offered by higher education institutions in every State and Territory. This is exacerbated by the fact that a large proportion of the graduates who secured full-time employment by the

time of the 2010 AGS did so in the State or Territory in which they undertook their higher education (*see supplementary Table F in Graduate Salaries 2010 Tables and Figures*).

For bachelor degree graduates aged less than 25 and in their first full-time employment, the percentage in full-time employment in their State or Territory of study in 2010 was lowest for the Australian Capital Territory (72.3 per cent), followed closely by Tasmania (72.4 per cent) and Northern Territory (72.7 per cent).

The percentage of these graduates in full-time employment in their State or Territory of study was highest for Western Australia (87.4 per cent), followed by Victoria (86.6 per cent) and South Australia (85.4 per cent).

Statistically significant gender differences in median GSS were observed in five States and Territories (the exceptions were Tasmania, Northern Territory and Australian Capital Territory). All of these significant differences

t4: Median starting salaries for bachelor degree graduates aged less than 25 and in first full-time employment by State or Territory of employment, and comparison of all graduates to male average weekly earnings (MAWE) for that State or Territory, 2010 (\$,'000)^a

	Males	Females	All	Sig. [sex]	MAWE (State)	GSS as % of MAWE
NSW	50.0	48.0	50.0	**	61.2	81.7
Vic.	49.6	47.2	48.0	**	59.3	80.9
Qld	50.0	48.0	49.0	**	62.3	78.6
SA	50.0	48.9	49.0	**	54.7	89.6
WA	53.2	50.0	50.0	**	69.9	71.5
Tas.	48.0	47.5	47.5		49.0	96.9
NT	46.1	52.0	50.0		61.5	81.4
ACT	50.0	50.0	50.0		70.8	70.6
TOTAL	50.0	48.0	49.0		61.4	79.8

^a See Graduate Salaries 2010 Explanatory Notes.

* = difference statistically significant at 5 per cent level;

** = difference statistically significant at 1 per cent level

revealed a definite male pay advantage.

- The largest significant gender difference was observed for graduates employed in Western Australia, where males earned a median starting salary \$3,200 greater than females.
- The salary discrepancy was least between males and females in South Australia (only \$1,100 separated the two).

Differences in median GSS between States and Territories do not necessarily reflect differences in average earnings within the wider population for each State and Territory. A clearer picture of GSS in the economic and demographic context of each State and Territory can be obtained by examining median GSS as a percentage of MAWE within each State and Territory (see Table 5).

Table 5 compares median GSS to the annual rate of average weekly earnings (AWE) for males and females individually. These figures

should be interpreted with a degree of caution because the composition of the labour force may make some median GSS figures seem overly positive in comparison (*see Graduate Salaries 2010 Explanatory notes*).

In 2010, male graduates earned median starting salaries between 70.6 per cent of MAWE (in the Australian Capital Territory) and 98.0 per cent of MAWE (in Tasmania).

Median starting salaries for female graduates, on the other hand, exceeded FAWE in every State and Territory with the exception of the Australian Capital Territory. Female graduates in Tasmania earned the highest median starting salary relative to FAWE (136.9 per cent) while female graduates in the Australian Capital Territory earned the lowest starting salary relative to FAWE (95.1 per cent), as has also been the case in recent years.

When starting salaries for all bachelor degree graduates aged less than 25 and in their first

full-time employment are compared to AWE for all persons in their State or Territory of employment, relative graduate earnings range from 81.4 per cent of AWE in the Australian Capital Territory to 113.0 per cent of AWE in Tasmania.

Median starting salaries of graduates employed in regional areas were again higher than those for their counterparts employed in capital cities (*see supplementary Table G in Graduate Salaries 2010 Tables and Figures*).

- Female graduates employed in regional areas earned a median starting salary \$2,000 more than female graduates employed in capital cities, while male graduates employed in capital cities and regional areas earned the same median starting salary.
- A similar pattern has been observed every year since this series began in 2005; median starting salaries for male graduates are

t5: Median starting salaries for male, female and all bachelor degree graduates aged less than 25 and in first full-time employment by employment State or Territory, and comparison with AWE for that State or Territory, 2010 (\$, '000)^a

	Male		GSS Median Salary	MAWE (State)	Female		GSS Median Salary	FAWE (State)	All	
	GSS Median Salary	MAWE (State)			GSS as % of MAWE	GSS Median Salary			GSS as % of FAWE	GSS Median Salary
NSW	50.0	61.2	81.7	48.0	41.3	116.2	50.0	51.4	97.3	
Vic.	49.6	59.3	83.5	47.2	38.3	123.3	48.0	48.9	98.3	
Qld	50.0	62.3	80.2	48.0	39.8	120.6	49.0	51.2	95.7	
SA	50.0	54.7	91.5	48.9	36.7	133.2	49.0	45.5	107.6	
WA	53.2	69.9	76.1	50.0	38.5	130.0	50.0	55.0	90.9	
Tas.	48.0	49.0	98.0	47.5	34.7	136.9	47.5	42.0	113.0	
NT	46.1	61.5	75.0	52.0	46.1	112.9	50.0	53.7	93.1	
ACT	50.0	70.8	70.6	50.0	52.6	95.1	50.0	61.4	81.4	

^a See *Graduate Salaries 2010 Explanatory Notes*.

largely comparable between capital cities and regional areas, while median salaries for female graduates are consistently, albeit marginally, higher for those graduates employed in regional areas.

When examined by field of education, statistically significant differences in GSS based on whether graduates were employed in capital cities or regional areas were observed in 9 of the 22 fields of education under examination that contained a sufficient number of responses to facilitate comparisons.

When examined over time (see Table 6), it can be seen that the greatest difference in median starting salaries between capital cities and regional areas in the past decade was observed 2006, when median capital city GSS fell to 95.2 per cent of median regional area GSS. The value of a median

capital city GSS only exceeded the value of a median regional area GSS once in this eleven-year period (in 2001, with a value of 100.9 per cent).

The situation is different, however, when examined by sex. For the past decade, the median starting salary for female graduates employed in regional areas has consistently exceeded the median starting salary for female graduates employed in capital cities, with relative values of a median capital city GSS ranging from 95.2 per cent of a median regional area GSS in 2004 and 2006 to 97.8 per cent in 2008.

Conversely, the median starting salary for male graduates employed in regional areas has only exceeded the median starting salary for male graduates employed in capital cities for two years out of the last ten (in 2004 and

2005, with values of 98.7 per cent and 99.6 per cent respectively). A median capital city GSS for males is typically equal (or only slightly higher) to the corresponding regional area GSS, although it did reach as high as 102.9 per cent in 2000 and 2001.

When comparing GSS between capital cities and regional areas, it is important to note that the majority of corporate head offices are located in capital cities (particularly Sydney and Melbourne), as well as the fact that graduates from certain fields may be paid a salary loading to work in more remote areas. This may contribute to the relatively high median starting salaries earned by graduates employed in the Northern Territory and Western Australia and may also help to account for the higher overall median starting salary earned by graduates employed in regional areas.

t6: Median starting salaries of bachelor degree graduates in first full-time employment and aged less than 25, by capital city / regional area, 2000-10 (\$, '000)^a

	Males			Females			All			Capital as % of regional		
	Capital City	Regional	Total	Capital as % of regional	Capital City	Regional	Total	Capital as % of regional	Capital City	Regional	Total	
2000	35.0	34.0	34.5	102.9	32.0	33.1	32.0	96.6	32.5	33.5	33.0	97.0
2001	36.0	35.0	36.0	102.9	33.6	34.5	34.0	97.4	35.0	34.7	35.0	100.9
2002	37.0	37.0	37.0	100.1	35.0	36.0	35.0	97.2	35.4	36.0	35.5	98.2
2003	38.0	38.0	38.0	100.0	36.0	37.0	36.3	97.3	36.5	37.6	37.0	97.2
2004	39.0	39.5	39.0	98.7	37.0	38.9	38.0	95.2	38.0	39.0	38.0	97.4
2005	40.0	40.1	40.0	99.6	38.5	40.0	39.0	96.3	39.5	40.0	40.0	98.8
2006	42.0	42.0	42.0	100.0	40.0	42.0	40.0	95.2	40.0	42.0	40.8	95.2
2007	45.0	45.0	45.0	100.0	42.0	43.0	42.0	97.7	43.0	43.5	43.0	98.9
2008	47.1	47.0	47.0	100.3	45.0	46.0	45.0	97.8	45.0	46.0	45.0	97.8
2009	50.0	50.0	50.0	100.0	46.0	48.0	47.0	95.8	47.5	48.0	48.0	99.0
2010	50.0	50.0	50.0	100.0	48.0	50.0	48.0	96.0	48.8	50.0	49.0	97.7

^a See Graduate Salaries 2010 Explanatory Notes.

5.0

SALARY RANKINGS

t7: Fields of education ranked according to median starting salary for bachelor degree^a graduates aged less than 25 in first full-time employment, 2010 (\$, '000)^b

	Median salary in 2010 (\$, '000)	No. of graduates in 2010	Rank in 2010
Dentistry	75.0	71	1
Optometry	70.0	33	2
Engineering	56.0	1,117	3
Medicine	55.0	332	4
Earth Sciences	54.0	97	5
Education	53.0	1,305	6
Mathematics	52.0	67	7
Computer Science	50.0	361	8
Paramedical Studies	50.0	2,287	8
Physical Sciences	50.0	101	8
Law	48.4	360	11
Psychology	47.7	290	12
Social Work	46.9	140	13
Accounting	45.0	1,007	14
Agricultural Science	45.0	137	14
Architecture & Building	45.0	353	14
Biological Sciences	45.0	498	14
Economics, Business	45.0	2,072	14
Veterinary Science	45.0	71	14
Social Sciences	43.7	130	20
Humanities	42.0	1,039	21
Art & Design	38.5	257	22
Pharmacy	36.0	361	23

^a See Graduate Salaries 2010 Explanatory Notes.

Ranking fields of education by median graduate starting salary (GSS) provides a useful basis for comparing salary data, both in the current year and over the long term. Table 7 ranks fields of education from highest to lowest (1 to 23) according to its median GSS. See *supplementary Table H in Graduate Salaries 2010 Tables and Figures* for similar rankings for the period 1977-2009.

The majority of the fields of education under examination have shown a high level of stability in rankings over the past three decades. The top-ranked fields of dentistry, optometry, engineering and medicine have been ranked consistently highly throughout this period, while the lower-ranked fields of art and design and pharmacy have also maintained consistent rankings over the years (see *supplementary Table H in Graduate Salaries 2010 Tables and Figures*).

When considering the rankings of the fields of education, the difference in median GSS between the highest-ranked field (dentistry) and the lowest-ranked field (pharmacy) was \$39,000; marginally higher than the difference of \$35,000 between these same two fields in 2009 (see *supplementary Table H in Graduate Salaries 2010 Tables and Figures*).

- The difference in median GSS in the upper half of the fields was \$26,600, between top-ranked dentistry (\$75,000) and 11th ranked law (\$48,400).
- The difference in median GSS for the remaining lower-ranked fields was \$11,700, between psychology (ranked 12th at \$47,700) and bottom-ranked pharmacy (\$36,000).

It should be noted that median salary rankings, while useful, can also be somewhat misleading. Graduate salary data collected via the GDS can potentially

include both overtime and above-award payments. This means that while median salary levels as reported do accurately reflect real graduate earnings at the time of the survey, they do not necessarily reflect award wage levels (where these may be in place).

When fields of education are ranked according to median hourly rate (calculated by dividing reported earnings by reported working hours), some notable differences between the respective rankings by median GSS and hourly rate are evident (*see Table 8*).

- While medicine graduates were ranked 4th in terms of their median GSS, they were ranked 12th in terms of their median hourly rate, working an average of 47 hours per week in 2010 at a median hourly rate of \$23.10 per hour.
 - This again represented the highest average number of hours worked for any field of education in 2010.
- While social work graduates were ranked 13th in terms of their median GSS, they were ranked 8th in terms of their median hourly rate. In 2010 they worked an average of 37 hours per week at a median hourly rate of \$24.30.

The average number of hours worked by graduates has remained remarkably stable over the past 20 years, with the average number of working hours per week fluctuating between 40 and 41 since 1991 (GCA 2004-2010; GCCA 1990-2003).

t8: Fields of education ranked according to calculated hourly rate for bachelor degree graduates aged less than 25 and in first full-time employment, 2010^a

2010 rank by hourly rate (2009 rank)	Mean hours	Hourly rate (\$)	Median GSS (\$, '000)	Rank by median GSS
1(1) Dentistry	38	36.1	75.0	1
2(2) Optometry	38	34.7	70.0	2
3(3) Engineering	41	26.9	56.0	3
4(5) Earth Sciences	43	25.9	54.0	5
5(6) Education	40	25.5	53.0	6
6(4) Mathematics	40	25.0	52.0	7
6(9) Physical Sciences	40	25.0	50.0	8
8(11) Social Work	37	24.3	46.9	13
9(9) Paramedical Studies	39	24.0	50.0	8
9(7) Computer Science	39	24.0	50.0	8
11(12) Psychology	39	23.3	47.7	12
12(16) Medicine	47	23.1	55.0	4
12(8) Law	42	23.1	48.4	11
14(14) Biological Sciences	39	22.2	45.0	14
15(12) Accounting	39	22.0	45.0	14
16(16) Social Sciences	38	21.7	43.7	20
17(14) Economics, Business	40	21.6	45.0	14
17(19) Agricultural Science	42	21.6	45.0	14
19(20) Humanities	40	20.8	42.0	21
20(21) Veterinary Science	41	20.7	45.0	14
21(18) Architecture & Building	41	20.2	45.0	14
22(22) Art & Design	39	19.2	38.5	22
23(23) Pharmacy	39	17.7	36.0	23
Male	41	24.0		
Female	40	23.1		
All	40	23.4		

^a See Graduate Salaries 2010 Explanatory Notes.

6.0

SALARY GROWTH

t9: Growth in male average weekly earnings (MAWE) relative to 1977 MAWE, growth in median starting salaries for bachelor degree graduates aged less than 25 and in first full-time employment (GSS) relative to 1977 GSS, 1977-2010 (%)^{a†}

	MAWE as % of 1977 MAWE	GSS as % of 1977 GSS	Difference (percentage points)
1977	100.0	100.0	0.0
1979	117.7	113.5	4.2
1980	130.2	122.9	7.3
1981	146.9	137.5	9.4
1982	171.9	155.2	16.7
1983	185.4	165.6	19.8
1984	204.2	179.2	25.0
1985	213.5	189.6	23.9
1986	230.2	206.3	23.9
1987	242.7	217.7	25.0
1988	259.4	239.6	19.8
1989	279.2	250.0	29.2
1990	299.0	259.4	39.6
1991	312.5	263.5	49.0
1992	324.0	267.7	56.3
1993	331.3	265.6	65.7
1994	338.5	270.8	67.7
1995	353.1	281.3	71.8
1996	362.5	291.7	70.8
1997	372.9	302.1	70.8
1998	387.5	312.5	75.0
1999	395.8	322.9	72.9
2000	408.3	343.8	64.5
2001	425.0	364.6	60.4
2002	446.0	369.8	76.2
2003	469.8	385.4	84.4
2004	485.4	395.8	89.6
2005	509.4	416.7	92.7
2006	533.3	425.0	108.3
2007	559.4	447.9	111.5
2008	579.2	468.8	110.4
2009	601.9	500.0	101.9
2010	639.7	510.4	129.3

^a See Graduate Salaries 2010 Explanatory Notes.

[†] Data from 1978 are incompatible with those from other years and have been excluded from the series.

¹ Median GSS and MAWE for 1977 are represented as 100.0 per cent in each respective growth index.

By comparing the median GSS in 2010 as a percentage of the median GSS in 1977 and MAWE in 2010 as a percentage of MAWE in 1977, the growth in median GSS can be measured over time against a common benchmark¹. (It is important to note that this analysis does not address the impact of consumer price inflation on salary levels and is based solely on nominal growth in median GSS and MAWE over time.)

In 2010, the median GSS was equivalent to 510.4 per cent of the median GSS in 1977, while MAWE in 2010 was equivalent to 639.7 per cent of MAWE in 1977 (see Table 9).

Since 1977, MAWE has grown at a greater rate than the median GSS, with the difference between the two trending higher over time (although the two began converging, albeit slightly, in 2008). In 2010, there was a difference of 129.3 percentage points between the GSS and MAWE growth indices; the highest gap recorded since the beginning of this series.

Examining field of education differences (see supplementary Table J in Graduate Salaries 2010 Tables and Figures), we see:

- the median starting salary for law graduates in 2010 was equivalent to 849.1 per cent of the median starting salary for law graduates in 1977, compared with an average of 510.4 per cent across all fields of education
- that with MAWE in 2010 equivalent to 639.7 per cent of MAWE in 1977, law continued to be the only field of education in which growth in the median GSS exceeded that of MAWE for this thirty-two year period.

“Relative to 1977, graduates employed in the professional and private practice sector have experienced the highest level of growth in their median starting salary...”

Other fields of education that exhibited greater than average growth in median GSS over the period 1977-2010 were:

- earth sciences (556.7 per cent)
- engineering (554.5 per cent)
- mathematics (547.4 per cent)
- physical sciences (531.9 per cent)
- education (530.0 per cent)
- accounting, and architecture and building (each with 517.2 per cent)
- pharmacy (514.3 per cent).

Overall, medicine graduates have experienced the lowest growth in their median starting salary between 1977 and 2010, with a median GSS in 2010 equivalent to 413.5 per cent of that in 1977.

The fields of paramedical studies, optometry and art and design were disaggregated for reporting purposes for the first time in 1988. GSS growth indices covering the period 1988-2010 for these fields of education are presented in supplementary Table H in Graduate Salaries 2010 Tables and Figures.

Examining the median starting salary growth indices covered by the period 1988-2010, we see:

- the median starting salary for optometry graduates in 2010 was equivalent to 266.2 per cent of the median starting salary for optometry graduates in 1988, the largest growth (compared with an average of 213.0 per cent across these fields of education for this same period)
- the growth in median starting salaries for optometry graduates exceeded the growth in MAWE between 1988 and 2010, which was 246.6 per cent.

The highest growth in 2010 median GSS relative to 1977 median GSS was for:

- law graduates in the professional and private practice sector (879.6 per cent), followed by
- humanities graduates (704.2 per cent) in the same sector.

These were the only fields of education in 2010 which exhibited growth in median GSS relative to 1977 at a greater rate than that of MAWE for the same period (639.7 per cent).

Relative to 1977, graduates employed in the professional and private practice sector have experienced the highest level of growth in their median starting salary (585.4 per cent). Conversely, graduates employed in the industry/commerce sector have experienced the least growth (478.7 per cent).

7.0

SALARIES FOR MALES AND FEMALES

Table 10 presents median starting salaries for female graduates aged less than 25 and in their first full-time employment as a percentage of the corresponding median starting salary for male graduates. Some caution should be exercised when examining fields of education which typically contain a small number of responses (e.g. veterinary science, dentistry, optometry).

The median starting salary for female graduates aged less than 25 and in their first full-time employment (\$48,000)

was equivalent to 96.0 per cent of the median starting salary earned by their male counterparts (\$50,000). This figure is 2.0 percentage points higher than the corresponding figure in 2009 (94.0 per cent) and 1.5 percentage points lower than the series high point of 97.5 per cent in 2005. The current figure is also slightly higher than the long-term average for this series (94.3 per cent).

While median starting salaries for female graduates have experienced notable

fluctuations relative to median starting salaries for male graduates over the years, earth sciences has remained the field of education with the highest female median graduate starting salary (GSS) relative to the median male GSS (an average of 100.6 per cent for the period 1977-2010), followed closely by engineering (100.1 per cent). These were the only two fields of education where median starting salaries for female graduates were, on average, higher than those for male graduates.

10: Median starting salaries for female graduates as a percentage of median starting salaries for male graduates based on bachelor degree graduates aged less than 25 and in first full-time employment, by field of education, 1977-2010^{††}

	1977	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Avg							
Accounting	97.7	96.0	99.1	98.3	99.3	98.0	98.7	98.2	98.4	99.5	94.0	100.0	100.0	99.6	98.0	96.0	98.8	100.0	98.5	96.4	98.9	100.0	99.0	102.4	94.3	97.1	100.0	97.2	96.1	97.6	100.0	100.0	98.4								
Agricultural Science	96.0	87.5	95.2	92.6	93.5	93.8	94.8	100.0	92.3	97.6	103.2	98.7	97.6	96.0	100.0	100.8	100.0	94.8	97.4	102.2	98.6	97.2	100.0	100.0	100.0	100.3	94.3	103.3	99.0	102.5	97.7	96.6	102.3	97.8							
Architecture & Building	103.4	100.0	95.8	86.7	97.1	92.8	89.0	96.6	96.6	89.7	100.5	89.5	90.4	85.1	100.0	97.8	100.0	92.0	91.9	96.2	93.6	96.4	89.7	100.0	88.2	97.1	91.7	85.0	91.5	88.4	88.9	85.6	88.9	93.2							
Art & Design	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	90.0	99.0	93.2	95.7	91.7	95.8	100.0	96.2	92.6	94.2	93.3	100.0	96.7	88.5	96.7	96.9	99.1	94.4	87.8	87.5	97.4	94.6	
Biological Sciences	100.0	101.0	98.2	94.5	91.7	99.3	93.9	99.4	99.5	98.0	98.6	97.8	97.9	96.8	97.7	100.4	96.5	98.9	98.6	100.0	96.6	100.0	103.3	95.0	98.9	97.2	97.3	100.0	102.6	100.0	96.4	98.9	101.1	98.4							
Computer Science	101.0	99.1	100.0	99.3	98.1	97.1	100.0	101.0	99.5	97.4	97.6	98.5	99.3	99.3	100.0	93.6	100.0	96.7	99.7	99.7	97.0	100.0	100.0	95.5	97.4	100.0	97.5	95.2	104.7	95.7	100.5	100.0	98.8								
Dentistry	94.2	90.3	86.3	80.7	91.7	83.3	82.2	87.7	90.3	95.0	93.9	88.6	83.4	92.8	95.0	105.2	96.9	86.8	100.0	92.0	90.7	87.5	104.2	90.0	89.7	86.5	106.2	95.4	100.7	100.7	92.0	100.0	104.9	92.9							
Earth Sciences	†	93.8	102.5	92.4	95.0	104.6	105.2	101.6	96.7	95.7	96.6	108.0	96.8	106.3	112.4	100.0	100.0	105.6	97.7	101.7	100.0	112.1	105.8	92.1	97.0	100.0	105.0	98.5	95.3	91.3	122.4	96.4	91.1	100.6							
Economics, Business	96.8	93.4	97.4	96.1	98.6	98.7	100.6	99.4	100.0	100.0	98.2	97.9	98.8	99.6	98.0	98.4	98.4	96.3	96.4	95.9	93.3	97.4	93.8	94.1	94.3	97.5	94.6	90.0	95.0	95.2	91.1	93.9	90.0	96.3							
Education	95.1	99.1	101.7	93.7	94.2	96.0	100.0	97.9	101.0	99.5	99.1	100.0	97.6	95.9	93.3	92.6	94.5	96.4	95.3	98.4	97.2	99.1	100.0	97.6	98.9	98.8	97.6	100.0	96.6	100.0	97.9	100.0	100.0	97.7							
Engineering	95.1	108.6	98.4	103.4	98.8	97.2	99.5	100.0	100.0	98.2	100.0	98.8	97.1	100.7	100.3	101.7	98.7	100.0	101.5	99.1	100.0	102.9	102.7	101.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.9	96.6	101.8	100.1						
Humanities	100.0	96.0	93.8	98.3	91.5	92.7	99.4	98.8	99.4	101.0	98.6	95.9	97.3	99.1	100.0	94.6	96.0	94.2	96.2	98.1	100.4	93.3	100.0	97.0	97.0	94.3	91.9	97.2	96.1	94.7	95.2	96.5	93.3	96.6							
Law	98.2	100.0	100.0	102.4	102.0	94.4	99.1	116.5	107.6	110.1	97.7	95.8	94.1	92.5	95.7	97.9	91.7	96.0	95.2	100.0	100.0	96.8	97.0	92.1	100.0	97.4	92.7	97.6	96.2	97.8	97.9	91.7	94.8	98.1							
Mathematics	97.9	100.0	98.3	97.8	98.1	98.7	97.1	97.3	95.1	99.1	95.9	100.0	96.9	94.4	97.8	93.8	92.5	92.9	90.3	93.4	93.8	93.0	94.7	96.2	100.8	100.0	92.1	97.6	100.3	97.0	93.5	100.0	96.3								
Medicine	90.7	96.0	97.4	97.1	98.5	97.7	92.9	95.7	98.0	98.4	98.6	96.4	95.4	85.7	92.1	100.0	95.0	100.0	100.0	95.2	93.3	100.0	90.0	90.0	96.0	97.6	89.1	94.3	91.8	99.1	95.7										
Optometry	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	97.0	96.6	106.7	101.7	88.2	91.4	91.4	96.3	100.0	98.7	99.2	92.9	91.7	109.8	91.3	99.0	89.4	89.7	109.6	†	88.2	108.3	100.0	97.1
Paramedical Studies	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	97.5	92.0	96.3	96.9	96.2	92.6	99.2	96.3	94.4	96.6	99.0	93.8	95.2	94.3	97.2	94.7	95.0	100.0	97.6	95.6	95.7	97.9	99.0	96.2
Pharmacy	91.9	101.2	104.8	99.0	100.0	97.5	95.4	100.7	98.6	101.3	100.6	93.8	109.3	94.4	100.0	105.8	95.5	100.0	102.4	102.3	92.1	103.3	83.3	100.0	104.0	100.7	98.0	99.7	104.9	96.5	97.7	100.0	102.9	99.3							
Physical Sciences	98.9	101.8	99.2	98.5	96.0	100.6	101.8	98.4	93.1	94.8	97.4	99.6	100.0	94.8	94.5	98.2	102.6	96.4	96.7	96.7	99.3	94.1	93.3	98.0	94.1	96.7	102.7	90.0	101.3	93.2	98.1	99.0	105.0	97.7							
Psychology	96.9	98.0	96.4	97.6	98.6	96.7	96.3	95.1																																	

Dentistry remained the field of education with the lowest median female GSS relative to median male GSS, on average, for the period 1977-2010 (92.9 per cent), followed by architecture and building (93.2 per cent), art and design (94.6 per cent) and medicine (95.7 per cent).

Differences in median GSS for males and females appear to be related, at least in part, to differing gender enrolment profiles. Male graduates tend to be overrepresented in the fields of education with higher median starting salaries while female graduates tend to be overrepresented in the fields of education with lower median starting salaries (*see supplementary Table M in Graduate Salaries 2010 Tables and Figures*).

When the fields of education are ranked according to their median starting salary, we see that males dominate the top six ranked fields with 25.4% of all males graduating from one of these fields, compared with only 6.3 per cent of females. Most of this difference appears to be due to a considerable over-representation of male graduates in the field of engineering (20.5 per cent of all male graduates compared with only 2.4 per cent of all female graduates).

Another factor which may contribute to the difference in median starting salaries for male and female graduates is the average number of hours graduates spend working in a given week (*see supplementary Table N in Graduate Salaries 2010 Tables and Figures*). Of the 23 fields of education examined in this report, statistically

significant gender differences in average working hours were observed in ten of them.

The largest gender difference was observed for physical sciences and earth sciences graduates, where males worked an average of 3.8 and 3.6 hours more respectively per week than their female counterparts, followed by:

- architecture and building (3.1 hours)
- agricultural sciences (2.4 hours)
- social sciences (2.1 hours)
- dentistry (2.1 hours).

There were even fewer statistically significant gender differences for graduates' hourly rate of pay, with evidence for such a difference only existing for three of the fields of education under examination (*see supplementary Table N in Graduate Salaries 2010 Tables and Figures*). None of these differences were of note, however, with the largest difference an additional \$1.60 per hour for male graduates from the field of law.

While it is outside the scope of the GDS to examine relative salary rates for males and females in the years following graduation¹, the ABS reported in 2005 that females with a bachelor degree qualification who were employed full-time earned an average annual salary equivalent to 73.7 per cent of that of their male counterparts (ABS 2006a). It has been estimated that the gender salary gap in the UK is around 10 per cent for new graduates (in Australia this figure is 5.7 per cent on average — see Table 10), but rises to around 25 per cent by the time graduates reach their mid 40s (Elias & Purcell 2004).

The gap between male and female AWE in the wider Australian population (for full-time employees) has been shown to increase with age. In 2009, the ratio of female to male average weekly earnings for 20-24-year-olds in the wider Australian population was 0.91 (i.e. females in this age group received average weekly earnings equivalent to around 91 per cent of that of their male counterparts), while the ratio for 45-54-year-olds was 0.73 (ABS 2010b). A range of explanations for this gender wage gap have been proposed, including access to overtime, a disproportionate share of women in lower-paid occupations, the undervaluation of skills in female dominated industries and labour market discrimination (Chapman 2004; Preston 2007).

It should be noted that the overall gender wage gap² in Australia as measured by the Organisation for Economic Cooperation and Development (OECD), 14.4 per cent, is below the average of 17.6 per cent for OECD countries. Australia recorded the eighth-lowest gender wage gap of the 20 participating countries, ranking above both the USA and UK (OECD 2006). Australia's gender wage parity relative to other OECD countries has declined in recent years, falling from a rank of second lowest in 2000 to its current rank of eighth lowest in 2006. Australia's gender wage gap did shrink in nominal terms between 2000 and 2006, however, falling from 17.2 per cent to 14.4 (OECD 2006).

¹ See Beyond Graduation 2009 (GCA 2010a) for a detailed examination of graduate salary growth in the first three years following graduation.

² The gender wage gap is measured as the difference between male and female median full-time earnings expressed as a percentage of male median full-time earnings (OECD 2006)

8.0

SALARIES PAID TO POSTGRADUATES

t11: Median salaries for postgraduates in full-time employment by level of award and field of education, 2010 (\$, '000)^{a†§}

	Postgraduate Diploma/Certificate [†]		Masters Coursework		Masters Research		PhD		
Field of Study	\$	n	\$	n	\$	n	\$	n	Sig.
Accounting	65.0	226	56.6	599	†	†	85.4	18	**
Agricultural Science	63.5	66	70.0	85	70.0	10	66.0	46	
Architecture & Building	65.0	139	50.0	427	†	†	80.0	17	**
Art & Design	54.0	63	50.0	108	60.0	25	71.0	30	**
Biological Sciences	65.0	226	70.0	172	58.0	22	64.0	279	**
Computer Science	71.5	175	79.7	364	†	†	76.5	60	
Dentistry	100.0	25	†	†	†	†	120.0	20	
Earth Sciences	60.0	51	80.0	23	†	†	75.7	28	*
Economics, Business	80.0	1,601	90.0	2,828	†	†	80.0	134	**
Education	54.7	2,053	71.0	1,147	73.5	19	79.0	103	**
Engineering	90.0	252	80.0	380	76.0	27	70.0	169	**
Humanities	65.0	921	72.0	957	61.0	35	71.0	209	**
Law	60.0	667	85.0	455	†	†	88.8	21	**
Mathematics	65.0	51	78.0	17	†	†	72.0	27	
Medicine	80.0	82	80.0	53	70.0	11	70.0	104	*
Optometry	82.5	47	†	†	†	†	†	†	
Paramedical Studies	70.0	1,953	70.0	1,380	80.0	33	72.7	160	**
Pharmacy	76.0	36	39.5	75	†	†	72.0	10	**
Physical Sciences	90.0	31	89.0	21	†	†	67.0	86	**
Psychology	62.0	284	67.0	242	†	†	70.0	124	**
Social Sciences	71.5	174	65.0	89	†	†	74.0	31	*
Social Work	70.5	96	62.5	107	†	†	69.7	15	*
Veterinary Science	†	†	90.0	10	†	†	62.0	11	
Male	75.0	3,562	82.0	4,478	72.0	104	72.0	795	
Female	62.0	5,646	70.0	5,054	70.0	120	70.0	908	
TOTAL	65.0	9,221	75.0	9,544	70.0	225	70.0	1,707	

^a See Graduate Salaries Explanatory Notes.

[†] Blank cells contain no, or fewer than 10 respondents.

[§] Some figures in this table are based on small response numbers and consequently are subject to notable fluctuation.

[‡] The heading 'Postgraduate Diploma/Certificate' includes graduate certificates and graduate/postgraduate diplomas.

* = difference statistically significant at 5 per cent level; ** = difference statistically significant at 1 per cent level

(a) Not enough valid cases to perform Mann-Whitney Test.

1 A more detailed examination of postgraduate salaries is presented in the report Postgraduate Destinations 2010 (GCA 2011c).

An examination of salaries paid to postgraduates is not as straightforward as an examination of salaries paid to younger bachelor degree graduates in their first full-time jobs. Postgraduates may have returned to study at any stage of their careers, so their salaries cannot be analysed in a simple 'first full-time employment' manner.

- Postgraduate diploma/certificate award graduates who were in full-time employment at the time of the 2010 AGS earned a median salary of \$65,000.
- Graduates who had completed a masters degree by coursework earned a median salary of \$75,000
- Masters degree by research graduates earned a median salary of \$70,000.
- PhD graduates earned a median salary of \$70,000 (see Table 11).

Statistically significant salary differences based on postgraduate level of award were observed in 17 of the 22 fields of education under examination which contained a sufficient number of responses to allow comparisons to be made.

- The largest difference was observed for pharmacy graduates, with \$36,500 separating the median salaries of masters coursework graduates (\$39,500) and postgraduate diploma/certificate graduates (\$76,000).
- Large differences between postgraduate levels were also observed for:
 - architecture and building graduates (\$30,000) accounting and law graduates (\$28,800)

- The smallest difference was observed for psychology and social work graduates, with only \$8,000 separating median salaries.

Of these postgraduate award levels, the highest growth in median starting salary since 1994 was 80.6 per cent for postgraduate diploma/certificate graduates (*see supplementary Table O in Graduate Salaries 2010 Tables and Figures*). In fact, postgraduate diploma/certificate graduates from particular fields of education earned a higher median starting salary than masters coursework graduates from the same field.

This was particularly noticeable for graduates from the fields of:

- pharmacy (\$36,500)
- architecture and building (\$15,000)
- accounting (\$8,400)
- social work (\$8,000).

These salary differences may be attributable, at least in part, to the nature of the particular courses offered at each level of award within particular higher education institutions, as well as differences between the individual graduates themselves (e.g. previous employment and educational history, career

goals and ambitions). Moreover, while postgraduate diploma/certificate graduates from these fields of education earned higher median salaries than their masters coursework counterparts in 2010, these salary figures tend to fluctuate over the years and are by no means typical for each of these fields of education.

As was the case in previous years, male postgraduates earned higher median salaries than their female counterparts at all levels of award (*see Table 11*).

- The female median salary was lowest relative to the male median salary at the postgraduate diploma/certificate award level, where female graduates earned a median salary equivalent to 82.7 per cent of the median salary earned by male graduates (or \$13,000 lower in nominal terms).
- Conversely, the greatest parity between genders is evident at the masters research and the PhD award level, with a median female salary equivalent to 97.2 per cent that of male graduates (or only \$2,000 lower in nominal terms). In relative terms, PhD graduates have experienced the greatest gender parity in median salaries earned by postgraduates since 2007.

While it may be expected that PhD graduates would be earning more than masters coursework graduates, in fact the opposite is true. The differing study and employment profiles of postgraduates at different award levels may help to explain this apparent anomaly.

Compared with masters coursework graduates, PhD graduates were much more likely to be in their first full-time employment in 2010 (22.6 per cent compared with 30.3 per cent). They were also much less likely to have been in full-time employment with their current employer in their final year of study (56.2 per cent of masters coursework graduates compared with 37.5 per cent of PhD graduates) and were much more likely to have studied on a full-time basis (32.5 per cent of masters coursework graduates compared with 63.5 per cent of PhD graduates) (*see supplementary Table P in Graduate Salaries 2010 Tables and Figures*).

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