Australian Bureau of Statistics

EMBARGO: 11.30 AM (CANBERRA TIME) WED 3 JUNE 1998

Australian Social Trends 1998

W. McLennan
Australian Statistician

AUSTRALIAN BUREAU OF STATISTICS

CATALOGUE NO. 4102.0

The Australian Bureau of Statistics has catalogued this publication as follows:

Australian social trends / Australian Bureau of Statistics. — 1994- . — Canberra : Australian Bureau of Statistics, 1994- . — v. : ill.; 30 cm.
Annual
Catalogue no. 4102.0
ISSN: 1321-1781

1. Social indicators — Australia — Statistics — Periodicals.
2. Australia — Social conditions — Statistics — Periodicals.
I. Australian Bureau of Statistics.

319.4

The photographs of nurses and children, gold miner, winemaker pressing grapes, and women at a textile machine are reproduced with the permission of the National Library of Australia. The photographs of the Asian couple in a greengrocer's, and of the chefs, are reproduced with the permission of the Department of Immigration and Multicultural Affairs.

Contents

Preface

Australian Social Trends 1998 is the fifth of an annual series presenting more than 30 articles on contemporary social issues and areas of public policy concern. By drawing on a wide range of ABS statistics, as well as those from other official sources, *Australian Social Trends* paints a picture of Australian society, and how it is changing over time. It is designed to assist and encourage informed descision-making and to be of value to a wide audience, including all those involved in social policy, research, journalism, marketing and teaching, as well as anyone interested in how we live today.

The articles in each edition of *Australian Social Trends are* organised into seven chapters, each representing an area of social concern: population, family, health, education, work, income and expenditure, and housing. Through extensive referencing to other articles, including those presented in previous editions of *Australian Social Trends,* connections between issues have also been highlighted. Each edition has also included an extra chapter focusing on other aspects of well-being. This year the feature chapter reviews people's concerns about, and attitudes to, the environment and examines how these concerns translate into action regarding transport choices, waste management and energy use.

Together with the analytical reviews, *Australian Social Trends* includes a set of national and State summary tables, which present key social indicators in each of the seven major areas of concern. These show at a glance how aspects of social well-being have been changing over time and how circumstances differ between States. As part of an on-going programme of review this edition has extended the range of indicators previously presented in these tables. Also provided is a set of tables of international comparisons for 18 countries, including major OECD countries and Australia's nearest neighbours and trading partners. Finally, there is a cumulative index for all five editions.

ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available.
In particular, I would like to acknowledge the external contributions of Mr Mike Giles, the Research and Measurement Section at NSW Board of Studies, the Department of Social Security, the Department of Health and Family Services, the Australian Institute of Health and Welfare and the Department of Immigration and Multicultural Affairs. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905.*

The ABS always welcomes readers' suggestions on how the publication could be improved. To express your views or to ask for more information, please contact the Director, Social Analysis and Reporting at the address below.

W. McLennan
Australian Statistician

Australian Bureau of Statistics
PO Box 10
Belconnen ACT 2615
June 1998

General information

Inquiries about these statistics

General inquiries about the content and interpretation of statistics in this publication should be addressed to:

Director
Social Analysis and Reporting Section
ABS
PO Box 10
Belconnen ACT 2616

Telephone Canberra (02) 6252 7187

Inquiries about the availability of more recent data from ABS should be directed to Information Services in your nearest ABS office (see p. 197).

ABS publications and services

A complete list of ABS publications produced in Canberra and each of the State Offices is contained in the ABS *Catalogue of Publications and Products* (Cat. no. 1101.0) which is available from any ABS office.

In many cases, the ABS can also provide information which is not published or which is historical or compiled from a variety of published and unpublished sources. Information of this kind may be obtained through the Information Consultancy Service. This information may be made available in one or more of the following forms: consultancy reports, microfiche, floppy disk, magnetic tape, computer printout or photocopy. Charges are generally made for such information. Inquiries may be made by contacting Information Services in your nearest ABS office (see p. 197).

Abbreviations

The following abbreviations have been used in graphics and tables throughout this publication.

Australia, States and Territories of Australia

Aust.	Australia
NSW	New South Wales
Vic.	Victoria
Qld	Queensland
SA	South Australia
WA	Western Australia
Tas.	Tasmania
NT	Northern Territory
ACT	Australian Capital Territory

Other abbreviations

MESC	Main English speaking countries — United Kingdom, Ireland, Canada, United States of America, South Africa, New Zealand and Australia
NESC	Non-English speaking countries — all countries other than the main English speaking countries
NZ	New Zealand
OECD	Organisation for Economic Cooperation and Development
PNG	Papua New Guinea
UK	United Kingdom
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
USA	United States of America
USSR	Union of Soviet Socialist Republics
WHO	World Health Organisation

Symbols and usages

The following symbols and usages mean:

billion	1 000 million
n.a.	not available
n.y.a.	not yet available
p	preliminary — figures or series subject to revision
r	figures or series revised since previous edition
*	subject to high sampling variability
* *	data suppressed due to unacceptably high sampling variability
. .	not applicable
—	nil or rounded to zero

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

Population

Population — national summary

COMPOSITION	Units	1987	1988	1989	1990	1991	1992	1993	1994(a)	1995(a)	1996(a)	1997(a)
Total population	'000	16 264	16 532	16 814	17 065	17 284	r17 495	r17 667	r17 855	r18 072	r18 311	p18 532
Male population	'000	8 118	8 249	8 388	8 511	8 615	r8 716	r8 798	r8 888	r8 994	r9 108	p9 218
Female population	'000	8 146	8 283	8 427	8 554	8 669	r8 779	r8 869	r8 967	r9 078	r9 203	p9 314
Median age	years	31.3	31.6	31.8	32.1	32.4	32.7	33.0	33.4	33.7	34.0	p34.3
Proportion of population aged 0–14	%	22.7	22.4	22.2	22.0	21.9	21.8	21.7	21.5	21.4	21.4	21.2
Proportion of population aged 15–64	%	66.6	66.8	66.9	66.9	66.8	66.7	66.6	66.6	66.6	66.6	66.7
Proportion of population aged 65 and over	%	10.7	10.8	11.0	11.1	11.3	11.5	11.7	11.8	11.9	12.0	12.1
Proportion of population aged 80 and over	%	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.6	2.7
Indigenous population	'000	n.a.	n.a.	n.a.	n.a.	345.4	352.9	360.7	368.8	377.1	386.0	n.y.a.
Overseas born	%	21.5	22.0	22.4	22.8	22.9	23.0	r22.9	r22.9	r23.0	r23.3	p23.3
Born in non-English speaking countries	%	12.1	12.4	12.8	13.1	13.3	13.5	r13.6	r13.7	r13.8	r14.1	p14.2
Living in capital cities	%	63.9	63.9	63.8	63.7	63.6	63.5	63.3	63.2	63.2	63.6	p63.7

GROWTH	Units	1987	1988	1989	1990	1991	1992	1993	1994(a)	1995(a)	1996(a)	1997(a)
Births	'000	243.4	244.2	250.1	258.3	260.3	259.2	260.0	258.3	258.2	250.4	p253.4
Deaths	'000	116.2	119.4	119.5	123.9	119.2	120.8	121.3	123.5	126.2	126.4	p127.6
Natural increase	'000	127.2	124.8	130.6	134.4	141.1	138.4	138.6	134.8	132.0	124.0	p125.8
Net overseas migration	'000	125.7	149.3	157.4	124.6	86.4	68.6	30.0	46.5	80.1	104.1	p95.8
Population growth	'000	245.5	268.3	282.3	250.7	218.9	210.6	172.4	187.6	217.0	239.0	p221.5
Rate of natural increase	%	0.79	0.77	0.79	0.79	0.83	r0.80	r0.79	r0.76	r0.74	r0.69	p0.69
Net reproduction rate	no.	0.88	0.88	0.88	0.91	0.89	0.91	0.90	0.89	0.88	0.86	n.y.a.
Net overseas migration rate	%	0.78	0.92	0.95	0.74	0.51	0.40	0.17	0.26	0.45	0.58	p0.52
Population growth rate	%	1.53	1.65	1.71	1.49	1.28	r1.22	r0.99	r1.06	r1.22	r1.32	p1.21
Net permanent movement	'000	93.6	123.0	123.7	93.4	90.6	78.3	48.4	42.5	60.5	70.5	55.9
Net long-term movement	'000	15.5	20.2	13.6	10.5	4.2	11.6	14.2	24.9	32.6	39.2	38.5
Humanitarian settler arrivals	'000	11.1	11.1	10.9	11.9	7.7	7.2	10.9	11.4	13.6	13.8	9.9

PROJECTIONS — SERIES A	Units	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046	2051
Total population	'000	19 372	20 343	21 237	22 073	22 864	23 601	24 258	24 821	25 293	25 702	26 074
Male population	'000	9 636	10 113	10 547	10 948	11 322	11 664	11 962	12 214	12 427	12 616	12 794
Female population	'000	9 736	10 230	10 690	11 125	11 542	11 937	12 296	12 606	12 866	13 086	13 280
Median age	years	35.3	36.6	38.0	39.1	39.8	40.6	41.2	41.7	42.1	42.4	42.6
Proportion of population aged 0–14	%	20.6	19.9	19.2	18.5	18.0	17.7	17.5	17.3	17.1	16.9	16.8
Proportion of population aged 15–64	%	67.1	67.2	66.8	65.6	64.5	63.0	61.8	60.9	60.3	60.2	60.0
Proportion of population aged 65 and over	%	12.3	12.9	14.0	15.9	17.5	19.3	20.7	21.8	22.6	22.9	23.1
Proportion of population aged 80 and over	%	3.0	3.5	3.8	3.9	4.2	4.8	5.8	6.6	7.4	7.9	8.3
5–year average growth rate	%	1.18	1.00	0.88	0.79	0.72	0.64	0.56	0.46	0.38	0.32	0.29

(a) Includes Christmas and Cocos Islands.

Reference periods: Population composition and projection figures are at 30 June. Overseas born, born in non-English speaking countries and growth figures (except net reproduction which is for the year ended 31 December) are for the year ended 30 June.

Population — State summary

COMPOSITION	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Total population	'000	1997p	6 274	4 605	3 401	1480	1 798	474	187	310	18 532
Male population	'000	1997p	3 115	2 274	1 704	732	904	234	99	154	9 218
Female population	'000	1997p	3 159	2 331	1 697	748	894	240	88	156	9 314
Median age	years	1997p	34.7	34.6	33.6	35.9	33.4	35.1	28.0	31.6	34.3
Proportion of population aged 0–14	%	1997p	21.0	20.6	21.8	20.1	22.0	22.1	26.7	21.6	21.2
Proportion of population aged 15–64	%	1997p	66.3	66.9	67.0	65.7	67.6	65.0	70.0	71.0	66.7
Proportion of population aged 65 and over	%	1997p	12.7	12.6	11.2	14.1	10.5	12.9	3.3	7.4	12.1
Proportion of population aged 80 and over	%	1997p	2.8	2.9	2.5	3.3	2.4	3.0	0.5	1.4	2.7
Indigenous population	'000	1996	109.9	22.6	104.8	22.1	56.2	15.3	51.9	3.1	386.0
Overseas born	%	1996	24.5	25.1	17.7	22.3	29.3	10.8	16.8	23.7	23.3
Born in non-English speaking countries	%	1996	16.7	18.0	7.7	11.1	12.5	4.2	9.0	14.5	14.1
Living in capital cities	%	1997p	62.7	72.1	45.5	73.2	73.4	41.3	45.1	99.9	63.7

GROWTH	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Births	'000	1996–97p	87.0	61.2	47.1	18.8	24.9	6.2	3.7	4.4	253.4
Deaths	'000	1996–97p	44.7	32.9	22.0	11.6	10.6	3.8	0.8	1.3	127.6
Natural increase	'000	1996–97p	42.3	28.3	25.1	7.3	14.3	2.4	2.9	3.1	125.8
Net overseas migration	'000	1996–97p	40.9	23.0	14.0	3.5	13.3	0.3	0.6	0.1	95.8
Net interstate migration	'000	1996–97p	–13.6	–6.3	23.4	–5.2	5.3	–3.7	1.8	–1.7	. .
Population growth	'000	1996–97p	69.6	45.0	62.5	5.6	32.9	–0.9	5.3	1.5	221.5
Rate of natural increase	%	1996–97p	0.68	0.62	0.75	0.49	0.81	0.51	1.58	1.01	0.69
Net reproduction rate	no.	1996	0.88	0.82	0.88	0.85	0.87	0.92	1.07	0.81	0.86
Net overseas migration rate	%	1996–97p	0.66	0.50	0.42	0.24	0.75	0.07	0.33	0.04	0.52
Net interstate migration rate	%	1996–97p	–0.22	–0.14	0.70	–0.35	0.30	–0.78	0.99	–0.55	. .
Population growth rate	%	1996–97p	1.12	0.99	1.87	0.38	1.86	–0.20	2.91	0.50	1.21
Net permanent movement	'000	1996–97p	25.7	12.4	8.3	1.9	6.9	0.1	0.2	0.3	55.9
Net long-term movement	'000	1996–97p	14.5	10.4	5.5	1.5	6.3	0.3	0.4	–0.2	38.5
Humanitarian settler arrivals	'000	1996–97	4.4	3.1	0.6	0.6	1.0	0.1	0.1	0.1	9.9

PROJECTIONS — SERIES A	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Total population	'000	2051	8 466	5 244	6 438	1 607	3 091	446	295	485	26 074
Male population	'000	2051	4 142	2 550	3 187	786	1 520	219	148	241	12 794
Female population	'000	2051	4 324	2 694	3 251	821	1 571	226	147	244	13 280
Median age	years	2051	42.3	43.9	42.3	45.1	41.6	48.0	34.8	40.2	42.6
Proportion of population aged 0–14	%	2051	17.2	16.0	17.0	15.5	17.3	15.3	21.7	16.7	16.8
Proportion of population aged 15–64	%	2051	60.0	59.5	60.5	58.7	60.8	56.0	63.5	62.9	60.0
Proportion of population aged 65 and over	%	2051	22.9	24.5	22.5	25.7	21.9	28.7	14.8	20.4	23.1
Proportion of population aged 80 and over	%	2051	8.3	9.3	7.7	9.8	7.5	10.9	4.4	6.3	8.3

Reference periods: Population composition and projection figures are at 30 June. Overseas born, born in non-English speaking countries and growth figures (except net reproduction which is for the year ended 31 December) are for the year ended 30 June.

Population — definitions and references

Births — Number of live births occurring in that year.
Reference: *Births, Australia* (Cat. no. 3301.0).

Deaths — Number of deaths occurring in that year.
Reference: *Deaths, Australia* (Cat. no. 3302.0).

Humanitarian settler arrivals — comprises: those who arrive under the refugee program (which provides protection for people who have fled their country because of persecution); those who arrive under the humanitarian programs (those who leave their country because of significant discrimination amounting to gross violation of human rights); and those who arrive under the special assistance category (groups determined by the Minister to be of special concern to Australia and in real need but who do not come under the traditional humanitarian categories. It includes those externally displaced people who have close family links with Australia).
Reference: *Immigration Update,* Department of Immigration and Multicultural Affairs.

Indigenous population — estimates of the resident Aboriginal and Torres Strait Islander population. Estimates are experimental in that the standard approach to population estimation is not possible because satisfactory data on births, deaths and migration are not generally available. Further, there is significant intercensal volatility in census counts of the Indigenous population, due in part to changes in the propensity of persons to identify as being of Indigenous origin.
Reference: *Experimental Estimates of the Aboriginal and Torres Strait Islander population* (Cat. no. 3230.0).

Median age — the age at which half the population is older and half is younger.
Reference: *Population by Age and Sex: Australian States and Territories.* (Cat. no. 3201.0).

Natural increase — the excess of births over deaths during the year. Rate of natural increase expresses this difference as a proportion (per cent) of the population at the beginning of the year.
Reference: *Australian Demographic Statistics* (Cat. no. 3101.0).

Net interstate migration — interstate arrivals minus interstate departures during the year. Net interstate migration rate expresses this as a proportion (per cent) of the population at the beginning of the year.
Reference: *Australian Demographic Statistics* (Cat. no. 3101.0).

Net long-term movement — long-term arrivals minus long-term departures during the year. Long-term arrivals comprise overseas visitors who intend to stay in Australia for one year or more (but not permanently) and Australian residents returning from an overseas visit of one year or more. Long-term departures comprise Australian residents who intend to stay abroad for one year or more (but not permanently), and overseas visitors departing who stayed a year or more.
Reference: *Migration Australia* (Cat. no. 3412.0).

Net overseas migration — permanent and long-term arrivals (including humanitarian settler arrivals) minus permanent and long-term departures during the year. Net overseas migration rate expresses this as a proportion (per cent) of the population at the beginning of the year.
Reference: *Australian Demographic Statistics* (Cat. no. 3101.0).

Net permanent movement — permanent arrivals minus permanent departures during the year. Permanent arrivals comprise travellers who hold migrant visas and other persons eligible to settle, and permanent departures comprise Australian residents who intend to settle in another country.
Reference: *Migration Australia* (Cat. no. 3412.0).

Net reproduction rate — the extent to which the population would reproduce itself. Measured as the number of daughters per woman that a group of newborn girls would bear during their lifetime, if the age-specific birth and death rates recorded in the year of their birth continue.
Reference: *Births, Australia* (Cat. no. 3301.0).

Non-English speaking countries — all overseas countries except United Kingdom, Ireland, New Zealand, South Africa, Canada and the United States of America.
Reference: *Migration, Australia* (Cat. no. 3412.0).

Population growth — increase in the population during the year, measured as the sum of natural increase and net overseas migration. For dates prior to 1996, differences between growth and the sum of natural increase and net overseas migration arise from retrospective adjustments to population estimates (which are made after each census) to compensate for intercensal discrepancy. Population growth rate expresses the increase as a proportion (per cent) of the population at the beginning of the year.
Reference: *Australian Demographic Statistics* (Cat. no. 3101.0).

Population projections — ABS population projections take the base year population for each sex by single years of age and advance it year by year by applying assumptions about future mortality and migration. Assumed age-specific fertility rates are applied to the female populations of child-bearing ages to provide the estimates of new births for each year. The ABS produces several series of population projections based on different combinations of assumptions about mortality, fertility and migration. The assumptions underlying Series A most closely reflect prevailing trends and comprise: declining rates of mortality; a constant level of fertility (total fertility rate of 1.88 for Australia); low levels of overseas migration (rising to 70,000 per year by the year 2000, then remaining constant); and continuing high levels of interstate migration.
Reference: *Projections of the Populations of Australia, States and Territories, 1995 to 2051* (Cat. no. 3222.0).

Interstate migration

POPULATION DISTRIBUTION

Between 1991 and 1996 there was a net flow of population out of Victoria and New South Wales and into Queensland and Western Australia.

Across Australia there is a constant flow of individuals and families moving to new locations. Between 1991 and 1996, 5.7 million people changed their address in Australia. Of these people, 4.9 million moved to a new address in the same State. The remaining 0.8 million people moved to a different State.

In general, net interstate migration flows were still northwards up the east coast and westwards across to Western Australia (see *Australian Social Trends 1995,* Internal migration, pp. 16–20). Queensland had the largest population gain between 1991 and 1996 from interstate migration – 268,000 people arrived from interstate and 122,500 people departed for another State or Territory, resulting in a net gain of 145,500 people. Queensland recorded net gains from all States and both Territories, while Western Australia recorded net gains from every State and Territory except for Queensland.

Definitions

Net interstate migration is the difference between the number of people who have changed their place of usual residence by moving *into* a given State or Territory and the number who have changed their place of usual residence by moving *out* of that State or Territory. The difference can be either positive or negative.

The use of Census data to determine migration patterns has some limitations, namely:

- The 1996 Census collected information on place of residence of respondents five years earlier and one year earlier. Other movements that took place between census night 1996 and five years earlier are unknown.
- Characteristics such as age, occupation etc. of respondents apply to census night and do not apply to the time of movement.
- The Census missed some people, particularly young adult males, because of their increased likelihood of moving.

Main net interstate migration flows(a) 1991–96

Scale: 1 mm thickness of line corresponds to 10,000 people.

(a) Excludes net flows of less than 2,000 people.

Source: Unpublished data, 1996 Census of Population and Housing.

Interstate movers(a) by State of arrival and State of departure 1991–96

	State of usual residence at 6 August 1996								
	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
State of usual residence at 6 August 1991	'000	'000	'000	'000	'000	'000	'000	'000	'000
New South Wales	..	42.6	127.7	14.3	19.6	6.7	6.2	26.2	243.2
Victoria	57.9	..	74.5	16.8	19.2	7.4	6.6	7.0	189.4
Queensland	59.9	24.5	..	7.7	12.6	4.9	7.4	5.5	122.5
South Australia	16.1	16.5	19.6	..	8.2	2.2	6.9	2.6	72.0
Western Australia	14.0	11.2	15.0	5.3	..	2.6	4.4	2.1	54.5
Tasmania	6.5	7.7	9.6	1.9	4.0	..	0.7	1.1	31.4
Northern Territory	5.0	3.3	11.7	6.0	5.8	0.7	..	1.0	33.6
Australian Capital Territory	25.1	5.0	9.9	1.6	2.4	0.7	0.8	..	45.5
Australia	**184.4**	**110.7**	**268.0**	**53.7**	**71.7**	**25.2**	**33.0**	**45.4**	**792.1**
Net gain or loss 1991–96	**–58.8**	**–78.6**	**145.5**	**–18.3**	**17.3**	**–6.3**	**–0.7**	**–0.1**	**..**
Net gain or loss 1986–91	–93.3	–45.2	125.3	–4.3	16.1	0.1	–3.8	5.1	..
Net gain or loss 1981–86	–61.3	–39.0	87.5	–8.7	15.6	–2.2	3.3	4.8	..

(a) Those living in a different State on census day 1996 from census day 1991. Based on usual residence, and excludes children aged less than five years at census day 1996.

Source: Population Growth and Distribution in Australia (Cat. no. 2504.0 Census 1986, Cat. no. 2822.0 Census 1991) and unpublished data, 1996 Census of Population and Housing, 1996.

States carefully monitor changes in the size of their population because they affect their allocation of Commonwealth funds and their number of seats in the House of Representatives. At the local level, changes in population size and age distribution affect the demand for services like health, education and housing.

The movement of people from one State to another is only one way the population of a State can grow. The size of a State's population is also affected by the number of births, deaths, and people leaving to live overseas or arriving from overseas. In general, gains from interstate migration have a smaller effect on the population of States and Territories than natural increase (births minus deaths). However, in Queensland, estimated net annual interstate migration has consistently exceeded annual natural increase since 1988.[1]

Where we move

Although all States and Territories both gained and lost interstate movers, the resulting redistribution of people is unequal. Between 1991 and 1996, only two States gained population overall, Queensland and Western Australia (net gains of 145,500 and 17,300 respectively). The other States and Territories lost more people than they gained. Victoria had a net loss of 78,600 people, New South Wales 58,800, South Australia 18,300, Tasmania 6,300, the Northern Territory 700 and the Australian Capital Territory 100.

Queensland was the most common destination of movers from all States and the Northern Territory, and the second most common destination of those leaving the Australian Capital Territory. The largest contributor to Queensland's net population gain was New South Wales, 127,700 people having moved north over the border. This was followed by Victoria which contributed 74,500 people.

Like Queensland, Western Australia also had a net gain in population (17,300 people), while 54,500 people left, going mainly to Queensland (28%), New South Wales (26%) and Victoria (21%). The 71,700 who arrived came mainly from New South Wales (27%), Victoria (27%) and Queensland (18%).

Victoria had the largest net loss of population: 78,600 people. Victorians who moved out went mainly to Queensland (39%), New South Wales (31%) and Western Australia (10%) while people moving into Victoria came mainly from New South Wales (38%), Queensland (22%) and South Australia (15%).

New South Wales had a net population loss of 58,800 people, the result of 184,400 people arriving and 243,200 leaving. Those movers arriving in New South Wales came mainly from Queensland (32%), Victoria (31%) and the Australian Capital Territory (14%) while those leaving went mainly to Queensland (53%), Victoria (18%) and the Australian Capital Territory (11%).

Population turnover

The movement of people around Australia has economic and social impacts that extend beyond the families and individuals involved. Children are taken out of school and re-enrolled at their new location; houses are sold and bought or rental tenancies are cancelled and new ones entered into; jobs are left and started, or more or fewer people compete for available jobs. These changes require many adjustments in service and infrastructure provision to cope with more people or remain viable with fewer.

The use of net migration to summarise the difference between people leaving and arriving removes attention from the number of people involved, especially when the number of people leaving and arriving are similar and produce a small net migration. An alternative measure is to use population turnover (the addition of people arriving and people leaving) and to relate it to the population of the State or Territory.[2]

The impact of internal migration is likely to be felt more in the States and Territories where the number of people leaving and arriving is large in relation to the population of that State or Territory. For example, the Northern Territory has a small resident population (about 175,300 people in 1996). Between 1991 and 1996 the Northern Territory experienced only a small net loss of less than 1,000 people from interstate migration. However, over that period 33,600 left the Territory and 33,000 arrived. These figures combine to give a population turnover of 66,600 people or about 38% of the usual resident population of the Northern Territory in 1996.

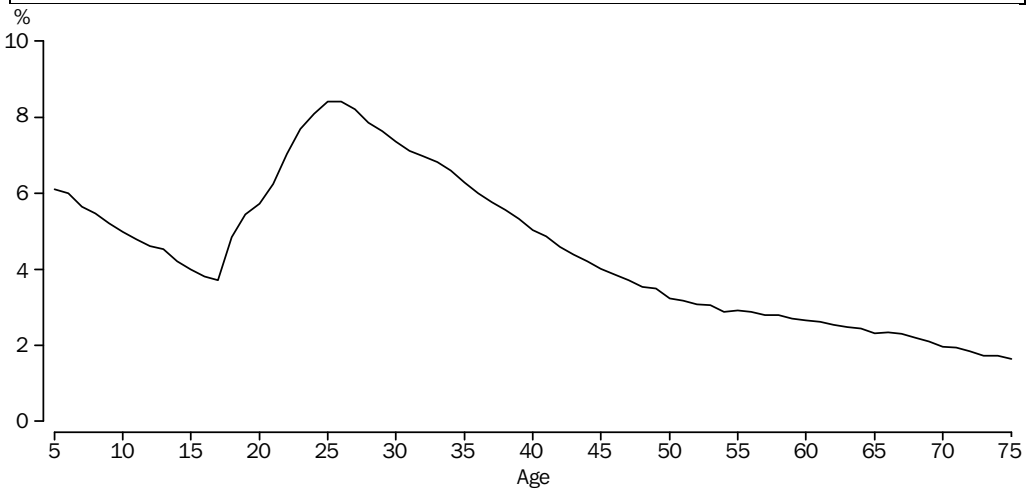
Population turnover(a), 1991–96

State/Territory	no.	%(b)
New South Wales	427 678	7.1
Victoria	300 096	6.8
Queensland	390 515	12.0
South Australia	125 687	8.7
Western Australia	126 197	7.4
Tasmania	56 559	12.2
Northern Territory	66 598	38.0
Australia Capital Territory	90 900	30.4
Australia	**1 584 230**	**8.9**

(a) The number of people who had moved into, or out of, a State/Territory.
(b) Percentage of the usual resident population at 6th August 1996.

Source: Unpublished data, 1996 Census of Population and Housing.

Age-specific inter-state mobility rates(a) of people between 1991 and 1996



(a) Based on age and population figures in 1996. Since the move could have taken place at any time during the five-year period, the actual ages at the time of movement would be younger. The data excludes children under five years old in 1996.

Source: Unpublished data, 1996 Census of Population and Housing.

Selected characteristics of interstate movers, 1991–96

Characteristic	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
Median age(a) 1996	years	years	years	years	years	years	years	years	years
Arrivals	30.3	30.0	30.9	30.1	29.4	32.2	28.5	27.4	30.1
Departures	30.2	30.5	30.0	29.7	30.6	27.8	31.0	29.5	30.1
Net migration by age(a)	'000	'000	'000	'000	'000	'000	'000	'000	'000
5	–6.7	–8.1	15.0	–0.9	1.5	–0.3	–0.5	–0.1	..
6–14	–5.6	–7.1	13.8	–1.3	1.2	–0.5	–0.6	–0.1	..
15–19	–6.4	–4.4	11.2	–0.9	0.7	–1.2	–0.5	1.6	..
20–24	–7.0	–7.8	13.7	–3.0	3.4	–2.9	2.1	1.5	..
25–34	–10.0	–18.4	28.4	–6.3	6.4	–1.3	1.5	–0.3	..
35–59	–17.5	–28.6	52.8	–5.9	3.6	–0.4	–1.9	–2.1	..
60 or older	–5.6	–4.3	10.6	–0.1	0.4	0.4	–0.8	–0.6	..
Total	**–58.8**	**–78.6**	**145.5**	**–18.3**	**17.3**	**–6.3**	**–0.7**	**–0.1**	..
Sex ratios(b)	ratio	ratio	ratio	ratio	ratio	ratio	ratio	ratio	ratio
Arrivals	101.1	98.8	102.2	104.1	111.2	99.9	114.6	98.4	102.6
Departures	101.4	104.6	101.8	101.6	105.2	99.3	106.8	99.8	102.6

(a) Based on age in 1996. Since the move could have taken place at any time during the five-year period, the actual ages at the time of movement would be younger. The data excludes children under five years old in 1996.
(b) Males per 100 females.

Source: Unpublished data, 1996 Census of Population and Housing.

Conversely, New South Wales had the largest population turnover, 427,700 people, but is the most populous State with over 6 million people in 1996. Its turnover represented 7% of its population in 1996.

Who moves?

All kinds of people move interstate. But some people are more likely to move than others. In general, previous research has demonstrated that young adults, people who are separated and/or divorced, unemployed people and recent immigrants from main English speaking countries have a greater likelihood of moving than people who are older, married or immigrants from non-English speaking countries[2].

Young adults in their twenties and thirties had the highest interstate mobility rates (the number of people of a specific age who moved interstate expressed as a proportion of the population of the same age) between 1991 and 1996. The highest rate, 8.4%, occurred at ages 25 and 26. However, because the age of the interstate mover was recorded in 1996 rather than when the move took place, the actual age at the time of the move would on average have been younger. The interstate mobility rate of children decreased with age. Since children usually only move because their parent/s move, this indicates that families with older children are less likely to move than those with younger children. After the ages of 25 and 26, the mobility rate decreased with increasing age. The interstate mobility rate of people around the traditional ages of retirement, 55–65, ranged from 2.9% to 2.3% respectively.

The median age of interstate movers, 30.1 years, is a result of their young age profile. In comparison, the median age of all Australians in 1996 was 34.0 years. The differences in the ages of people moving into a State or Territory and people moving out are demonstrated by their median ages and their age structure. In Queensland and Western Australia the overall net gains occurred across all ages. In New South Wales, Victoria and South Australia the net losses also occurred across all ages.

In Tasmania and the two Territories the differences in median age between interstate movers arriving and leaving were quite marked. Interstate movers arriving in Tasmania were older, having a median age of 32.2 years. Those leaving were younger, having a median age of 27.8 years. The pattern of net migration by age shows that Tasmania had net losses in all age groups

under 60 years and a small net gain of 400 people over 60. In the 20–24 year age group the bias was strongly towards leaving Tasmania: 2,000 arrived and 4,900 left, resulting in a net loss of 2,900 people.

In the Australian Capital Territory the largest net loss occurred among people aged 35–59: 2,100 people (12,200 arrived and 14,300 left). However, there was a small net gain of 3,100 people aged 15–24 (12,300 arrived and 9,200 left). Similarly, the Northern Territory, although having a small overall loss of 700 people, had a net gain of 3,600 people in the 20–34 age group and a net loss of people in all other age groups.

Overall, people moving interstate between 1991 and 1996 were slightly more likely to be male. For every 100 female interstate movers between 1991 and 1996 there were 103 males. This reflects the high mobility rate of young males. There were differences in the sex ratios of particular States and Territories. The Northern Territory had a high male bias with 115 males arriving for every 100 females and 107 leaving for every 100 females. Western Australia also had a bias towards males with 111 males arriving for every 100 females and 105 males leaving for every 100 females. Only in the Australian Capital Territory and Victoria was there a slight bias towards females arriving with 98 males arriving for every 100 females and 99 males arriving for every 100 females respectively.

Why we move

The Census does not ask people why they moved. Surveys of movers have found that among the many reasons people move home to another State or Territory, the most common are related to employment and social amenity (the proximity to family, friends and people of similar ethnicity or religion).[3]

For example, a 1995 survey of people who had moved residence in the past 12 months in Queensland[4] identified some of the motivations behind people's moves into that State. The majority of people who had moved from another State or Territory did so for reasons relating to employment (40%) and location (38%). The importance of these factors varied with the age of the movers. For young (aged 15–19) and old movers (aged 55 years or more) location was the most important factor while employment was the most important factor among people aged 20–54.

Endnotes

1 Australian Bureau of Statistics, 1997, *Australian Demographic Trends 1997,* Cat. no. 3102.0, ABS Canberra.

2 Martin, Bell, 1995, *Internal migration in Australia 1986–1991: Overview report*, AGPS, Canberra.

3 Flood, J. Maher, C. Newton, P. Roy, J. 1991, *The Determinants of Internal Migration in Australia*, Indicative Planning Council for the Housing Industry, CSIRO, Melbourne.

4 Government Statisticians Office, 1996, *1995 Queensland Migration Survey*, Queensland Government, Brisbane.

Small towns: which ones are in decline?

POPULATION DISTRIBUTION

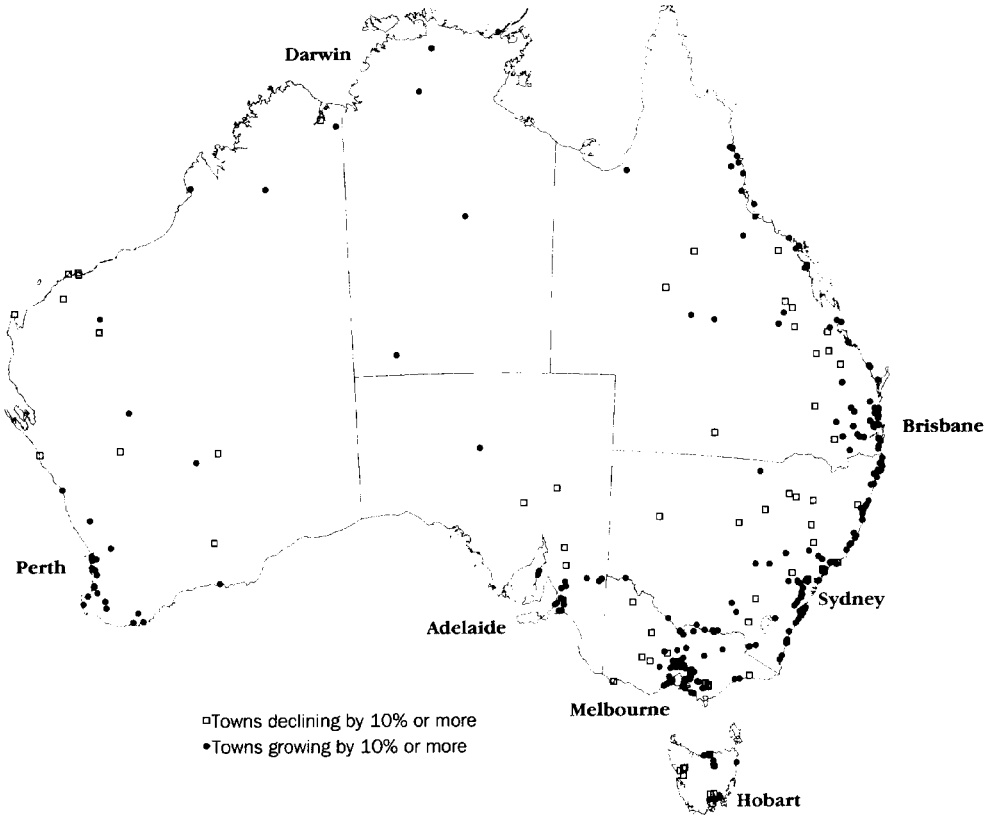
While the majority of small towns existing in 1986 had experienced population growth by 1996, nearly a third (31%) declined in population. 10% had declined by more than 10%. Most of these were inland.

A number of small towns throughout Australia have been affected by falling prosperity. In 1996 there were 678 towns with between 1,000 and 19,999 people, 100 more than in 1986, and nearly 2.5 million people lived in them (an increase of about 324,000 since 1986). Of the 578 towns of this size existing in 1986, about a third (31%) had sustained population losses by 1996, with 10% declining by at least 10%. At the same time, another 47% grew by at least 10%.

Towns in decline between 1986 and 1996 were usually inland in wheat-sheep belts, dryland grazing regions or mining regions. Conversely, most towns experiencing substantial population growth were coastal, located around metropolitan capital cities, or associated with growth in particular industries such as wine growing or tourism.

People living in declining towns risk losing their savings, livelihood and support systems as they confront the break-up of their community, loss of jobs, deteriorating infrastructure and declining property values. In addition, declining towns often lose services through the closure of schools, hospitals, retail establishments and banks. Such closures have a direct impact on the health and well being of remaining residents, but they can also have psychological impact, with many seeing the closure of central services as signalling the 'death of a town'.[1] Factors affecting population losses in a particular town may be unique to the town (the closure of a mine or downturn in a local industry). However, understanding differences in the distribution of declining and growing towns throughout Australia provides insights into other factors affecting small town prosperity.

Australian small towns which decreased or increased by 10% or more, 1986–96



Source: Unpublished data, 1996 Census of Population and Housing.

New South Wales

Population losses in New South Wales were particularly evident in inland towns west of the Great Dividing Range. The largest cluster of towns experiencing population decline of at least 10% between 1986 and 1996 were located in the north-east wheat-sheep region. These included Werris Creek, Wee Waa, Narrabri, Barraba and Dorrigo which are, in general, service centres for surrounding agricultural areas. Towns further south such as Murrumburrah-Harden (a service centre for the surrounding agricultural region) and Batlow (a timber milling and fruit growing town) also sustained population losses of at least 10%.

Against this trend many inland towns grew by at least 10%, particularly along the Murray River, in the Snowy Mountains, close to the Hume Highway approaching Sydney, and in the Hunter Valley region. These were mostly affected by the growth of particular industries such as wine growing and tourism. The pattern of coastal growth was strongly evident in New South Wales.

Victoria

As in New South Wales, the inland areas of Victoria in the wheat-sheep belt experienced the greatest population declines. Most of the towns experiencing population decline were in the central-west and central-south regions of Victoria. Towns in the central-west region included Charlton, Ararat, and Beaufort which are, in general, service centres for surrounding agricultural areas (wheat, grazing). The towns in the central-south region (in the Latrobe valley) sustained the largest absolute population declines. These towns were Moe-Yallorn, Morwell and Churchill which are heavily dependent on the open-cut brown coal mining industry.

Identifying towns

In 1996 most Australians (68%) lived in only 21 cities of 50,000 people or more. However, a sizeable minority of around 14% lived in small towns of between 1,000 and 19,999. Another 11% lived in rural areas or communities of less than 1,000 people.

In this review *small towns* have been defined as population centres with between 1,000 and 19,999 people. Towns might ideally be distinguished from cities and from smaller rural communities according to functional criteria, such as the presence or absence of various educational, medical, recreational and retail services, together perhaps with administrative criteria such as whether or not a city or town council operated from within the town. While such conceptual distinctions might be made, it is difficult to put such definitions into practice. The above population size was therefore considered the most suitable alternative which would generally encompass these criteria.

The population counts used to define towns have been obtained from ABS Censuses of Population and Housing. The counts refer to the number of people located in the town on the night of the Census. This measure can give a misleading estimate of the actual (or usual) resident population of the town, particularly where large numbers of people are either visiting the town (as in the case in tourist destinations such as Jindabyne or Thredbo) or they have temporarily moved elsewhere.

The possible effects of such moves when measuring the growth or decline of small towns may not always be negligible. It is for this reason that only those experiencing population change of 10% or more are considered to be towns which have grown or declined. While care has been taken to ensure that listed towns are declining, it is possible that changes in town boundaries or names may account for some of these declines.

Urban centre by size

	Number of centres		*% of Australian population*	
	1986	*1996*	*1986*	*1996*
Size	no.	no.	%	%
500 000 and over	5	5	54.4	55.1
50 000–499 999	15	16	11.7	12.7
20 000–49 999	33	42	5.5	6.9
1 000–19 999	578	678	13.8	14.3
Total	**631**	**741**	**85.3**	**89.1**
Rural balance	..	..	14.7	10.9
Total	**..**	**..**	**100.0**	**100.0**

Source: Unpublished data, 1986 and 1996 Censuses of Population and Housing.

Towns experiencing population growth were mostly concentrated around Melbourne and along the Murray River. Some scattered tourist towns grew by at least 10%. Rutherglen, a wine growing area, and Lakes Entrance, a tourist resort on the coast, grew by 20% and 28% respectively.

Western Australia

A number of towns experienced population decline in the central-west region where sheep farming and iron-ore mining are main industries. These towns included Kalbarri, Dampier, Mount Magnet, Pannawonica, Paraburdoo, Roebourne and Wickham. Of these, Wickham sustained the largest absolute decline (796 people). Exmouth, also in the

Small towns declining 10% or more, 1986–96

State	Town	Region	*Population size in 1996*	*Decline*	*Absolute decline*
			no.	%	no.
New South Wales	Werris Creek	North-East	1 484	18.4	335
	Barraba	North-East	1 267	15.4	231
	Dorrigo	North-East	1 013	13.2	154
	Wee Waa	North-East	1 860	11.7	246
	Narrabri	North-East	6 419	11.4	827
	Murrumburrah-Harden	South-East	1 700	16.9	345
	Batlow	South-East	1 069	12.9	158
	Scone	Central-East	3 468	18.8	804
	Nyngan	Central	2 240	10.5	262
	Wilcannia	Far-West	688	34.4	360
Victoria	Moe-Yallorn	Central-South	15 512	15.6	2 864
	Morwell	Central-South	13 823	15.6	2 564
	Churchill	Central-South	4 882	11.7	644
	Charlton	Central-West	1 096	18.3	245
	Ararat	Central-West	6 890	14.0	1 125
	Beaufort	Central-West	1 039	13.3	160
	Ouyen	North-West	1 251	16.8	252
	Orbost	East	2 150	14.1	352
	Castlemaine	Central-North	6 690	12.6	966
	Portland	South-West	9 664	11.6	1 270
Western Australia	Dampier	Central-West	1 424	35.3	777
	Wickham	Central-West	1 649	32.6	796
	Pannawonica	Central-West	779	29.1	319
	Mount Magnet	Central-West	747	25.3	253
	Roebourne	Central-West	958	24.5	311
	Paraburdoo	Central-West	1 980	13.6	312
	Exmouth	Central-West	3 058	13.0	456
	Laverton	South-East	644	43.5	496
	Norseman	South-East	1 516	14.6	259
	Wyndham	North	868	34.7	461

Source: Unpublished data, 1986 and 1996 Censuses of Population and Housing.

central-west region, may have declined because of the withdrawal of American personnel from a naval communications centre located there. In the south-east, the mining towns, Laverton and Norseman, declined by more than 10%. Laverton sustained the largest percentage decline (44%). Wyndham, in the north, declined by 35%.

Inland towns that grew by at least 10% were scattered between the different regions of Western Australia. Meekatharra in the central-west grew by 25%. Broome and Kununurra in the north grew by 97% and 56% respectively. In the south-east, Leonora grew by 14%.

As was the case in Victoria, the majority of towns experiencing population growth were concentrated around the capital city, Perth. Population growth also occurred in towns south of Perth and on the southernmost coastal point of Western Australia.

Queensland

Population growth rates in Queensland as a whole have been very high in recent years (see *Australian Social Trends 1998*, Population – State summary table, p. 3), with much of the growth occurring in coastal towns. These stretched as far north as

Small towns declining by 10% or more, 1986–96

State	Town	Region	*Population size in 1996* no.	*Decline* %	*Absolute decline* no.
Queensland	Moura	South-East	1 980	29.5	828
	Mitchell	South-East	967	20.2	245
	Biloela	South-East	5 161	16.4	1 013
	Blackwater	South-East	5 931	15.6	1 098
	Miles	South-East	1 187	15.6	219
	Cunnamulla	South-East	1 461	13.9	236
	Mount Morgan	South-East	2 487	13.2	379
	Monto	South-East	1 288	12.7	187
	Millmerran	South-East	1 054	11.5	137
	Collinsville	North-East	2 021	36.3	1 152
	Middlemount	North-East	2 132	14.8	371
	Dysart	North-East	3 444	14.7	595
	Hughenden	North-West	1 444	19.4	347
	Winton	North-West	1 142	10.9	139
South Australia	Leigh Creek	Central-North	1 006	48.9	961
	Woomera	Central-North	1 349	25.3	456
	Peterborough	Central-North	1 855	17.2	384
	Burra	Central-North	1 008	15.1	179
Tasmania	Savage River	West	158	85.1	900
	Tullah	West	268	76.0	849
	Rosebery	West	1 439	31.5	663
	Zeehan	West	1 116	30.7	494
	Queenstown	West	2 631	26.8	962
	New Norfolk	South-East	5 286	14.1	866
	Bridgewater-Gagebrook	South-East	7 451	13.9	1 203
	George Town	North-East	4 522	14.9	793

Source: Unpublished data, 1986 and 1996 Censuses of Population and Housing.

Port Douglas (which grew by 173%) and south down the coast to the Queensland/New South Wales border.

Nevertheless, various small towns in north-east and south-east Queensland experienced a decline. These towns were located inland from Townsville to Bundaberg. These towns and declining towns in the north-west region (Hughenden and Winton) are mostly service centres for surrounding agricultural areas (cattle, cotton, sheep and grain). Collinsville in the north-east, and Blackwater and Biloela in the south-east sustained the greatest absolute declines.

Not all inland towns in wheat-sheep belts and dryland grazing regions of Queensland were experiencing population declines. Emerald, also a service centre for surrounding agricultural area (cattle and farming industries), grew by 56%. Emerald is at the centre of a major irrigation scheme. Many towns of the Darling Downs west of Brisbane also grew by at least 10%.

South Australia

Four towns in South Australia (all located in the central-north region) declined by at least 10%. These were Burra, an old copper mining town; Peterborough, a railway town surrounded by grain growing and pastoral areas; Woomera, the site of a rocket range; and Leigh Creek, a coal mining town. Leigh Creek sustained the largest absolute and percentage population decline, losing nearly half (961 people or 49%) of its population over the decade.

Against this trend Coober Pedy, which is located in the outback, grew by 31%. This growth is probably due to the growth in tourism and opal mining in the region. Other small towns that grew by at least 10% were

Small towns changing in size by 10% or more by State or Territory, 1986–96

	Towns in decline		*Towns in growth*	
State or Territory	no.	% of all towns in 1986	no.	% of all towns in 1986
New South Wales	10	5.3	95	50.0
Victoria	10	7.7	54	41.5
Western Australia	11	20.4	25	46.3
Queensland	14	11.8	64	53.8
South Australia	4	8.3	17	35.4
Tasmania	8	27.6	11	37.9
Northern Territory	0	0.0	5	62.5
Total	**57**	**9.9**	**271**	**46.9**

Source: Unpublished data, 1986 and 1996 Censuses of Population and Housing.

concentrated around Adelaide, in the wine growing regions and along the Murray River (continuing the New South Wales/Victoria pattern). These included Berri (produces fruit products) which grew by 12% and Renmark (a wine growing town) which grew by 25%. Other wine growing towns closer to Adelaide included Tanunda and Gawler in the Barossa Valley (grew by 23% and 36% respectively) and Aldinga and McLaren Vale which are south of Adelaide (increases of 53% and 93% respectively).

Absolute decline

Large absolute population changes can be masked when the population base is comparatively large and change is measured in percentage terms. For this reason, towns with large absolute declines between 1986 and 1996 (losses of more than 500 people) but which did not decline by 10% or more (and are therefore outside the scope of this review) are listed below.

Towns with an absolute decline of 500 or more people, 1986–1996

State	*Town*	*Population size in 1996*	*Absolute decline*
NSW	Moree	9 270	945
	Lithgow	11 441	928
	Kurri Kurri -Weston	12 555	856
	Gunnedah	8 315	829
	Kempsey	8 630	705
Vic.	Wangaratta	15 527	1 071
	Colac	9 793	752
	Hamilton	9 248	721
SA	Port Augusta	13 914	1 377
WA	Collie	7 194	635

Source: Unpublished data, 1986 and 1996 Censuses of Population and Housing.

Tasmania

Strong population loss occurred in mining towns in the west of Tasmania. These were Queenstown, Tullah, Rosebery, Savage River and Zeehan. Other towns that had declined by at least 10% were George Town (north-east), and Bridgewater-Gagebrook and New Norfolk (south-east). Bridgewater-Gagebrook sustained the largest absolute decline (losing some 1,200 people). Most of the growing towns were located near Launceston and the capital city Hobart.

Northern Territory

No towns declined by at least 10%. Of towns that grew, most were situated near the top of the Territory. These were Jabiru, Galiwinku and Katherine (expanding by 20%, 25% and 40% respectively). Growth also occurred further south in Yulara, a tourist resort close to Uluru and the Olgas (grew by 138%).

Endnotes

1 McKenzie, F. 1994, *Regional Population Decline in Australia,* Impacts and Policy Implications, AGPS, Canberra.

Growth and distribution of Indigenous people

POPULATION GROWTH

The 1996 Indigenous population count has increased by 55% since 1986 compared with a 12% increase in the non-Indigenous population. This partly reflects the greater willingness of people to report their Indigenous origin on the census form.

Administrators and policy makers concerned with the wellbeing of Australia's Indigenous peoples need information about the numbers and distribution of Indigenous people and their living conditions to support their work in allocating resources. For many decisions, the main source of information used has come from the 13 national censuses of population and housing conducted since the turn of the century. In recent years, census results have been refined and adjusted to give experimental annual estimates of the numbers of Indigenous people in Australia (see *Australian Social Trends 1998*, Population – national summary table, p. 2). An examination of the data indicates substantial on-going change in the size and distribution of the Indigenous population in Australia.

Size and distribution

At 30 June 1996, there were an estimated 386,000 Indigenous people in Australia (2.1% of the total population). More than two thirds lived in New South Wales (28%), Queensland (27%) and Western Australia (15%). Indigenous people comprised only a small proportion of the population in each of the States and Territories (3.2% or less), except the Northern Territory. There, the 51,900 Indigenous people represented more than one quarter (29%) of the total population.

According to 1996 Census counts, Indigenous people were generally less likely to live in major urban areas than the total population (30% compared to 63%) and more likely to live in more remote non-urban communities.

Census concepts

Indigenous people are those of Aboriginal and Torres Strait Islander origin. More particularly, in this review, they are people who have identified themselves as being of Indigenous origin in response to questions asked in ABS Censuses of Population and Housing.

Census questions on origins have varied since 1911. From the first national census in 1911 through to the 1976 census the questions sought to identify a person's race or racial origin (e.g. European, Aboriginal, Chinese etc). If a person was of more than one race, the mix of races was to be indicated. Since the 1981 census the word 'racial' has been omitted and the questions have simply asked whether a person is ' .. of Aboriginal or Torres Strait Islander origin'.

Indigenous families referred to in this review are couple families with children aged less than 15 years, where one or both partners have reported themselves as being of Indigenous origin on the census form.

Major urban areas are urban centres with a population of 100,000 and over. *Other urban* areas are urban centres with a population of 1,000–99,999. Rural areas consist of *rural localities,* which are all population clusters of 200–999 and *other rural* areas, which are the rural remainder, including people living on separate properties.

Indigenous population estimates (ERP) are produced by modifying census counts. These modifications comprise adjustments for:

- visitors, and residents who were temporarily absent;
- net census undercount;
- non-response to Indigenous status;
- age mis-statement of infants less than one year old;
- Indigenous persons with both parents born overseas;
- births, deaths and migration between census date and 30 June each year.[1]

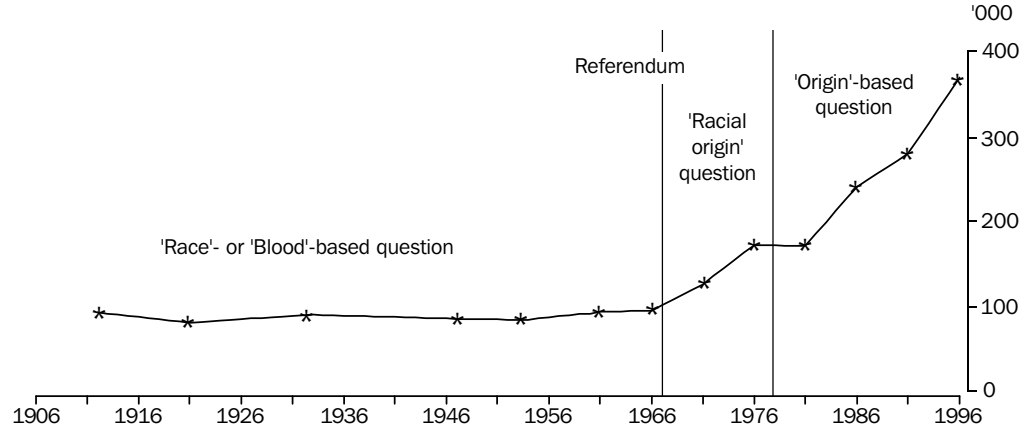
Distribution of the Indigenous population, 1996

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Australia(a)*
Geographic area	%	%	%	%	%	%	%	%	%
Major urban	40.0	47.0	27.8	44.3	29.4	20.5	n.a.	98.9	30.3
Other urban	44.3	39.6	47.2	31.9	37.7	48.7	39.6	n.a.	42.3
Rural locality	5.5	2.2	11.4	3.9	12.6	8.1	27.5	0.1	10.8
Other rural	10.2	11.2	13.6	19.9	20.2	22.6	32.8	1.0	16.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Total 1996	**109.9**	**22.6**	**104.8**	**22.1**	**56.2**	**15.3**	**51.9**	**3.1**	**386.0**

(a) Totals include Jervis Bay Territory.

Source: Unpublished data, 1996 Census of Population and Housing; *Experimental Estimates of the Aboriginal and Torres Strait Islander Population* (Cat. no. 3230.0).

Indigenous counts(a)



(a) Includes augmented estimates for the years 1911 to 1966. Torres Strait Islanders were considered to be non-Aboriginal for the 1947, 1954 and 1961 Censuses. Asterisk denotes census years.

Source: Smith, L. R., 1980, *The Aboriginal Population of Australia;* Unpublished data, 1981–1996 Censuses of Population and Housing.

However, their likelihood of living in major urban areas varied between States. This partly reflects the different settlement patterns of the total population in each State.

Population growth

The 1996 Census count of Indigenous people was substantially (55%) higher than the number counted in the 1986 Census. This growth compares with an increase of 12% in the number of non-Indigenous people in Australia.

The large population increase over the last decade has been part of a longer trend that started after the 1967 Constitutional Referendum repealed the requirement that Aboriginal 'natives' (persons with more than 50% Aboriginal 'blood') be excluded from population counts. The number of Indigenous people counted in the censuses between 1911 and 1966, augmented by estimates of traditional Aboriginal people who had been excluded, ranged between 80,000 and 100,000. Since the 1967 Constitutional Referendum the Indigenous population has more than trebled in size, while the non-Indigenous population counts grew by not quite half (47%).

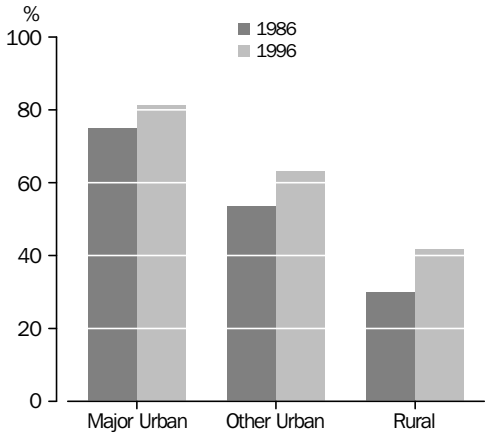
Components of growth

Ongoing difficulties in measuring the main components of population change (births and deaths) among Indigenous people do not allow accurate statements to be made about the actual contribution of natural increase (ie births minus deaths) to the observed levels of growth. However, calculations obtained in the process of producing experimental estimates of the Indigenous population show that natural increase (allowing for children born to non-Indigenous women with Indigenous male partners) has accounted for about one third of the 33% growth observed between the 1991 and 1996 censuses.[2]

The other major source of growth comes from changes in the willingness of people to record their Indigenous status on the census form.[3] The most likely group in the community to change their identification is the large and increasing number of people with mixed origins (i.e. Indigenous and non-Indigenous ancestry). It is possible that many of these people would have identified themselves as non-Indigenous (or perhaps not answered the census question) when policies of assimilation prevailed. However, with increasing action to enhance the status and rights of Indigenous people in the community, it is likely that their desire to identify with the Indigenous community has increased.

Legislative and administrative changes reflecting improvements to Indigenous status and rights over the last few decades have included the enactment of the Racial Discrimination Act of 1975, the establishment of the Aboriginal and Torres Strait Islander Commission (ATSIC) in 1989 and in 1991 the Council for Aboriginal Reconciliation.[4] They have also included changes in census collection strategies. These have included census awareness campaigns directed specifically at Indigenous people, together with the involvement of Indigenous people and organisations in census collection activities.[5]

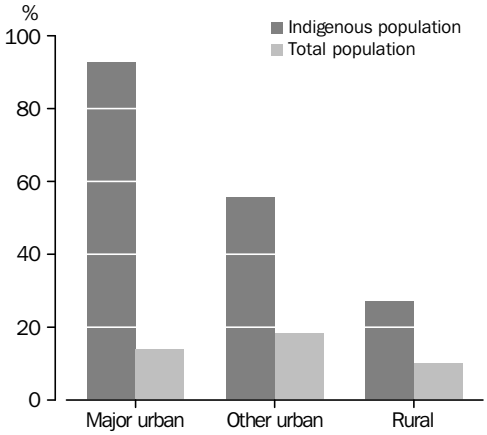
Per cent of Indigenous couple families(a) with one partner not Indigenous



(a) Couple families with children under 15 years, where one or both partners are Indigenous.

Source: Unpublished data, 1986 and 1996 Censuses of Population and Housing.

Percentage change in population counts, 1986 to 1996



Source: Unpublished data, 1986 and 1996 Censuses of Population and Housing.

Identification within Indigenous families

It is not possible from recent censuses to identify the number of Indigenous people with mixed origins or to provide direct evidence of the extent to which there have been changes in willingness to report Indigenous origin. However, some insights into both of these issues can be obtained by looking at families involving mixed marriages (those in which one partner identifies as being Indigenous) and how children in those families are identified by their parents.

In 1996, close to two thirds (62%) of Indigenous families comprising a couple with children (aged under 15) had only one parent who was Indigenous, an increase from 51% in the 1986 Census. As might be expected the proportion where only one parent was Indigenous was higher in major urban areas (81%) than in other urban areas (63%) and rural areas (42%) where traditional communities are more likely to predominate.

In 1996, the majority of mixed couple families (86%) had one or more children identified as Indigenous in the census. Ten years earlier, the likelihood that children in these families were identified as being Indigenous was lower (75%). Thus, in addition to the growing number of families of mixed origins, there is an increased likelihood of a child of mixed origin being identified as Indigenous.

The higher representation of mixed origin families in major urban areas helps to account for the greater increase in numbers of people identified as Indigenous in those areas. Between 1986 and 1996, increases in the counts of Indigenous people were greatest in major urban areas (93%).

Increases were less marked in other urban areas (56%) and in rural areas (27%). In all areas, increases were much larger for counts of the Indigenous population than the total population.

The influence of inter-regional migration on the high levels of urban growth appears not to have been so important, with most Indigenous people moving within the same local area (see *Australian Social Trends 1994,* Aboriginal and Torres Strait Islander people, pp. 5–8).

Endnotes

1 Australian Bureau of Statistics, 1997, *Population Distribution, Indigenous Australians,* Cat. no. 4705.0, ABS, Canberra.

2 Australian Bureau of Statistics, 1998, *Experimental Estimates of the Aboriginal and Torres Strait Islander Population, 30 June 1991 – 30 June 1996,* Cat. no. 3230.0, ABS, Canberra.

3 Taylor, John, 1997, 'The contemporary demography of Indigenous Australians', *Journal of the Australian Population Association,* Vol. 14, No. 1, ANU, Canberra.

4 Council for Aboriginal Reconciliation, January 1993, *Making Things Right: Reconciliation after the High Court's decision on Native Title,* Council for Aboriginal Reconciliation, Canberra.

5 Australian Bureau of Statistics, 1997, *1996 Census of Population and Housing: Nature and Content of the Census,* Cat. no. 2008.0, ABS, Canberra.

Changes in immigration intake

POPULATION GROWTH

Since 1983–84, Family immigration has been the largest component of the immigration program.

Australia has a long history of immigration. Clearly, all non-Indigenous Australians can, in principle, trace their family back to immigrants at some time during the relatively short period since settlement in 1788.

The current immigration visa classification system allows people who have been granted permanent visas to enter and settle permanently in Australia. The main visa categories encompass family immigration, skilled immigration, humanitarian immigration, and special eligibility immigration (a small component that includes former residents and citizens of Australia). New Zealand citizens intending to settle in Australia do not require a visa and are consequently not part of the visa-based immigration program.[1] However, they are included among counts of settler arrivals. (*see Australian Social Trends 1994,* Birthplaces of Australia's settlers, pp. 9–12 for a brief history of immigration policy in Australia).

At the beginning of each financial year the Commonwealth Government sets the overall planning level for the migration program and the humanitarian program in consultation with State, Territory and some local governments, as well as business, industry, trade union, ethnic, environmental and other groups.[2] The actual number of settler arrivals is usually within 5% of the planning level.

Settler arrivals

Settler arrivals comprise people arriving in Australia who hold permanent visas, regardless of stated intended period of stay. It includes New Zealand citizens who indicate an intention to settle and other people who are eligible to settle, such as overseas-born children of Australian citizens.

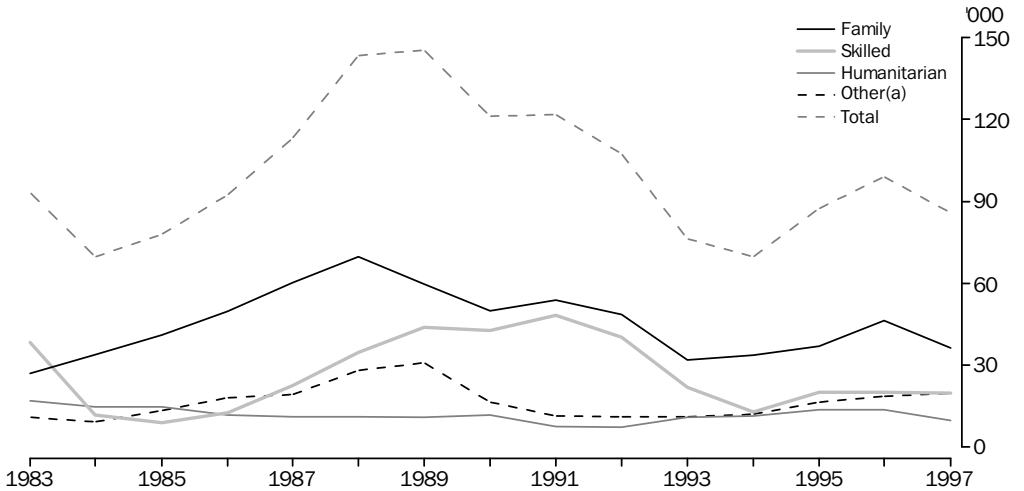
Data on settler arrivals are compiled on a financial year basis. However, for ease of display, graphs are labelled with the year ending the financial year (i,e. 1983–84 is labelled 1984).

Between 1982 and 1997, the period covered by this review, visa categories have changed slightly. The allocation of settler arrivals to visa categories has been aligned so as to match past categories with current categories as closely as possible. Comparison between years is indicative only.

However, a match is not expected since some people will not use their visa, others will not migrate to Australia immediately and some applicants may already be in Australia. Also settler arrivals include people who already have a right to enter Australia – mainly New Zealand citizens.

The eligibility criteria applied to potential settlers vary with the type of application. Family immigration settlers must meet selection criteria which mainly relate to the

Immigration eligibility categories and total settler arrivals



(a) Comprised mainly of settler arrivals from New Zealand, but includes a number of settler arrivals under other non-program immigration and a small number of special eligibility settler arrivals.

Source: Department of Immigration and Multicultural Affairs, *Australian Immigration Consolidated Statistics* and *Immigration Update*.

rules that define who is in a family and how far a family extends. Applicants wishing to be considered as skilled immigrants must undertake a points test that considers educational attainment, skill levels and English language skills, and which favours younger ages. Humanitarian applicants are assessed on the basis of their refugee status or experience of persecution or discrimination.

The changing category mix

Since 1982–83 the total annual number of settlers has varied between a maximum of 145,316 in 1988–89 to low points of 69,808 in 1983–84 and 69,768 in 1993–94. These changes were particularly influenced by economic conditions. Both the two low points followed recessions (1982–83 and 1990–92).

Family immigration has been the largest immigrant category since 1983–84. Since that time family immigrants have represented over 40% of all settlers in each year. Prior to 1983–84, skilled immigration was the largest category but the impact of the recession during 1982–83 saw its proportion decline from 41% in 1982–83 to 11% of settlers by 1984–85. In addition, a change of Commonwealth Government in 1983 resulted initially in a shift in immigration policy away from an emphasis on skilled labour to a greater focus on family reunion.[3] However, from the mid 1980s, the proportion of skilled immigrants increased steadily, reaching 40% in 1990–91. The 1990–92 recession again saw the number of skilled immigrants decrease rapidly, so that by 1993–94 they represented just 18% of settler arrivals.

Family immigration

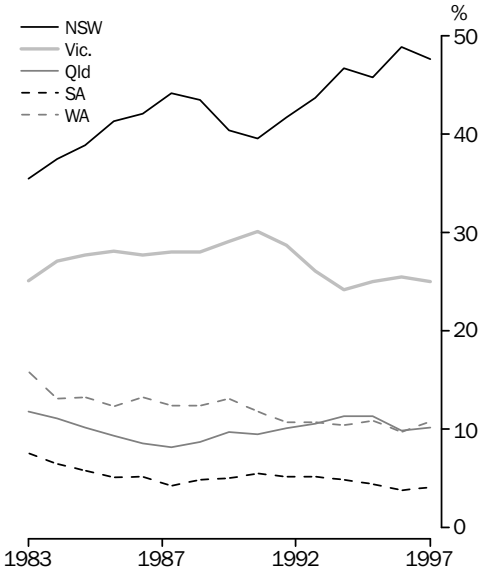
Family immigration comprises the following categories under which a potential immigrant can be sponsored by a relative who is an Australian citizen or permanent resident.

- *Preferential* – made up of spouse, prospective marriage partner, child, adopted child, parent, aged dependent relative, remaining relative, orphan relative, special need relative.
- *Concessional* – made up of non-dependent child, non-dependent brother or sister, non-dependent niece or nephew and parent of working age.

Family immigration

The main aim of the family immigration category is to facilitate the reunion of close family members. Immigrants who have been resident in Australia for a specified time, normally two years, can sponsor family members to migrate to Australia.

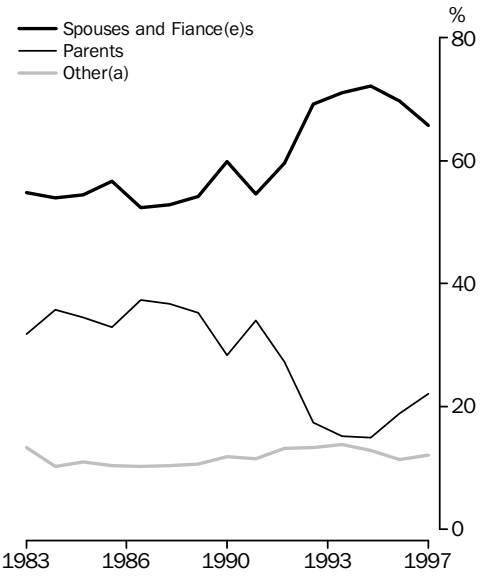
Family immigrants, State of intended residence(a)



(a) Based on stated intention at time of arrival only, settlers may have actually settled in another State.

Source: Department of Immigration and Multicultural Affairs, *Australian Immigration Consolidated Statistics* and *Immigration Update*.

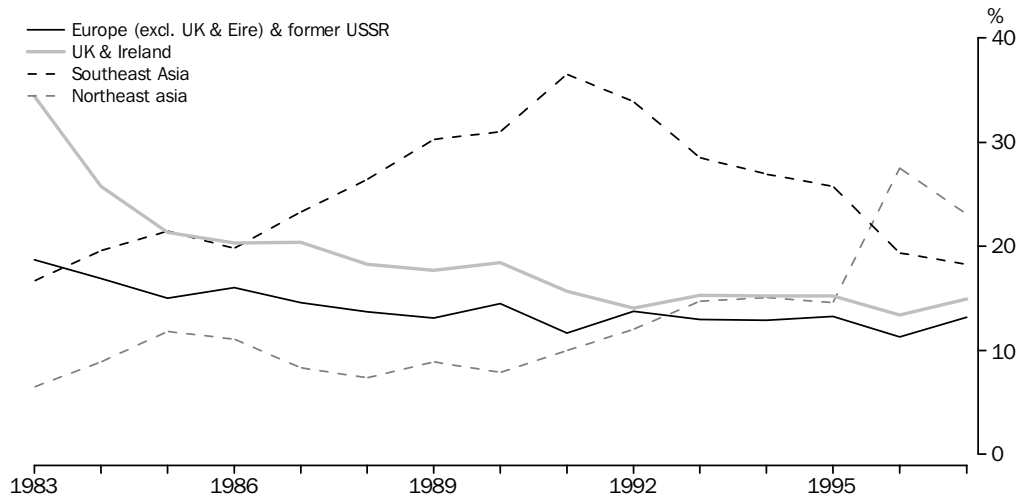
Preferential family immigration, detailed categories



(a) Includes dependent children and child for adoption.

Source: Department of Immigration and Multicultural Affairs, *Australian Immigration Consolidated Statistics* and *Immigration Update*.

Family immigration, main birthplace regions



Source: Department of Immigration and Multicultural Affairs, *Australian Immigration Consolidated Statistics* and *Immigration Update*.

Since 1982–83 the number of settlers arriving each financial year under the family immigration category rose from 26,952 to 69,571 in 1987–88. From then on the number fluctuated but generally declined, standing at 36,490 in 1996–97. Over the same period the types of family members being sponsored also varied. Those sponsored under the preferential category, primarily dependent relatives, formed 77% of family immigrants in 1996–97 compared with 43% in 1987–88.

The majority of preferential family immigrants were spouses or fiance(e)s. Between 1982–83 and 1994–95 the proportion of spouses and fiance(e)s among preferential family immigrants increased from 55% to 72%. Conversely, the proportion who were parents decreased from 32% to 15% over the same period. Since 1994–95 the trend has reversed with the proportion of parents increasing to 22% in 1996–97 and the proportion of spouses and fiance(e)s decreasing to 66%.

The majority of settlers in the family category intended to settle in New South Wales or Victoria. This reflects the large population and economic dominance of these States which have attracted immigrants in the past. These immigrants have, in turn, sponsored other family members, starting a chain of immigration to the same State. However, since the early 1990s preferences in intended State of residence have been shifting in favour of New South Wales while Victoria has received a diminishing share of immigrants. The proportions of immigrants intending to settle in Western Australia and South Australia have also been declining.

Since 1982–83 there have been distinct shifts in the countries of origin of family immigrants. In 1982–83, 34% of family immigrants came from the United Kingdom or Ireland and a further 19% came from Europe or the former USSR. By 1996–97 these proportions had decreased to 15% and 13% respectively.

This decrease in the proportion of family immigrants from European countries was associated with an increase in settler arrivals from Asia. By 1990–91, 36% of family immigrants came from Southeast Asia (mainly from Viet Nam, the Philippines and Malaysia). In 1996–97 family immigrants from Northeast Asia (mainly from China and Hong Kong) formed the largest group, 23% of family immigrants, followed by those from Southeast Asia, 18%.

Skilled immigrants

Since settlement of Australia, immigration has been an important source of skilled labour for growth in the Australian workforce. After World War II, many skilled and semi-skilled immigrants entered Australia and found work in the booming manufacturing and construction industries. The current intention of the skilled immigration program is to attract immigrants with specific skills that will benefit the Australian community and economy.

The intake of skilled immigrants has varied considerably since 1982–83, reaching as high as 48,421 in 1990–91 (40% of all settlers in that year) and as low as 8,856 in 1984–85 (only 11% of settlers in that year). This reflects a change of policy following the

Skilled immigration

Skilled immigration comprises a number of categories for prospective immigrants where there is a demand in Australia for their particular occupational skills:

- *Employer nominations* of highly skilled people by employers in Australia who have been unable to find or train skilled workers in Australia for the position.
- *Independent* for unsponsored applicants whose education, skills and ready employability will contribute to the Australia economy.
- *Business skills* for people with established business skills and a genuine commitment to owning and managing a business in Australia.
- *Distinguished talents* for people who have an outstanding record of achievement in a profession, occupation, the arts or sports.

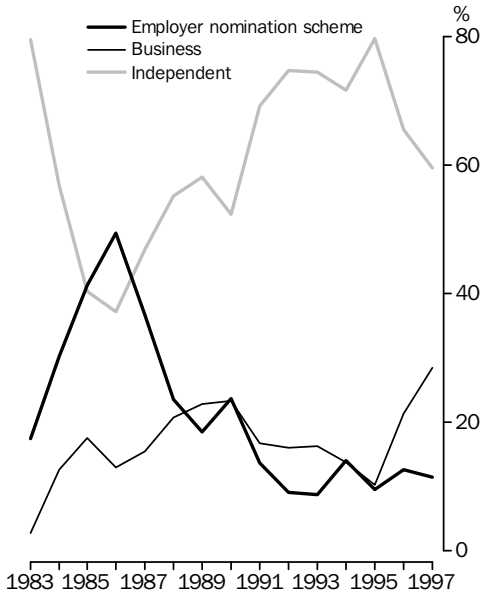
1982–83 recession that emphasised training resident workers rather than admitting skilled immigrant workers, though still using the skilled immigration scheme to fill skill gaps.[4]

In general, the majority of skilled immigrants over the period 1982–83 to 1996–97 were in the independent category, though the proportion has varied considerably over this time. In 1985–86 the proportion of skilled immigrants that were in the independent category had decreased to 37% (from a high of 80% in 1982–83) while skilled immigrants under the employer nomination scheme had increased to 49%. However, this pattern then reversed again – the proportion of independent skilled immigrants increased while that of employer nomination immigrants decreased. Between 1982–83 and 1996–97 the proportion of skilled immigrants in the business skills category rose from 3% to 28%.

In 1996–97 business immigrants were particularly concentrated in the managers and administrators occupation group (89%). Independent immigrants were mainly professionals and tradepersons (61% and 15% respectively). Employer nomination immigrants were mainly professionals or managers and administrators (52% and 17% respectively).

Although family immigrants are most likely to be influenced in their intended State of residence by the location of their sponsors, skilled immigrants, unless already employed under the employer nomination scheme, may have greater freedom to choose a location favourable to employment or establishing a business. Skilled immigrants have increasingly preferred New South Wales as their intended State of residence (increasing from 33% of

Skilled immigration, detailed categories(a)



(a) Does not show distinguished talent category which represented less then 1% of skilled immigrants.

Source: Department of Immigration and Multicultural Affairs, *Australian Immigration Consolidated Statistics* and *Immigration Update.*

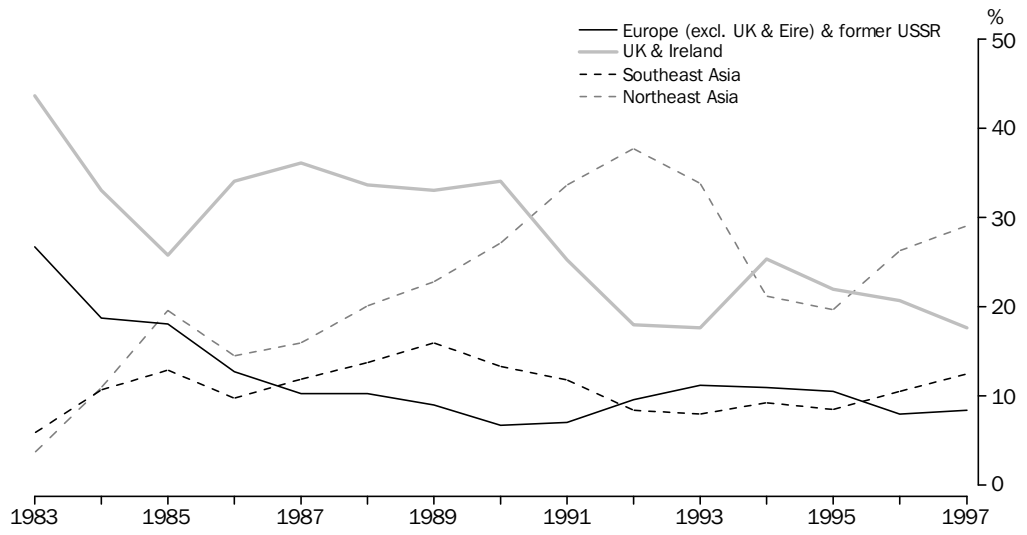
Occupation of skilled immigrants employed prior to immigration, 1996–97

Occupation prior to immigration	*Skilled immigration category*		
	ENS(a)	*Business*	*Indep–endent*
	%	%	%
Managers & administrators	17.5	88.6	7.0
Professionals	52.3	6.3	61.2
Para-professionals	8.7	0.5	7.1
Tradespersons	10.3	0.6	15.4
Clerks	6.3	3.0	5.2
Salespersons & personal service workers	2.9	0.8	3.5
Plant & machine operators & drivers	0.8	0.1	0.2
Labourers & related workers	1.1	0.3	0.3
Total	**100.0**	**100.0**	**100.0**

(a) Employer nomination scheme.

Source: Department of Immigration and Multicultural Affairs, *Immigration Update*, June Quarter 1997.

Skilled immigrants, main birthplace regions



Source: Department of Immigration and Multicultural Affairs, *Australian Immigration Consolidated Statistics* and *Immigration Update*.

skilled immigrants in 1982–83 to 45% in 1996–97). Victoria, Western Australia and Queensland have also been favoured destinations. In 1996–97 they had an even share of about 16% each, though their share has varied in the past.

Changes in the country of birth of skilled immigrants were similar to those that occurred among family immigrants, namely a decline in the proportion coming from the United Kingdom, Ireland and the rest of Europe and an increase in the proportion coming from Asian countries. Northeast Asia has become an important source of skilled immigrants (29% of skilled immigrants in 1996–97).

Humanitarian immigrants

Australia's humanitarian immigration program has two main aims. The first is to assist the United Nations High Commissioner for Refugees to resettle refugees based on its assessment of world-wide resettlement needs. The second is to assist people overseas who are suffering discrimination or are in other vulnerable situations and who have close links with Australia.[2]

The humanitarian stream is the smallest of Australia's immigration categories. In 1996–97 there were 9,886 humanitarian immigrants, representing 12% of settler arrivals in that year. Between 1982–83 and 1996–97, the number of humanitarian immigrants has been as high as 17,054 (18% of settler arrivals in 1982–83) and as low as 7,157 (7% of settler arrivals in 1991–92). This variability is a result of the random nature of international events that trigger refugee emigration, such as warfare, revolution and political instability.

Special assistance categories were created in 1992 to cater for applicants who would not be categorised as refugees by the United Nations. Immigrants in these categories were mainly from countries that had previously been important sources of refugees, such as the former USSR, former Yugoslavia, Timor and Lebanon.[5] In 1996–97, 44% of humanitarian immigrants were in the special assistance category (4,394 people), 34% were refugees (3,372 people) and 21% were in the special humanitarian category (2,120 people).

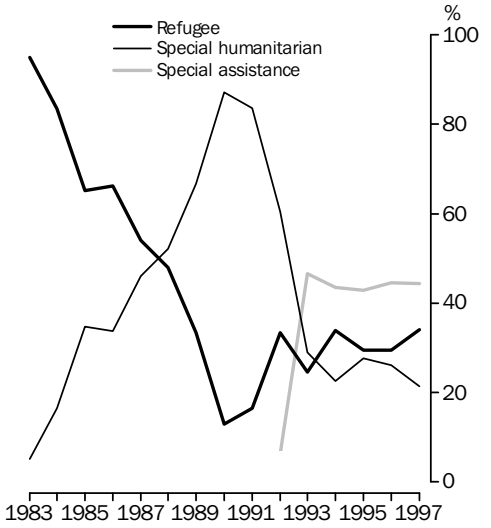
Because humanitarian immigrants come from places where war and other events have displaced people, the changes in their

The humanitarian program

The *humanitarian program* comprises:

- The *refugee program* which provides protection for people outside their country fleeing persecution.
- *Special humanitarian program* for people suffering persecution in their own country and for people who have left their country because of significant discrimination amounting to a gross violation of human rights.
- The *special assistance category* embraces groups determined by the Minister for Immigration and Multicultural Affairs to be of special concern to Australia and in real need but who do not fit within other humanitarian categories. This program also assists those internally and externally displaced people who have close family links in Australia.

Humanitarian immigration, detailed categories



Source: Australian Immigration Consolidated Statistics and *Immigration Update*, Department of Immigration and Multicultural Affairs.

countries of birth over time reflect the prevailing troubled regions of the world. The war in Viet Nam created a huge movement of refugees across the world. In 1982–83 about three quarters of humanitarian immigrants to Australia came from Southeast Asia.

More recently, the civil war in former Yugoslavia and the opening up of the USSR has made Europe and the former USSR the most common region of birth among humanitarian immigrants (46% of all humanitarian immigrants in 1996–97).

Humanitarian immigrants were more likely than other immigrants to give their intended State of residence as NSW or Victoria (75% of humanitarian immigrants in 1996–97). This reflects the importance of Sydney and Melbourne as reception areas for refugees due to their historical importance as ports and the consequent availability of hostel facilities.

Endnotes

1 Department of Immigration and Ethnic Affairs, 1983, *Review of Australia's Demographic Trends 1983*, AGPS, Canberra.

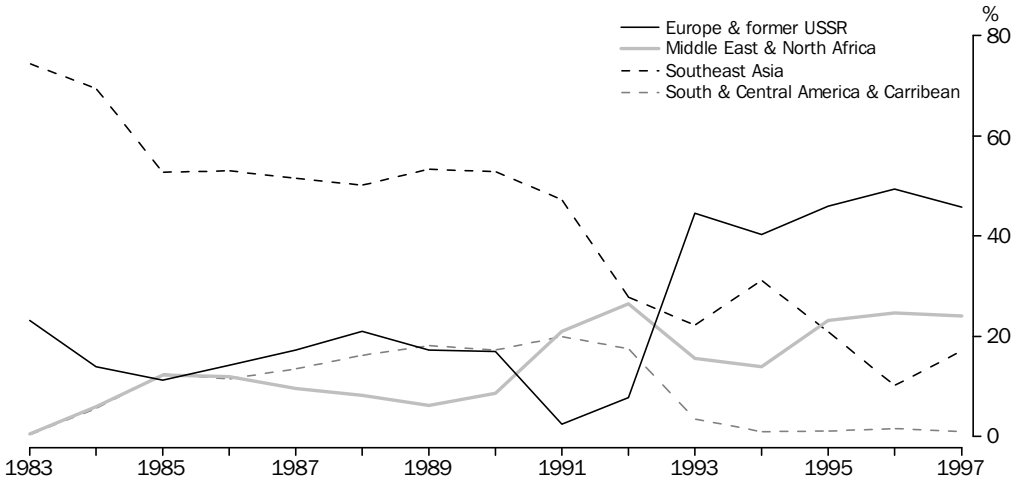
2 Department of Immigration and Multicultural Affairs, 1997, *Population Flows: Immigration Aspects,* DIMA, Canberra.

3 Bureau of Immigration and Population Research, 1990, *The chains that bind: Family Reunion Migration to Australia in the 1980s*, AGPS, Canberra.

4 Bureau of Immigration and Population Research, 1994, *The Rationale for Australia's Skilled Immigration program*, AGPS, Canberra.

5 Bureau of Immigration and Population Research, 1994, *Exile or Refugee? The settlement of refugee, humanitarian and displaced immigrants*, AGPS, Canberra.

Humanitarian immigrants, main birthplace regions



Source: Australian Immigration Consolidated Statistics and *Immigration Update*, Department of Immigration and Multicultural Affairs.

Family

Family — national summary

LIVING ARRANGEMENTS	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total families	'000	4 146	4 236	4 319	4 456	4 502	4 587	4 638	4 709	4 791	4 834	4 899
Persons who live alone (of persons aged 15 and over)	%	8.3	8.5	8.4	8.2	8.6	8.9	9.6	9.6	10.0	10.2	10.5
Average family size (persons)	no.	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1
Couple families with dependants (of all families)	%	45.5	45.7	44.7	44.3	43.7	43.4	42.9	41.6	41.4	40.6	40.8
One-parent families with a male parent with dependants (of all families)	%	n.a.	1.0	0.9	1.0	1.1	1.1	1.0	1.2	1.2	1.3	1.3
One-parent families with a female parent with dependants (of all families)	%	n.a.	7.0	6.8	7.1	7.4	7.9	7.9	7.8	8.5	8.4	9.1
Couple-only families (of all families)	%	30.4	30.7	31.5	31.2	31.3	31.1	32.1	33.3	33.6	34.1	33.6
De facto couples (of all couples)(a)	%	n.a.	n.a.	n.a.	n.a.	8.2	n.a.	n.a.	n.a.	n.a.	10.1	n.a.
Couples with dependants, both employed (of all couples with dependants)	%	50.2	50.9	53.8	55.9	53.4	53.3	52.5	52.8	57.7	55.7	56.3
One-parent families with dependants, parent employed (of all one parent families with dependants)	%	n.a.	n.a.	50.2	49.0	47.0	45.7	45.3	45.9	46.9	46.8	46.5

FAMILY FORMATION	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Marriage rate (per 1,000 not married males)	no.	47.6	45.8	45.5	44.6	43.5	41.7	41.1	39.8	38.2	36.7	34.7
Median age of men at first marriage	years	25.6	25.9	26.1	26.3	26.4	26.7	26.9	27.0	27.2	27.3	27.6
Median age of women at first marriage	years	23.5	23.8	24.0	24.2	24.3	24.5	24.7	24.8	25.1	25.3	25.7
Marriages where both partners married for the first time (of all marriages)	%	66.7	67.2	67.1	67.3	67.4	67.5	67.2	67.1	67.5	67.5	66.4
Divorce rate (per 1,000 married males)	no.	10.7	10.6	10.8	10.8	10.9	11.6	11.5	12.1	12.0	12.3	12.9
Median duration of marriage to separation	years	7.6	7.3	7.3	7.3	7.3	7.4	7.4	7.6	7.7	7.6	7.6
Divorces involving children (of all divorces)	%	59.7	58.6	57.5	55.3	55.6	54.2	52.9	52.6	52.4	n.a.	53.6
Total fertility rate (per woman)	no.	1.87	1.85	1.84	1.84	1.90	1.85	1.89	1.87	1.85	1.82	1.80
Median age of mothers at first birth within registered marriage	years	26.5	26.8	27.1	27.3	27.6	27.8	28.0	28.3	28.5	28.6	28.7
Births to mothers aged under 20 (of all births)	%	5.9	5.7	5.7	5.7	5.8	5.7	5.4	5.1	5.0	4.9	4.9
Births to mothers aged 35 and over (of all births)	%	7.9	8.5	9.0	9.6	10.0	10.7	11.4	11.9	12.9	13.7	14.6
Births outside marriage (of all births)	%	16.8	18.0	19.0	20.2	21.9	23.0	24.0	24.9	25.6	26.6	27.4
Births outside marriage acknowledged by father (of all births outside marriage)	%	70.6	73.0	74.4	75.9	77.1	79.5	81.0	81.7	82.2	83.3	84.2

(a) Includes same-sex couples in 1996.

Reference periods: Data on family formation are for the calendar year. Data on de facto couples are at census date. Data on other living arrangements are at June.

Family — State summary

LIVING ARRANGEMENTS	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Total families	'000	1997	1 644	1 212	908	412	485	128	34	76	4 899
Persons who live alone (of persons aged 15 and over)	%	1997	10.4	10.7	9.7	12.1	10.2	12.9	6.6	9.1	10.5
Average family size (persons)	no.	1997	3.1	3.2	3.1	3.0	3.1	3.0	3.2	3.2	3.1
Couple families with dependants (of all families)	%	1997	40.8	42.5	39.5	37.6	41.5	38.9	46.5	44.8	40.8
One-parent families with a male parent with dependants (of all families)	%	1997	1.2	1.3	1.3	1.5	1.4	1.1	* *	2.2	1.3
One-parent families with a female parent with dependants (of all families)	%	1997	9.3	8.0	9.6	9.3	9.3	9.9	8.8	10.5	9.1
Couple-only families (of all families)	%	1997	32.8	31.7	35.5	37.3	34.2	36.5	31.2	29.6	33.6
De facto couples (of all couples)(a)	%	1996	9.4	8.4	11.9	9.8	12.0	11.1	19.6	11.3	10.1
Couples with dependants, both employed (of all couples with dependants)	%	1997	54.4	57.4	57.1	60.9	54.8	50.7	64.9	63.4	56.3
One-parent families with dependants, parent employed (of all one parent families with dependants)	%	1997	42.9	50.8	48.1	45.4	45.9	40.1	56.0	61.2	46.5

FAMILY FORMATION	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Crude marriage rate	no.	1996	5.8	5.7	6.2	5.4	5.8	5.6	4.4	5.4	5.8
Median age of men at first marriage	years	1996	27.6	27.8	27.2	27.4	27.8	27.1	28.5	27.7	27.6
Median age of women at first marriage	years	1996	25.6	26.0	25.3	25.5	25.8	25.1	26.4	26.1	25.7
Marriages where both partners married for the first time (of all marriages)	%	1996	67.0	69.1	64.4	65.0	63.7	61.5	63.4	67.4	66.4
Crude divorce rate	no.	1996	2.6	2.8	3.3	2.9	2.8	3.3	2.7	(b)	2.9
Median duration of marriage to separation	years	1996	6.8	7.6	8.1	8.0	8.4	8.8	7.3	7.9	7.6
Divorces involving children (of all divorces)	%	1996	50.8	51.9	56.9	56.4	53.5	64.0	50.6	56.4	53.6
Total fertility rate (per woman)	no.	1996	1.83	1.71	1.84	1.75	1.81	1.92	2.29	1.68	1.80
Median age of mothers at first birth within registered marriage	years	1996	28.6	29.1	28.4	29.1	28.7	28.0	28.6	28.6	28.7
Births to mothers aged under 20 (of all births)	%	1996	4.7	3.2	6.5	4.6	5.7	6.9	13.2	3.8	4.9
Births to mothers aged 35 and over (of all births)	%	1996	15.3	15.8	12.8	15.4	13.6	11.3	10.9	16.2	14.6
Births outside marriage (of all births)	%	1996	25.4	21.6	32.6	30.1	30.9	34.3	57.8	25.2	27.4
Births outside marriage acknowledged by father (of all births outside marriage)	%	1996	84.3	86.0	83.7	86.6	84.4	87.6	62.8	84.3	84.2

(a) Includes same-sex couples.

(b) Based on the location of the Family Court where the divorce is granted and registered. Due to the large number of divorces granted in the ACT to usual residents of another State, the divorce rate for the ACT is not representative of the ACT population.

Reference periods: Data on defacto couples are at census date. Data on other living arrangements are at June.

Family — definitions and references

Average family size — the total number of family members divided by the number of families.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Birth — the delivery of a child irrespective of the duration of pregnancy who, after being born, breathes or shows any other evidence of life such as heart beat.
Reference: *Births, Australia* (Cat. no. 3301.0).

Births outside marriage — births where the father was not registered as married to the mother at the time of the birth, whether or not the parents were living together at the time of the birth, and whether or not the child may subsequently have been legitimated or adopted.
Reference: *Births, Australia* (Cat. no. 3301.0).

Births outside marriage acknowledged by father — births outside registered marriage where the father's name is recorded on the birth certificate.
Reference: *Births, Australia* (Cat. no. 3301.0).

Couple family — a family consisting of a male and a female partner who are registered as married or are in a de facto relationship. It may include one or more dependent children and/or other family members.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Couple family with dependants — a couple family with at least one dependent child present.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Couple-only family — a couple family with no dependent children or other family members (e.g. adult children) present.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Crude divorce rate — the number of divorces granted in the calendar year per 1,000 of the estimated resident population at 30 June of that year.
Reference: *Marriages and Divorces, Australia* (Cat. no. 3310.0).

Crude marriage rate — the number of marriages registered in the calendar year per 1,000 of the estimated resident population at 30 June of that year.
Reference: *Marriages and Divorces, Australia* (Cat. no. 3310.0).

De facto couple — a couple who identified themselves as de facto partners in a relationship question.
Reference: *1991 Census — Community Profiles, Australia* (Cat. no. 2722.0).

Dependants (dependent children) — all family members under 15 and family members aged 15–24 attending an educational institution full-time, except those classified as husbands, wives, lone parents or other family heads.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Divorce rate — the number of divorces granted per 1,000 male or female population registered as married.
Reference: *Marriages and Divorces, Australia* (Cat. no. 3310.0).

Divorces involving children — divorces of couples with unmarried children of the registered marriage who were under 18 at the time of application for divorce. Under the *Family Law Act 1975,* adopted and ex-nuptial children and children from a former registered marriage may be included (in certain cases). Children who are registered as married or aged 18 or more are not subject to custody and guardianship orders and are excluded.
Reference: *Marriages and Divorces, Australia* (Cat. no. 3310.0).

Employed — persons aged 15 and over who either worked during the reference week for pay, profit, commission, payment in kind or without pay in a family business, or who had a job but were not at work.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Family — two or more people related by blood, registered marriage, adoption, or a de facto relationship who live in the same household. Three major family types are identified: couple families, one-parent families and families of related adults. Families living in non-private dwellings and non-family members (such as friends or boarders) are excluded.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Lone parent — the head of a one-parent family.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Marriage rate — the number of registered marriages per 1,000 not married male or female population aged 15 and over.
Reference: *Marriages and Divorces, Australia* (Cat. no. 3310.0).

Marriages where both partners married for the first time
Reference: *Marriages and Divorces, Australia* (Cat. no. 3310.0).

Median — the value at which half the population falls above, and half falls below.

Median age at first marriage
Reference: *Marriages and Divorces, Australia* (Cat. no. 3310.0).

Median age of mothers at first birth within registered marriage
Reference: *Births, Australia* (Cat. no. 3301.0).

Median duration of marriage to separation — the median interval between the date of registered marriage and the date of separation.
Reference: *Marriages and Divorces, Australia* (Cat. no. 3310.0).

One-parent family with dependants — a parent together with at least one dependent child of his/her own.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Persons who live alone — persons who are the only member of a household.
Reference: *Labour Force Status and Other Characteristics of Families, Australia* (Cat. no. 6224.0).

Total fertility rate — the average number of children a woman would bear during her lifetime if she conformed to the current age-specific fertility rates.
Reference: *Births, Australia* (Cat. no. 3301.0).

Family planning

FAMILY FORMATION

Two thirds of Australian women aged 18 to 49 either use some method of temporary contraception, or have permanent contraceptive protection.

Changes in the birth rate of a country can reflect changes in other social and economic trends, and also changes in personal attitudes relating to ideal family size, life style choices and standards of living. Access to contraceptive methods assists couples and individuals in realising their personal decisions on the number and spacing of children in their families.

International statements such as the 1974 World Population Plan of Action, to which Australia was a signatory, recognised the principle that all couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so. This principle was maintained in the Programme of Action adopted at the UN International Conference on Population and Development held in Cairo in 1994.

Fertility trends

In 1934 Australia's crude birth rate was at a level lower than ever previously experienced. From this low point in the middle of the great depression, the birth rate increased through the war years and the baby boom years that followed, stabilising in the 1950s. The total fertility rate followed a similar pattern, reaching its highest point in 1961. From that time both rates declined, and during the 1980s and 1990s were at levels well below the rates of 1934 (see *Australian Social Trends 1996,* Trends in fertility pp. 36–40).

Family formation

Year	*Total fertility rate* rate	*Fifth or higher order births(a)* %	*Median age of mothers at first nuptial birth* years
1934	2.1	17.5	24.4
1944	2.6	10.3	24.9
1951	3.0	8.7	24.2
1961	3.6	11.8	23.2
1971	2.9	6.7	23.2
1981	1.9	2.6	25.3
1991	1.9	2.3	27.8
1996	1.8	2.3	28.7

(a) as a proportion of total nuptial births.

Source: Australian Demography; Births, Australia (Cat. no. 3301.0).

Fertility and fertility control

The *total fertility rate* is the number of babies a woman could expect to have in her lifetime, given the fertility patterns prevailing at the time.

The *crude birth rate* is the number of births in a calendar year per 1000 of the population at 30 June.

Methods of fertility control

Contraceptive methods include:
- 'traditional', such as withdrawal, periodic abstinence(rhythm or natural method).
- short-term, such as condom, diaphragm, spermicides, douche.
- long-term, such as the oral contraceptive pill, intra-uterine device(IUD).
- permanent protection, such as tubal ligation, vasectomy.

Other changes occurred in family formation patterns. In 1934 about 18% of married mothers who gave birth in that year had already had at least four children. In 1951 the proportion had halved, but increased again in 1961. By 1981 the proportion of women giving birth who were having a fifth or higher order child was insignificant.

The timing of first births also changed over the period. The median age of married mothers when they had their first babies was lowest in 1961 and 1971, then increased markedly between 1971 and 1981, and again to 1991. Delays in starting child bearing are undoubtedly associated with the increasing participation by young women in education and labour force activities.

Development of birth control in Australia

Evidence given to the 1903–1904 NSW Royal Commission on the Decline of the Birth-Rate in NSW showed that a wide range of birth control methods was being used at the time, including withdrawal, douches, sponges and pessaries, and condoms[1].

The diaphragm, an important female-controlled method, was introduced into Australia in the 1920s. Another significant influence on contraceptive practices was the Papal Encyclical of 1930, *Casti Connubi*, which identified periodic abstinence as the only licit form of contraception.[1]

(This remained an important influence as there has always been a significant proportion of Roman Catholics in the Australian population, ranging from 20% at the 1933 Census to 27% in 1996.)

The introduction of the oral contraceptive pill in 1961 and the new versions of the intra-uterine device (IUD) available from the mid-1960s brought about major changes in contraceptive practice. Use of many of the older methods declined markedly.

The technological revolution

The oral contraceptive pill was approved for distribution in Australia in 1961, upon the written prescription of a medical practitioner. Access was therefore under the control of doctors, and dependent on their attitudes, particularly with regard to prescribing for unmarried women.[2]

The oral contraceptive has two distinctive features: the actual use of the pill is controlled by the woman taking it, and the protective effect is continuous. The IUD also provides continuous protection. However, both methods can be accompanied by possible significant side-effects, which may discourage long-term usage.

Another development of the 1970s and 1980s was the increasing use of voluntary sterilisation procedures. Developments in surgical techniques, and the resolution of legal and ethical issues associated with sterilisation, made these procedures more widely acceptable.[3]

Although public acceptance of contraceptive use seemed well established, there was little official government action in this field until the 1970s. In December 1972 the Federal government removed the sales tax on all contraceptives, then standing at 27.5%, and included the pill on the Pharmaceutical Benefits Schedule, thus reducing the cost markedly. In addition, restrictions on advertising contraceptives were removed in the ACT, under Federal administration at the time. In following years Federal financial support was provided for a range of family planning information and education programs. State governments provided varying levels of support in their jurisdictions. State-based restrictions on advertising contraceptives and family planning services were gradually liberalised. Family planning was generally recognised as a major preventive health measure.[2]

Taking the pill

Data from the 1971 Melbourne Family Formation Survey indicated that overall 26% of wives aged under 45 years were using the pill as their main method of contraception during 1970–71.[4]

In 1977, data from the first national health survey showed that 20% of women aged 18–49 years had taken birth control pills in the two days before interview. (This figure would be an underestimate of total use because of the reference time period; the medication regime at the time provided pills for three weeks, leaving the fourth week of the cycle without any intake).

In 1983, 24% of this age group had taken contraceptive pills in the previous two weeks. In 1989, 28% reported they were taking oral contraceptives (for any reason); in 1995 the proportion was 27%. Over the entire period, the highest proportion of pill users was the 20–24 year age group, followed by those aged 25–29 years.

The proportions of younger women taking the pill increased markedly between 1977 and 1989, particularly among those aged 18–19 years. Part of the increase is likely to reflect the increasing willingness of doctors to prescribe the pill for unmarried women.

In 1977, among women aged 30 years and over, the proportions taking the pill were lower than for the younger age groups; although there was some increase in use over the period it was not so great as for the younger women. A small increase occurred between 1989 and 1995 for older age groups, whereas pill use by younger women declined.

Use of contraceptive pill

Age group	*1977*	*1983*	*1989*	*1995*
	%	%	%	%
18–19	21.2	29.0	39.4	33.0
20–24	35.4	45.6	52.2	46.7
25–29	29.1	34.1	43.3	38.2
30–34	19.8	22.2	28.5	28.1
35–39	11.8	11.8	18.5	22.4
40–44	8.0	6.6	6.8	12.1
45–49	6.1	3.2	4.2	6.8
Total	**20.4**	**23.6**	**28.1**	**26.7**

Source: Unpublished data, Australian and National Health Surveys.

Contraceptive use in the 1990s

As part of the National Health Survey in 1995, information was collected about use of the contraceptive pill and other temporary contraceptive methods by Australian women aged 18–49 years (or their partner where appropriate). Women were also asked why they were not using these temporary methods; such reasons could include trying to get pregnant, not being sexually active or permanent protection provided by sterilisation operations.

Overall, two thirds of women aged 18–49 years either were using one of the temporary contraceptive methods or they or their partner had undergone a sterilisation operation. A further 12% were not sexually active, and 6% were pregnant or trying to get pregnant. The remaining women gave a variety of other reasons, or no reason was recorded.

The contraceptive pill remained the primary method reported by 40% of contraceptive users. Around a third had permanent protection through tubal ligation, hysterectomy or their partner's vasectomy and 18% used condoms. Use of some older methods, such as the diaphragm and withdrawal, had diminished.

Patterns of use and age

The use of contraception now appears well established in all age groups between 18 and 49 years. The group aged 18–19 years, who reported the lowest usage, at 50%, also had the highest proportion not sexually active (34%).

In the younger age groups contraception was mainly restricted to the pill or condoms. The level of use of the latter method may also be related to the additional function of condoms in controlling the spread of infections, and the emphasis given to this in information campaigns.

Overall about the same proportions (3%) of women relied on periodic abstinence ('natural' or rhythm methods) and IUDs. Nearly half (47%) of those using IUDs were aged 40 and over, whereas the users of abstinence methods were more likely to be in their 30s.

Use of sterilisation is closely related to age/life-cycle stage, as such operations are generally considered irreversible. Women undergoing hysterectomies performed for various medical reasons also acquire permanent contraceptive protection. This operation is also more common in older age groups.

Type of contraception used by women aged 18–49, 1995

	Age of users							
Contraceptive method	*18–19*	*20–24*	*25–29*	*30–34*	*35–39*	*40–44*	*45–49*	*Total*
	%	%	%	%	%	%	%	%
Contraceptive pill	66.3	71.1	59.2	43.0	31.3	16.9	10.1	40.0
Condom(a)	32.2	21.6	27.0	21.2	13.9	10.5	7.2	17.6
IUD	*	2.1	*	2.8	3.1	6.1	2.8	3.0
Periodic abstinence	*	*	3.6	4.2	3.9	3.0	2.4	3.0
Other temporary methods	*	2.6	2.4	3.9	3.7	2.1	*	2.6
Female sterilisation	0.0	*	3.6	10.7	21.6	36.1	49.9	19.2
Male sterilisation(a)	0.0	*	2.8	14.2	22.4	25.3	25.8	14.5
	'000	'000	'000	'000	'000	'000	'000	'000
Total women who use contraception	111.3	441.1	428.6	453.7	476.5	448.2	392.6	2 751.9
	%	%	%	%	%	%	%	%
Women who use contraception, as a proportion of all women	49.7	65.7	64.5	65.4	71.6	71.8	67.4	66.7

(a) Used by male partner.

Source: Unpublished data, *1995* National Health Survey.

The proportions of women protected by female or male sterilisation operations increased rapidly after age 30. In the age group 35–39 years the proportion using the two major temporary methods, the pill and condoms, was almost the same as the proportion sterilised. In the older age groups the proportion with partners who had had vasectomies remained relatively stable. However, with the increasing numbers of hysterectomies reported in the older age groups, the proportion with female sterilisations increased to 50% of contraceptive users aged 45–49 years.

A large proportion of those aged under 25 reported they were not sexually active, and not using any contraceptive method. Among the group aged 25–34, 11% were pregnant or trying to get pregnant and therefore not using contraception.

Patterns of use and single women

In the past thirty years a revolution has taken place in community attitudes relating to sexual activity outside registered marriage. It has been accepted for some time that 'no account of contraceptive practice can any longer concentrate wholly on the married'[1].

In 1995 the majority (62%) of women aged 18–49 years were living with a partner, with or without children, and another 10% were single parents living with their children. 12% were daughters (or other relatives), not themselves married, living with their parents, and 13% were single women living by themselves or with non-relatives.

Half of the young women living with their parents used some form of contraception; 69% were using the pill and 27% condoms.

Of the single women living alone or with non-relatives, 61% were using contraception. Again, the majority were using the pill (61%) and 24% used condoms.

This pattern of use is probably related as much to age as to marital status. Women living with a partner used a wider range of contraceptive methods, and a substantial proportion were protected by sterilisation operations.

Termination of pregnancy

Termination of pregnancy is rarely used as a regular contraceptive method. It is generally a response to unintended pregnancy resulting from contraceptive failure or unplanned sexual activity.

In the year ending June 1996 there were around 95,200 terminations of pregnancy, as recorded in claims on Medicare and public patient hospital admission records.[5] Approximately 27% of known pregnancies ended in termination during the period. (The total of known pregnancies does not include those ending in miscarriage or still-birth.)

Endnotes

1 Economic and Social Commission for Asia and the Pacific, 1982, *Country monograph series no 9: Population of Australia,* United Nations, New York.

2 Siedlecky, S. and Wyndham, D. 1990, *Populate and Perish,* Allen & Unwin Australia Pty Ltd, Sydney.

3 Santow, G. 1991, *Trends in contraception and sterilization in Australia,* Australian & New Zealand Journal of Obstetrics and Gynaecology, vol.31, no. 3.

4 Lucas, D. 1983, *Australian family planning surveys: some problems of comparability,* Journal of Biosocial Science: vol 15.

5 Department of Health and Family Services *Medicare Statistics*; Australian Institute of Health and Welfare, National Hospital Morbidity Database, unpublished data.

Adoptions

FAMILY FORMATION

The number of adoptions in Australia has dropped sharply from 9,798 in 1971–72 to 668 in 1995–96.

The numbers of children being adopted have been falling over recent decades. Various factors have contributed to this trend. Medical and social changes have reduced the likelihood of unplanned and unwanted pregnancies, and social pressures on young unmarried mothers to give up their children for adoption have diminished. The trend to lower fertility (see *Australian Social Trends 1996*, Trends in fertility, pp. 36–40) suggests that social pressures for families to raise children at all, and hence the demand for children for adoption, have declined as well. Changes in legislation concerning who might be involved in adoptions have contributed to the decline.

Changes in adoption procedures in the post-world war II period have paralleled a shift in social attitudes from one in which adoptions were regarded as providing a service for adults (childless couples and young single mothers) to one in which the wellbeing of children has become paramount.[1] Recent moves to allow relevant parties access to information about their biological relatives reflect this trend.

Trends in adoption

Australia-wide statistics on the number of adoptions have been available since the year ended 30 June 1969. The number of adoptions in Australia peaked in 1971–72, when 9,798 adoptions were recorded. Four years later this number had halved (4,990 in 1975–76), by 1979–80 it had

Adoptions

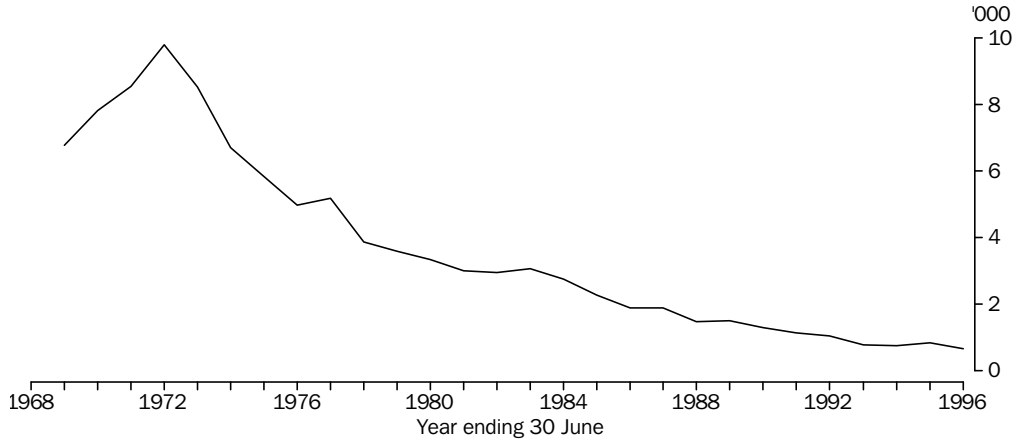
This review uses data from the series *Adoptions Australia* (1990–91 to 1995–96) released by the Australian Institute of Health and Welfare (AIHW). Information on adoptions was also provided by State and Territory community service departments.

Data for the years prior to 1985–86 are from the ABS publication *Adoptions, Australia* (Cat. no. 4406.0) and data for the years 1987–88 to 1989–90 are from the standardisation of social welfare statistics project (WELSTAT) publication *Adoptions: National Data Collection*, published by the Standing Committee of Social Welfare Administrators. Adoptions where the relationship to the adoptive parents was unknown were not included. No data on adoptions were collated nationally for 1985–86 to 1986–87. Data for New South Wales on adoptions by step parents is missing from 1987–88 to 1993–94, and the number of adoptions may also be underestimated for 1995–96 due to a change in record keeping. Also missing is data on overseas-born adoptees in Victoria for 1987–88.

Adoption is the legal process in which a child ceases to be the child of its biological parents and becomes the child of another person(s).[1] Children can either be adopted by a *relative,* such as a step parent or a *non-relative*.

A birth is classified as *nuptial* if the child's parents were legally married to each other at the time of birth and *ex-nuptial* if they were not.

Adoptions in Australia, 1968–69 to 1995–96



Source: AIHW, *Adoptions Australia, 1995–96,* 1997.

dropped to one third (3,337) and by 1995–96 there were only 668 adoptions recorded in Australia.

Since overseas adoptions made up only a small proportion of all adoptions until the mid 1980s, the decline since the 1970s can be attributed to the fall in the number of Australian-born children available for adoption.

The major turnaround in the number of adoptions after 1972 occurred at a time of rapidly changing social attitudes surrounding the plight of young unmarried mothers. The introduction of the Supporting Mothers' Benefit in July 1973 meant that single parenting for young unmarried mothers became a realistic option, thus reducing the pressure to relinquish their child for adoption.

The turnaround also occurred at a time when attitudes and laws relating to the termination of unwanted pregnancies were changing. The conditions under which a pregnancy could be terminated were relaxed in Victoria in 1969 and New South Wales in 1972 (the two most populous States in Australia).

General practitioners, in line with changing community attitudes, had started prescribing the contraceptive pill (previously restricted to married women) to young unmarried women. This, together with the emergence of family planning centres (see *Australian Social Trends 1998*, Family planning, pp. 29–32) and sex education classes, had a big impact on the ability of young women to avoid unwanted pregnancies.

Australian-born children adopted by non-relatives, by age

	1979–80(a)	*1995–96*
Age of child	no.	no.
Under 1	887	71
1–4	107	73
5–9	37	34
10–14	12	29
15+	10	8
Unknown	41	2
Total	**1 094**	**217**

(a) Excludes 519 non-relative adoptions in New South Wales.

Source: AIHW, *Adoptions Australia 1995–96* and *1979–80* (Cat. no. 4406.0).

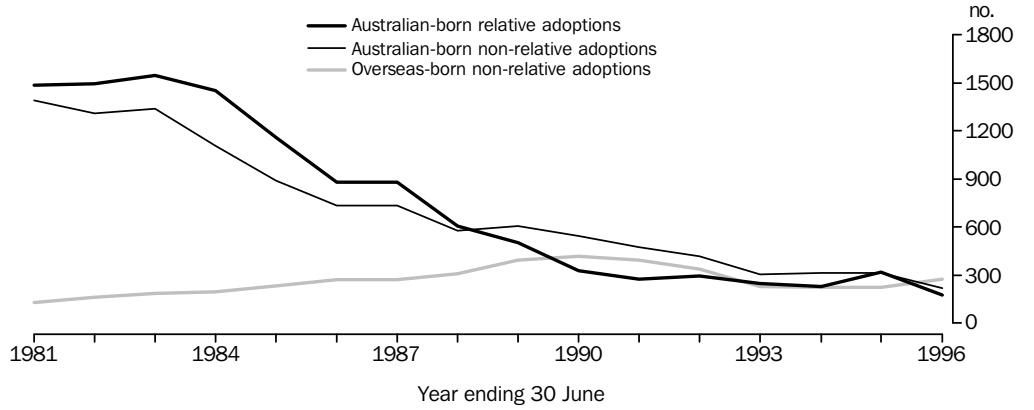
In addition, the number of women in the workforce has increased over the last two decades, as has access to child care facilities.

This has further improved women's economic independence and their ability to support a family on their own.[2]

As a result of these changes, the supply of new-born babies available for adoption dropped sharply. In 1979–80, when information about the ages of adoptees was first available, adopted children aged under one year represented 81% of all adoptions of Australian-born children by non-relatives. By 1995–96 this had dropped to 33%.

The more recent development of alternative reproductive technologies, such as in-vitro fertilisation (IVF) and gamete intrafallopian transfer (GIFT) have avoided the need for adoption for some couples unable to conceive a child naturally, although the

Relative and non-relative adoptions, 1980–81 to 1995–96



Source: AIHW, *Adoptions Australia, 1995–96,* 1997; AIHW, *Adoptions Australia, 1994–95,* 1996; AIHW, *Adoptions Australia, 1993–94,* 1995.

number of such cases is small. In 1994 in Australia there were 2,715 births following IVF or GIFT treatment.[3]

Changes in legislation

Recent changes in legislation are likely to affect the number of adoptions in the future. First, the introduction of the Family Law Reform Act (1996) and changes to individual State and Territory laws have restricted adoption by relatives, particularly those by step parents. Step parents adopt children to legally integrate the child into a new family structure by changing the child's name and giving full legal rights and obligations to the step parent.[4] The restrictions now allow non-custodial parents to retain rights of guardianship, access or custody.[5]

Adoptions by relatives other than step parents are also now discouraged as they can distort biological relationships. For example, if a child is adopted by a sibling, the birth mother would then become the child's grandmother. Most States and Territories have policies in place which promote the use of guardianship or custody orders, rather than adoptions, to place children in the care of non-parental relatives.[5]

Second, alternative legal orders have been introduced that transfer guardianship and custody of a child to another person without changing the child's legal status. For instance, in 1995–96 in Victoria, 110 permanent care orders were granted, compared to 74 adoptions of Australian-born children. As a result, adoptions by relatives have dropped more sharply than those by non-relatives.

The number of Australian-born children adopted by relatives had already been declining at a faster rate than those adopted by non-relatives since 1980–81. In most years since 1988–89 there have been more children adopted by non-relatives than by relatives.

Australian-born adoptees in 1995–96

During 1995–96 there were 394 adoptions of Australian-born children. Of these, 217 adoptions were by non-relatives and 177 were by relatives, mostly step parents (167).

Australian-born children who were adopted by non-relatives were generally younger than those who were adopted by relatives. Two thirds (66%) of Australian-born children adopted by non-relatives in 1995–96 were under five years of age, compared to 8% of children adopted by relatives. Most

Indigenous adoptions

Before 1788, Aboriginal and Torres Strait Islander people were governed by customary laws, many of which are still observed by Indigenous communities today. In Aboriginal societies, a child who cannot be cared for by his or her biological parents is cared for by members of the child's extended family. As there is no change in the parent-child relationship under customary law, such placements are more like 'fostering' than 'adoption'.[6]

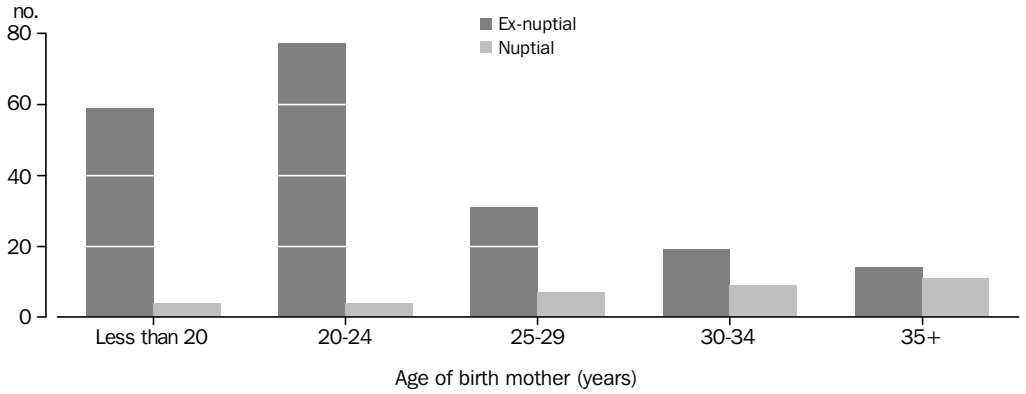
Although adoption is not part of Aboriginal customary law, Torres Strait Islander communities widely practice 'customary adoption'.[7] This is the process in which a child is permanently given to another member of the extended family, who is then regarded as the child's parent by the community.[6] The reasons for customary adoption include: to ensure an even distribution of boys and girls between families, to give an infertile couple or a single person a child, to fulfil an obligation, or to strengthen alliances between families.[7]

Each State and Territory of Australia has different legislation and policies in regard to the adoption of Indigenous children. However, there is general agreement that if adoption is considered appropriate for an Indigenous child, the adoption should be by Indigenous people whenever possible.

This has not always been the case. Indeed, Australia has had a history of removing Indigenous children from their families and communities since the very first days of European settlement.[8] At its peak during the 1950s and 1960s, large numbers of Indigenous children were removed from their families to advance the cause of assimilation. They were placed in institutions or foster homes, or adopted into non-Indigenous families – sometimes a progression of several of these. This practice declined in the 1970s following the establishment of legal representation for Indigenous children and their families in removal applications. However, it was not until the 1980s that the practice of removal and placement was finally reappraised. It is not possible to state with any precision how many children were forcibly removed (even if restricted to those removed officially), and how many were eventually adopted. Many records have not survived; others failed to record the children's Aboriginality.[8] However, in 1994 over 10% of persons aged 25 years and over reported having been taken from their natural family by a mission, the government or 'welfare'.[9]

The number of Indigenous children adopted between 1991–92 and 1995–96 was very low – a total of 47 adoptions. Nearly all (44) of these children were adopted by non-relatives, 23 by Indigenous non-relatives and 21 by other non-relatives. The other three children were adopted by Indigenous relatives. The fact that so few Indigenous adoptions over this period were by relatives, may indicate that arrangements other than formal adoption were made when relatives were available to care for the child.[5]

Australian-born children adopted by non-relatives(a), 1994–95



(a) Excludes 74 adoptions where nuptiality and/or age of birth mother unknown.

Source: AIHW, *Adoptions Australia, 1994–95,* 1996.

Australian-born children adopted by relatives were aged between 5 and 14 years (72%), while only 29% of children adopted by non-relatives were in this age range.

In 1994–95, nuptiality details were known for 298 of the 311 Australian-born children adopted by non-relatives. Of these, the majority (82%) were born ex-nuptially.

Adopted ex-nuptial children were more likely (68%) to have younger birth mothers (aged under 25 years) than those born nuptially (23%). Conversely, 31% of adopted children born nuptially were born to mothers aged 35 and over. While for every age group of birth mothers, the number of adopted children born ex-nuptially exceeded the number born nuptially, the difference declined as the age of the mother increased.

Overseas-born children adopted by Australian non-relatives, 1990–91 to 1995–96

	Male	*Female*	*Female*
Country of birth	no.	no.	%
Korea	223	331	59.7
India	46	111	70.7
Sri Lanka	86	67	43.8
Philippines	88	50	36.2
Thailand	84	46	35.4
Colombia	64	44	40.7
Other	160	161	50.2
Total	**751**	**810**	**51.9**

Source: AIHW, *Adoptions Australia,* various years.

Overseas-born adoptees

The adoption of overseas-born children (by non-relatives), known as inter-country adoption, essentially began in Australia in 1975 when orphans from the Vietnam War were sent to Australia.[10] The number of overseas-born children adopted in Australia increased from 66 in 1979-80 to a peak of 420 in 1989–90. It then declined to 222 in 1993-94, before rising again to 274 in 1995–96. The net increase in adoption of overseas-born children over the past two decades contrasts with the decline in the number of adoptions of Australian-born children during this time.

In 1995–96, 56% of the 491 children adopted by non-relatives were born overseas, and the majority of both the overseas-born (80%) and Australian-born (66%) children were aged under five years.

Adoptions of overseas-born children by relatives are governed by the relevant State or Territory Child Welfare legislation, but the numbers are extremely small and are therefore excluded from adoption statistics.

In every year since 1988–89, the largest proportion of overseas-born children adopted by non-relatives has come from Korea (60% in 1988–89 and 34% in 1995–96). In 1988–89, the next largest proportions came from Sri Lanka (9%) and India (7%). However, by 1995–96, these countries provided only 5% and 7% respectively of the total, and Colombia (15%) and the Philippines (8%) were providing the next highest proportions after Korea. The decline in the number of adoptions of overseas-born children between

Access to information

In the past, adoption legislation promoted secrecy in the process of adoption. The relinquishing and adoptive parents were kept apart during the process of adoption and once the child was placed, contact with the biological family ceased. However, over the last decade it has been acknowledged that every child has a right to know about his or her origins.[2]

Changes relating to existing adoptions were implemented to adoption laws in every State and Territory between 1984 and 1994. In general, these changes, which vary by State and Territory, enable an adopted person aged over 18 years, and birth parents, to access information relating to the adoption. There were 5,567 applications for information about Australian adoptions lodged by all parties to the adoption during 1995–96. There have been 24,121 applications for adoption information lodged between 1 July 1992 and 30 June 1996.

The right to information has also had to be balanced with the right to privacy. In Victoria and Tasmania, registers operate where the parties involved can record whether they wish to give or receive information and make contact. In addition, written consent by the party is required before any information is released. In the other States and Territories, information and/or contact vetoes can be lodged by the adoptee, the adoptive parents, birth parents and other birth relatives. An information veto prevents any identifying information being disclosed to another party, while a contact veto legally prohibits another party contacting the person who lodged the veto. A total of 1,655 contact and information vetoes were lodged between 1 July 1992 and 30 June 1996.

1990–91 and 1993–94 can be partly attributed to countries such as Korea and the Philippines restricting adoption applications.

Overall for most years, there were similar proportions of boys and girls born overseas who were adopted in Australia. However, from some countries there have been higher proportions of girls adopted each year. From 1990–91 to 1995–96, 71% of children born in India and 60% born in Korea who were adopted in Australia by non-relatives were girls, while only 35% of adoptions from Thailand were girls.

Endnotes

1 Goulding, T. (5th Ed.), 1995, *The Law Handbook*, Redfern Legal Publishing Centre, Sydney.

2 Boss, P. Edwards, S. & Pitman, S. 1995, 'Substitute care and adoption' in Boss, P. Edwards, S. & Pitman, S. (eds), *Profile of Young Australians: Facts, Figures and Issues*, Churchill Livingstone, Melbourne.

3 Lancaster, P. Shafir, E. Hurst, T. Huang, J. 1997, *Assisted Conception Australia and New Zealand 1994 and 1995,* Australian Institute of Health and Welfare and the Fertility Society of Australia, AGPS, Canberra.

4 Harper, P. 1984, *Children in Stepfamilies,* quoted in Bates, F. 1987, *An Introduction to Family Law*, The Law Book Company Limited, Sydney.

5 Bentley, R. & Broadbent, A. 1997, *Adoptions Australia, 1995–96,* Australian Institute of Health and Welfare, AGPS, Canberra.

6 The Law Reform Commission 1986, *The Recognition of Aboriginal Customary Laws, Volume 1*, AGPS, Canberra.

7 Ban, P. 1993, 'Torres Strait Islander Family Life' in *Family Matters*, No. 35, August, 1993, pp.16–21.

8 Human Rights and Equal Opportunity Commission, 1997, *Bringing them home*, Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families, Sterling Press Pty Ltd, Sydney.

9 Australian Bureau of Statistics, 1995, *National Aboriginal and Torres Strait Islander Survey 1994*, Cat. no. 4190.0, ABS, Canberra.

10 English, B. A. 1990, 'Inter-country Adoption: The Context of Recent Developments and the Need for Research' in *Children Australia*, Vol. 15, No. 1, 1990, pp. 16-20, NCBA, Notting Hill.

Child care

FAMILY SERVICES

Between 1984 and 1996, the proportion of children under 12 years of age receiving formal child care increased from 12% to 20%. Nearly half (47%) of all these children were in child care because of the work-related needs of their parents.

Trends in child care arrangements and needs reflect labour market changes and the changes to family structure and functioning that have been taking place in Australia over the last two decades.

Labour market changes affecting the demand for child care include greater participation of women in the workforce (see *Australian Social Trends 1998*, Trends in women's employment, pp.111–114), the increase in the number of hours worked by full-time workers and the use of shift work in a broader range of occupations. Along with these changes there has been a growth in the number of dual-earner families with dependants (from 42% of all families in 1984 to 56% in 1996) and single parent families (from 8% in 1984 to 10% in 1996).

Government spending on child care increased from $246 million in 1990–91 to $991 million in 1995–96.[1] In 1995–96 the Commonwealth Government funded 306,600 places.

Trends in child care

In 1996, 48% of children aged less than 12 years used some form of formal and/or informal child care. This proportion, while changing only slightly since 1993 (49%), has continued the reduction in the use of child care since the peak in 1990 (52%) (see *Australian Social Trends 1994*, Child Care, pp. 47–49).

Formal and informal child care

	1984	*1996*
Type of care used	%	%
Formal care	12.4	20.1
Informal care	29.8	36.4
Formal care only	8.7	12.0
Informal care only	26.1	28.3
Formal and informal care	3.7	8.1
Total formal and/or informal care	38.5	48.4
Neither formal nor informal care	61.5	51.6
Total(a)	**100.0**	**100.0**
	'000	*'000*
Total children	**2 897.4**	**3 102.8**

(a) Some children received more than one type of child care, thus components do not add to totals.

Source: Child Care, Australia, 1984 (Cat. no. 4402.0) and *Child Care, Australia, 1996* (Cat. no. 4402.0).

Child care terms

Child care refers to arrangements made for the care of children under 12 years of age. This does not include parental care or those occasions when the child is under someone else's care for other reasons, such as school or sporting activities. The various types of care used can be grouped into two main categories, *formal care* and *informal care.*

Formal care is regulated child care away from the child's home and includes attendance at: a pre-school or kindergarten; a long day care centre or family day care; an out of school hours care program; and other arrangements such as creches in shopping centres.

Informal care is non-regulated child care either in the child's home or elsewhere. It includes care given by family members (such as the child's brothers or sisters, grandparents or other relatives), friends or neighbours, and paid baby-sitters.

Between 1984 and 1996, the proportion of children under 12 years of age receiving formal child care increased from 12% to 20%. The greatest increase was among 0–2 year olds (from 8% to 22%). At the same time, the proportion of 3–4 year olds receiving formal care increased from 41% to 59% (and doubled, excluding pre-school/kindergarten, from 12% to 24%) while the proportion of 5–11 year olds receiving formal care rose from 6% to 8%.

The use of informal child care arrangements rose from 30% of children under 12 years in 1984 to 42% in 1990, then fell to 36% in 1996. This decline was evident for all age groups. However, while these trends indicated a shift from informal to formal care, Australian families still use the former more frequently.

Type of care

The type of child care used largely depends on the age of the child, particularly in the case of formal care. In 1996, the most commonly used formal care was pre-school (32%), followed by long day care (28%), out of school hours care programs (18%), and family day care (15%).

The main providers of informal care were relatives other than brothers or sisters. This accounted for nearly two thirds of children receiving informal care.

Type of care by age of child, 1996

Type of care	Age of child (years) 0-2	3-4	5-11
	%	%	%
Formal care			
Out of school hours care program	—	0.9*	5.9
Long day care centre	10.6	17.1	* *
Family day care	6.3	5.0	1.2
Occasional care	3.6	3.8	0.3*
Pre-school	0.6*	35.6	0.7
Other formal care	1.2	1.6	0.2*
Total formal care(a)	**21.6**	**59.2**	**8.3**
Informal care			
Brother/sister care	1.3	2.4	7.9
Other relative	30.8	29.4	18.5
Non-relative	8.9	11.6	10.4
Total informal care(a)	**39.3**	**41.2**	**33.7**
Total using care(a)	**51.8**	**76.0**	**39.1**
	'000	'000	'000
Total children	**776.5**	**516.0**	**1 810.4**

(a) Some children received more than one type of child care, hence components do not add to totals.

Source: Child Care, Australia, 1996 (Cat. no. 4402.0).

Younger children are much more likely to receive formal care than school-age children. In 1996, the use of formal care by very young children was low (8% of children under one year), but increased rapidly from age one (22%) up to the age of four (62%). Pre-school attendance of 3–4 year old children was a major contributor to this increase. At age five, when most children start school, the proportions of children using formal care dropped sharply (12% of children aged five) and continued to decrease as children grew older (6% of children aged 9–11).

In 1996, 11% of 0–2 year olds and 17% of 3–4 year olds received care in long day care centres which cater for children from birth to school age. Family day care offered in private homes by registered carers was used by 6% of 0–2 year olds and 5% of 3–4 year olds. Of 3–4 year olds, 36% attended pre-schools which had fixed attendance times and catered for children in the year prior to starting primary school. Only 8% of 5–11 year olds received formal care; most (6%) attended out of school hours care programs.

In 1996, children below school age were more likely to use informal care than older children. Of children aged under 5 years, 40% used informal care compared with 34% of 5–11 year olds.

Informal care was generally provided by family members. Around 8% of 5–11 year olds were cared for by their brothers or sisters. Other family members, such as grandparents, uncles and aunts, cared for 31% of 0–2 year olds, 29% of 3–4 year olds and 19% of 5–11 year olds.

Main reasons for using child care

The use of child care is influenced both by the needs of parents (such as work, leisure and shopping) and by their perceptions of benefits to the child of receiving non-parental care such as play groups, pre-school, and care by grandparents.

An important reason for using child care, both formal and informal, is to provide care for children while parents are at work. Much of the overall increase in the past decade is related to the increased participation of women in the labour force. Between 1986 and 1996, the labour force participation rate of women with children under 15 years increased from 49% to 59%.

Children who attended out of school hours care programs, family day care or long day care, did so primarily because of the work-related reasons of their parents (87%, 74% and 60% respectively of all reasons given). Child care for work-related reasons also included care while parents were looking for work or studying/training for work. In contrast, 81% of those children who attended pre-school did so mainly because parents felt it was beneficial for the child.

Needing time for personal activities (such as shopping, entertainment, social or sporting activities) was the reason given for 41% of children placed in informal child care and 13% receiving formal care.

Commonwealth expenditure on child care

In 1995–96 the Commonwealth Government spent $991 million on child care services. Childcare Assistance, which is paid to care providers as a means of reducing child care costs for low- and middle-income families, accounted for $657 million. Operational subsidies to reduce running costs for child care services, made up $132 million. A further $121 million was paid to parents as the Childcare Cash Rebate (CCR).[1] The CCR is a

Main reason for using child care, 1996

	Main reason for using care					
	Work related	Personal	Beneficial for child	Other	Total children	
Type of care used	%	%	%	%	%	'000
Formal care						
Out of school hours care program	86.8	6.7	4.3*	2.1*	100.0	111.7
Long day care centre	60.0	17.4	20.0	2.4*	100.0	177.7
Family day care	74.3	12.0	10.8	2.9*	100.0	96.2
Occasional care	30.5	29.8	37.4	2.3*	100.0	52.4
Pre-school	11.3	4.1	81.3	3.2	100.0	200.6
Other formal care	* *	53.6	25.7	* *	100.0	22.2
Total formal care(a)	**47.5**	**12.8**	**36.9**	**2.8**	**100.0**	(a)**624.4**
Informal care						
Brother/sister care	47.1	47.2	1.4*	4.3	100.0	165.1
Other relative	45.5	41.9	3.2	9.4	100.0	726.0
Non-relative	52.0	35.9	4.4	7.7	100.0	318.0
Total informal care(a)	**47.2**	**41.2**	**3.3**	**8.3**	**100.0**	(a)**1128.3**

(a) Some children received more than one type of child care and therefore components do not add to totals.

Source: Child Care, Australia, 1996 (Cat. no. 4402.0).

non-means tested payment to families for work-related child care costs exceeding $16.50 per week.

Care providers receive Childcare Assistance and operational subsidies on a per-child basis, subject to government eligibility criteria. In 1995-96 a major part (56%) of Childcare Assistance was paid to commercial, employer and non-profit day care centres. Community long day centres and family day care schemes received 20% and 22% respectively of total Childcare Assistance, and 34% and 40% respectively of operational subsidies.

The CCR, which subsidises work-related child care costs, was claimed for 278,600 children using formal and/or informal care. This represented a take-up rate of 56% of those eligible. The proportion of children for whom the CCR was claimed varied depending on the type of care. The take-up rate was over 65% for children using out of school hours care, long day care and family day care. In comparison, the rebate was claimed for only 34% of eligible children attending pre-school, and 38% of those eligible using occasional care.

The cost to parents of child care

While Childcare Assistance and the CCR make child care more affordable for parents, the actual amount families pay is dependent on their income level, the number of children in care, the type of care used, the hours in care and the fees charged.

Of those children who used informal care, 86% did so at no cost, and for half of all children using formal care (51%), the cost amounted to less than $20 per week. However, some parents paid considerably more than that. For 31% of children who attended long day care, and 24% who attended family day care, the cost was $60 or more per week.

As family income increased, the proportion of children who used care also increased, consistent with the proportion of families with both parents working. For children in families with a weekly family income of less than $400, 43% used some form of care, compared with 75% of children in families with a weekly family income over $2,000.

Unmet demand for formal care

In 1996, for most children (over 90%), no additional formal child care was needed. This was the case for families not currently using

Weekly cost of formal child care, 1996

	Weekly cost of care				
	No cost	*$1–$19*	*$20–$59*	*$60 or more*	*Total*
Type of care	%	%	%	%	%
Out of school hours care program	4.3	58.5	34.5	2.3	100.0
Long day care centre	1.1	23.2	43.6	31.1	100.0
Family day care	3.3	44.4	27.2	24.0	100.0
Occasional care	5.2	59.4	31.3	2.1	100.0
Pre-school	9.9	57.0	27.2	5.5	100.0
Other formal care	34.7	51.8	* *	* *	100.0
Total children who used formal care(a)	**5.7**	**44.8**	**33.5**	**15.5**	**100.0**
Total children who used informal care	**86.1**	**5.5**	**5.8**	**2.5**	**100.0**
	'000	'000	'000	'000	'000
Total children who used formal and informal care	**794.9**	**314.9**	**258.3**	**129.4**	**1 501.8**

(a) Some children received more than one type of child care and therefore components do not add to totals.

Source: Child Care, Australia, 1996 (Cat. no. 4402.0).

any form of care, as well as for those using either formal or informal care. Around 8% of children under 12 years of age were reported as requiring, but not receiving, additional formal care in 1996, a fall from 16% in 1993.

In 1996, the main type of additional care required was out of school hours care (32% of children requiring extra care) and occasional care (31%). This varied between age groups.

Demand for extra care was higher in the 0–4 age group with 11% of children (143,000) requiring additional formal care. Of these, 40% required occasional care and 25% required long day care.

In the 5–11 years age group, 118,800 children (7%) required additional care. Of these, 69% required out of school hours care, and 21% required care on an irregular basis.

For children requiring care, the main reasons given for not using care were that none existed in their area or parents did not know of any in their area (24% of children), or there were no places in existing centres (17%). For 16% of children, the parents said the care was too expensive.

Care for sick children

Child care is linked to work commitments of parents, particularly mothers. However, the responsibility of looking after a sick child may conflict with a parent's paid work obligations.

When a child falls sick and needs time off school or to be away from child care, alternative arrangements must be made to care for the child.

For families where both parents are employed or for an employed lone parent, this may involve a parent taking time off work. In 1996, of the families with children where both parents worked, 56% had children who had been sick and needed to be away from school or child care in the previous six months.

For almost half (49%) of these, one or other parent took time off – more often the mother (41% compared with 21% of fathers). A similar proportion of employed lone parents with a sick child took time off (50%).

In 55% of cases where other arrangements were used, the children were cared for by a relative, and in 14% of cases the parent worked at home.

Endnotes

1 Australian Institute of Health and Welfare, 1997, *Australia's Welfare 1997, Services and Assistance*, AIHW, Canberra.

Rural families

In 1996, there were 646,000 families living in rural areas. Compared to urban areas, there were more couple families, particularly those with dependent children, but fewer one-parent families.

Families in rural areas (those living on separate properties or in small rural localities) represented one in seven (14%) of all families in Australia in 1996. While many lived in close proximity to towns and cities, such as those located on the coast, rural families often live at some distance (sometimes hundreds of kilometres) from the range of services that people living in urban areas (towns or cities) have ready access to. The limited accessibility to education and health services (such as schools, libraries, doctors and hospitals), to social support networks, and to job opportunities, can be critical to their wellbeing and affect the likelihood of their continuing to live in the area.

Largely drawing on the results of the 1996 Census, this review looks at some of the differences in the living conditions (housing), activities (work) and status outcomes (education and income) of people living in rural and urban areas. The broad grouping of people into rural and urban categories presents some insights into the costs and benefits of living in the respective areas. However, it should be noted that such broad groupings can mask substantial differences within each area.

Definitions and classifications

The geographic classification used in this review is based on population size.

- *Rural areas* – people living on separate properties or in population clusters of less than 1,000 people;
- *Towns* – all urban centres with a population of 1,000 to 99,999;
- *Cities* – urban centres with a population of 100,000 and over.

A *family* is defined by the ABS as two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually resident in the same household. More than one family may be counted in a household.

In this review the *primary family,* which comprises 98.4% of all families, is used as the basis for analysis. The *primary family* comprises any family in a single family household and the family with dependent children in a multiple family household. Where there were no families with dependants in a multiple family household, then the primary family was chosen at random. Where there was more than one family with dependants, the family with the greater number of dependants was chosen as the primary family. The *primary family reference person* is usually the first person on the census form, and the one upon whom the relationships within the household are based.

Family type, 1996

		Urban areas	
	Rural areas	*Towns*	*Cities*
	%	%	%
Couple families	89.7	83.2	83.0
Couple only	35.0	35.4	31.6
With dependants	45.1	40.0	40.5
Other(a)	9.7	7.8	10.9
One-parent families	9.3	15.4	14.8
With dependants	6.4	11.4	9.6
Other(a)	2.9	4.0	5.2
Other families(b)	1.0	1.4	2.2
Total	**100.0**	**100.0**	**100.0**
	'000	'000	'000
Total families	**645.9**	**1 060.0**	**2 877.1**

(a) Comprises families with non-dependent children and/or other relatives only.
(b) Comprises families of related adults such as brothers, sisters, aunts, uncles.

Source: Unpublished data, 1996 Census of Population and Housing.

Family type

Rural families are often thought of as more 'traditional' than urban families, with more couple families, greater numbers of children and fewer one-parent families. Data from the 1996 Census supports this view. Most (90%) primary families in rural areas were couple families, compared with 83% of families in cities or towns. Families in rural areas also had the highest proportion of couple families with dependent children (45% of all families). Proportions of this family type were lower in both towns and cities (around 40%). As well, the proportion of families with three or more dependent children was greater in rural areas (15%) than in towns (13%) or cities (11%).

At the same time there were fewer one-parent families in rural areas (9% of all families) compared with towns (15%) and cities (15%). 'Traditional' values may not be the only reason why there are fewer one-parent families in rural areas. Research has shown that, compared with urban areas, a greater proportion of families in rural areas lived near the husband's parents than those of the wife.[1]

Age of persons, 1996

		Urban areas	
	Rural areas	Towns	Cities
Age group	%	%	%
0 – 14	24.7	23.4	20.2
15 – 24	12.2	13.6	15.4
25 – 34	13.4	14.7	16.2
35 – 44	16.7	14.9	15.2
45 – 54	14.1	11.5	12.7
55 – 64	9.4	8.4	8.1
65 and over	9.4	13.5	12.2
Total	**100.0**	**100.0**	**100.0**
	'000	'000	'000
Total persons	**2 498.3**	**4 161.5**	**11 221.4**

Source: Unpublished data, 1996 Census of Population and Housing.

Housing of families, 1996

		Urban areas	
	Rural areas	Towns	Cities
Dwelling structure	%	%	%
Separate house	95.1	89.3	81.4
Semi-detached etc.(a)	0.7	4.1	7.7
Flat	0.5	4.0	8.9
Caravan, cabin, houseboat	1.2	0.7	0.2
Other and not stated	2.5	1.9	1.8
Total	**100.0**	**100.0**	**100.0**
	'000	'000	'000
Total families	**645.9**	**1 060.0**	**2 877.1**

(a) Comprises semi-detached, row or terrace houses, villa units or townhouses.

Source: Unpublished data, 1996 Census of Population and Housing.

When combined with reduced access to support services in rural areas, lone mothers, who comprise the majority of lone parents, may tend to move back to an urban environment, either to be nearer their parents to gain family help or to have closer access to government or community support services.

The greater presence of families with children in rural areas is reflected in the different age structures of rural and urban populations. Thus in 1996, there were proportionately more children aged 0–14 in rural areas (25%) than in towns and cities (23% and 20% respectively) and more mature adults (aged 35 to 64) as well.

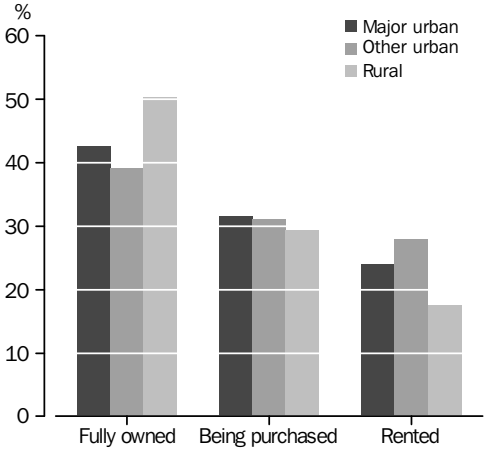
In contrast, teenagers and young adults (aged 15–34) and elderly people (aged 65 and over) – especially elderly women – were less well represented in rural areas. The differences suggest that these groups have a tendency to move to urban areas. Reasons for such moves will differ according to the needs of the individuals involved. For instance, it is likely that many young people move to the cities in search of work and study opportunities. Women aged 65 years and over, on the other hand, may move to an urban area when their husband dies, either because they have children who have already moved there, or because they want to be closer to community services and health facilities.

Housing

The large majority of Australian families live in separate houses, particularly in rural areas (95% of families compared with 81% in cities). Conversely, fewer rural families lived in medium or high density style housing, both of which were more appropriate to and more available in highly populated areas. Not surprisingly, families living in flats or units, or semi-detached, terrace or town houses comprised 17% of all families in cities, 8% in towns and 1% in rural areas.

Owning the family home reduces the amount spent on living costs each week through not having to pay rent or mortgage payments. In 1996, half of rural families fully owned their home compared with 39% of town families and 43% of city families. The proportions of families purchasing their homes were similar across all areas, but much lower proportions of rural families were renting (17%) than

Tenure of family home, 1996



Source: Unpublished data, 1996 Census of Population and Housing.

families in towns (28%) or in cities (24%). Families in rural areas spent less on average each week on rent ($77 median) than families in towns ($127) or cities ($168). Rural families also spent less each week on mortgage payments ($171 median) than those in cities ($192), but slightly more than families in towns ($163).

Transport

Family members in rural areas generally need to make a greater effort to access services, buy groceries, meet friends and travel to work and school than those living in urban areas. This need is reflected in the higher levels of car ownership among rural families. Most families have a motor vehicle, but the likelihood of a rural family not having a motor vehicle (2%) was less than in towns or cities (6% for both). The greater dependence on cars is further indicated by the fact that just over two thirds of rural families (69%) had two or more motor vehicles (excluding motor bikes and tractors) compared with just over half of families in towns (52%) or cities (54%).

As well as the need to travel further (and use more fuel), the cost of petrol is usually higher in most rural areas. This cost can place a considerable strain on family resources, particularly for families that have several vehicles.[2] Excluding fuels used for business purposes (for example, running the farm), families in rural areas spent on average $32.43 per week on motor vehicle fuel and lubricants in 1993–94, whereas families in capital cities spent $25.54.[2]

Education

Access to education in rural areas depends on how close the family is to the nearest school. Some children can walk to school while others may have to travel long distances or conduct their lessons through the School of Distance Education. When children reach secondary school age distance education is often replaced with either boarding school or attendance at the nearest high school which may still be some distance away and may also have restricted curriculum choices.

Tertiary education attendance (particularly at a university) frequently requires young family members to move to larger towns or cities where they often stay to find work after they have finished their course. However, for those who want to remain in rural areas, a degree is not always the most relevant qualification. Employees with skilled vocational qualifications are more likely to be in demand than someone with a university degree.[3] In 1996, the proportion of families in rural areas (8%) and towns (7%) whose primary reference person had a bachelor degree or higher educational qualification was almost half that of families in cities (15%). In comparison, family reference persons in rural areas (19%) and towns (19%) were slightly more likely to have a skilled vocational qualification than those in cities (17%).

Post-school educational qualifications(a), 1996

		Urban areas	
	Rural areas	Towns	Cities
Qualifications	%	%	%
Bachelor degree or higher	7.7	7.4	15.3
Diploma	6.0	5.7	7.4
Skilled vocational qualification	18.8	19.4	16.7
Basic vocational qualification	2.7	2.9	2.8
Level of attainment inadequately described or not stated	7.9	8.8	8.7
No post-school qualifications	56.9	55.7	49.1
Total	**100.0**	**100.0**	**100.0**
	'000	'000	'000
Total families	**645.9**	**1 060.0**	**2 877.1**

(a) Refers to highest post-school educational qualification of primary family reference person.

Source: Unpublished data, 1996 Census of Population and Housing.

Employment

In 1996, rural families had higher proportions of their primary family reference person in the labour force (73%) than families in towns (66%) and cities (69%). Overall, more than half of all families' primary reference persons were employees, with greater proportions in cities (59%) than in rural areas (51%). People in rural families were also more likely to be employers (4%) or own account workers (11%) than those in towns or cities. This reflects the fact that farming and service industries make up a large proportion of rural economies. Couple families in rural areas (47%) and in cities (47%) were also more likely than those in towns (42%) to have both partners in the labour force either as employers, employees or as own account workers.

Unemployment rates can vary considerably between regions and over time, but overall unemployment rates among family reference persons in rural areas (6.7 % as measured by

Health

Health — State summary

HEALTH STATUS	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Life expectancy											
Male life expectancy at birth	years	1996	75.0	75.6	75.1	75.3	75.4	74.1	69.2	76.6	75.2
Female life expectancy at birth	years	1996	80.9	81.2	80.9	81.3	81.3	80.0	75.0	81.6	81.1
Mortality											
Total number of deaths	'000	1996	45.1	32.7	22.3	11.6	11.0	3.9	0.8	1.3	128.7
Crude death rate (per 1,000 population)	no.	1996	7.3	7.2	6.6	7.8	6.3	8.2	4.3	4.2	7.0
Standardised death rate (per 1,000 population)	no.	1996	6.4	6.3	6.4	6.3	6.3	7.2	8.8	6.1	6.4
Infant mortality rate (per 1,000 live births)	no.	1996	5.8	5.0	6.4	4.9	6.5	4.5	11.5	5.7	5.8
Perinatal mortality rate (per 1,000 live births and fetal deaths combined)	no.	1996	9.6	7.3	8.5	7.5	8.4	8.6	10.6	7.9	8.5
Morbidity and disability (per 1,000 population)(a)											
Cancer	no.	1995	21	18	26	19	21	24	20	19	21
Heart disease	no.	1995	29	28	28	27	24	36	*14	27	28
Diabetes	no.	1995	20	24	20	27	25	26	25	20	23
Asthma	no.	1995	104	112	133	112	115	102	127	112	113
Injury	no.	1995	58	56	77	64	76	72	87	76	64
Disability with selected restrictions	no.	1993	119	131	139	148	135	139	139	139	131

CAUSES OF DEATH	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Death rates per 100,000 population —											
Leading causes(a)											
Cancer	no.	1996	173	180	180	171	178	198	204	171	177
Coronary heart disease	no.	1996	148	137	155	143	139	155	108	134	145
Stroke	no.	1996	64	58	62	61	59	67	68	69	61
Selected cancers(a)											
Male lung cancer	no.	1996	52	57	60	52	55	73	92	34	55
Female lung cancer	no.	1996	19	20	19	18	22	22	31	15	20
Female breast cancer	no.	1996	24	27	24	28	24	21	17	32	25
Prostate cancer	no.	1996	33	33	34	31	35	42	19	39	33
Skin cancer	no.	1996	8	6	7	5	7	4	8	4	7
Heart disease and diabetes(a)											
Male coronary heart disease	no.	1996	200	186	207	196	189	213	124	188	196
Female coronary heart disease	no.	1996	108	99	113	100	100	111	85	95	105
Diabetes mellitus	no.	1996	11	19	14	18	17	15	31	12	15
Accidents and suicide											
Motor vehicle traffic accident(a)	no.	1996	9	9	12	12	14	12	36	9	11
Male 15–24 years motor vehicle traffic accident	no.	1996	26	28	36	35	40	51	68	33	32
Female 15–24 years motor vehicle traffic accident	no.	1996	7	8	8	11	9	21	27	4	8
Suicide(a)	no.	1996	13	11	16	12	12	14	19	12	13
Male 15–24 years suicide	no.	1996	24	19	39	21	29	21	31	18	25
Female 15–24 years suicide	no.	1996	4	5	4	2	5	0	14	8	4
AIDS(a)											
AIDS-related	no.	1996	5	3	2	2	2	* *	* *	* *	3

(a) Rates are age-standardised.

Reference periods: All health status data and causes of death data are for the calendar year.

Health — national summary continued

RISK FACTORS	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Immunisation status												
Children not fully immunised aged 3 months to 6 years (of children 3 months to 6 years)	%	n.a.	n.a.	n.a.	n.a.	45.9	n.a.	n.a.	n.a.	n.a.	47.9	n.a.
Drinking and smoking												
Alcohol: apparent consumption per person per day	mls	31.8	30.4	30.7	30.2	29.9	28.6	r27.3	26.5	27.3	r26.7	26.5
Tobacco: apparent consumption per person per day	grams	6.5	6.1	6.0	5.7	5.8	5.4	5.4	4.8	4.4	4.2	4.0
Diet and exercise												
Total fats: apparent consumption per person per day	grams	57.4	56.3	55.8	55.4	54.5	r55.0	r54.8	r53.7	54.5	53.1	54.1
Persons who do not exercise for sport, recreation or fitness (of persons 18 years and over)(a)	%	n.a.	n.a.	n.a.	n.a.	35.8	n.a.	n.a.	n.a.	n.a.	34.0	n.a.

SERVICES	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Hospital separations (per 1,000 population)	no.	212	n.a.	214	n.a.	225	n.a.	237	247	260	274	285
Hospital beds (per 1,000 population)	no.	5.7	5.4	5.3	5.2	5.0	5.0	4.5	4.4	4.2	4.3	4.3
Average length of stay in hospital	days	6.5	6.3	6.2	5.9	5.6	5.1	4.8	4.8	4.7	r4.5	4.3
Doctors (per 100,000 population)	no.	r205	n.a.	n.a.	n.a.	n.a.	r225	n.a.	n.a.	n.a.	n.a.	241
Nursing home and hostel beds (per 1,000 population aged 70 years and over)	no.	n.a.	n.a.	98.4	97.2	95.1	94.0	94.2	94.1	92.6	90.0	90.9
Medicare usage												
Average Medicare services processed per person(a)	no.	7.7	8.0	8.2	8.5	8.5	8.5	8.9	9.7	10.0	10.3	10.5
Average Medicare services processed per male(a)	no.	6.1	6.4	6.6	6.8	6.9	6.9	7.2	7.8	8.2	8.4	8.7
Average Medicare services processed per female(a)	no.	9.2	9.6	9.8	10.2	10.1	10.1	10.6	11.5	11.8	12.2	12.4
Average Medicare services processed per person aged 65 years and over	no.	13.9	14.6	14.8	15.2	15.3	15.4	16.4	17.9	18.8	19.6	20.5
Proportion of Medicare services used by persons aged 65 years and over	%	19.3	19.8	19.7	19.6	20.0	20.6	21.0	21.4	22.0	22.5	23.0

EXPENDITURE	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Persons with private health insurance	%	48.8	48.3	47.0	45.5	44.5	43.7	41.0	39.5	37.2	34.9	33.6
Total health expenditure per person per year (1989–90 prices)	$	1 521	1 571	1 603	1 661	r1 705	r1 716	r1 746	r1 790	1 837	r1 911	p1 986
Total health expenditure as a proportion of GDP	%	7.7	8.0	7.8	7.7	7.8	r8.3	8.6	8.6	8.5	r8.5	p8.5

(a) Rates are age-standardised.

Reference periods: Immunisation status data are at April. Apparent consumption and expenditure data (except private health insurance data which are at the June quarter) and services data (except doctors per 100,000 population which is at census date) are for the year ended 30 June.

Health — State summary

HEALTH STATUS	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Life expectancy											
Male life expectancy at birth	years	1996	75.0	75.6	75.1	75.3	75.4	74.1	69.2	76.6	75.2
Female life expectancy at birth	years	1996	80.9	81.2	80.9	81.3	81.3	80.0	75.0	81.6	81.1
Mortality											
Total number of deaths	'000	1996	45.1	32.7	22.3	11.6	11.0	3.9	0.8	1.3	128.7
Crude death rate (per 1,000 population)	no.	1996	7.3	7.2	6.6	7.8	6.3	8.2	4.3	4.2	7.0
Standardised death rate (per 1,000 population)	no.	1996	6.4	6.3	6.4	6.3	6.3	7.2	8.8	6.1	6.4
Infant mortality rate (per 1,000 live births)	no.	1996	5.8	5.0	6.4	4.9	6.5	4.5	11.5	5.7	5.8
Perinatal mortality rate (per 1,000 live births and fetal deaths combined)	no.	1996	9.6	7.3	8.5	7.5	8.4	8.6	10.6	7.9	8.5
Morbidity and disability (per 1,000 population)(a)											
Cancer	no.	1995	21	18	26	19	21	24	20	19	21
Heart disease	no.	1995	29	28	28	27	24	36	*14	27	28
Diabetes	no.	1995	20	24	20	27	25	26	25	20	23
Asthma	no.	1995	104	112	133	112	115	102	127	112	113
Injury	no.	1995	58	56	77	64	76	72	87	76	64
Disability with selected restrictions	no.	1993	119	131	139	148	135	139	139	139	131

CAUSES OF DEATH	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Death rates per 100,000 population —											
Leading causes(a)											
Cancer	no.	1996	173	180	180	171	178	198	204	171	177
Coronary heart disease	no.	1996	148	137	155	143	139	155	108	134	145
Stroke	no.	1996	64	58	62	61	59	67	68	69	61
Selected cancers(a)											
Male lung cancer	no.	1996	52	57	60	52	55	73	92	34	55
Female lung cancer	no.	1996	19	20	19	18	22	22	31	15	20
Female breast cancer	no.	1996	24	27	24	28	24	21	17	32	25
Prostate cancer	no.	1996	33	33	34	31	35	42	19	39	33
Skin cancer	no.	1996	8	6	7	5	7	4	8	4	7
Heart disease and diabetes(a)											
Male coronary heart disease	no.	1996	200	186	207	196	189	213	124	188	196
Female coronary heart disease	no.	1996	108	99	113	100	100	111	85	95	105
Diabetes mellitus	no.	1996	11	19	14	18	17	15	31	12	15
Accidents and suicide											
Motor vehicle traffic accident(a)	no.	1996	9	9	12	12	14	12	36	9	11
Male 15–24 years motor vehicle traffic accident	no.	1996	26	28	36	35	40	51	68	33	32
Female 15–24 years motor vehicle traffic accident	no.	1996	7	8	8	11	9	21	27	4	8
Suicide(a)	no.	1996	13	11	16	12	12	14	19	12	13
Male 15–24 years suicide	no.	1996	24	19	39	21	29	21	31	18	25
Female 15–24 years suicide	no.	1996	4	5	4	2	5	0	14	8	4
AIDS(a)											
AIDS-related	no.	1996	5	3	2	2	2	* *	* *	* *	3

(a) Rates are age-standardised.

Reference periods: All health status data and causes of death data are for the calendar year.

Health — State summary continued

RISK FACTORS	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
Immunisation status											
Children not fully immunised aged 3 months to 6 years (of children 3 months to 6 years)	%	1995	46.1	48.8	52.5	50.3	40.7	57.0	46.5	36.5	47.9
Drinking and smoking(a)											
Male medium/high-risk drinkers (of males 18 years and over)	%	1995	10.9	8.9	11.4	10.2	11.4	9.6	24.6	12.2	10.6
Female medium/high-risk drinkers (of females 18 years and over)	%	1995	6.4	5.3	6.5	6.4	6.6	4.7	5.9	7.1	6.1
Male current smokers (of males 18 years and over)	%	1995	27.1	26.7	29.0	26.6	26.6	27.2	30.2	23.6	27.3
Female current smokers (of females 18 years and over)	%	1995	20.0	20.0	21.7	20.0	18.8	24.5	26.0	19.3	20.3
Diet and exercise(a)											
Male overweight/obese adults (of males 18 years and over)	%	1995	62.5	64.6	62.1	64.7	60.5	66.4	58.9	63.1	63.0
Female overweight/obese adults (of females 18 years and over)	%	1995	45.3	48.9	43.5	49.4	45.3	53.6	43.5	50.4	46.5
Males who do not exercise for sport, recreation or fitness (of males 18 years and over)	%	1995	34.5	34.2	33.8	34.0	29.7	33.8	42.6	22.6	33.7
Females who do not exercise for sport, recreation or fitness (of females 18 years and over)	%	1995	37.4	32.4	34.8	34.8	28.5	36.1	34.6	28.0	34.4
High blood pressure(a)											
Male hypertension (of males 18 years and over)	%	1995	17.1	17.1	19.6	18.3	15.6	17.7	17.3	16.9	17.6
Female hypertension (of females 18 years and over)	%	1995	14.6	15.0	15.1	17.2	15.6	17.4	9.3	13.7	15.1

SERVICES	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Hospital separations (per 1,000 population)	no.	1995–96	284	287	296	314	258	265	260	232	285
Hospital beds (per 1,000 population)	no.	1995–96	4.1	4.1	4.6	4.9	4.4	4.5	4.1	3.5	4.3
Average length of stay in hospital	days	1995–96	4.7	4.1	4.4	4.2	4.0	4.5	4.0	4.0	4.3
Doctors (per 100,000 population)	no.	1996	250	237	233	264	221	220	249	259	241
Nursing home and hostel beds (per 1,000 population aged 70 years and over)	no.	1995–96	92.5	85.4	95.2	93.6	91.0	86.7	103.1	86.5	90.9
Medicare usage											
Average Medicare services processed per person(a)	no.	1995–96	11.4	10.4	10.3	9.8	9.6	9.4	6.8	9.2	10.5
Average Medicare services processed per male(a)	no.	1995–96	9.5	8.6	8.2	8.1	7.9	7.4	5.3	7.5	8.7
Average Medicare services processed per female(a)	no.	1995–96	13.3	12.2	12.3	11.5	11.9	11.3	8.4	10.9	12.4
Average Medicare services processed per person aged 65 years and over	no.	1995–96	21.7	20.5	19.8	19.2	19.4	17.1	12.7	18.4	20.5
Proportion of Medicare services used by persons aged 65 years and over	%	1995–96	23.5	23.9	21.5	26.4	21.3	22.9	6.7	15.2	23.0

EXPENDITURE	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Persons with private health insurance(c)	%	1996	34.1	33.5	30.9	34.1	36.9	37.1	25.6	n.a.	33.6

(a) Rates are age-standardised.

(b) Risk factor estimates for NT relate to predominantly urban areas.

(c) The ACT is included in NSW.

Reference periods: Immunisation status data are at April. Overweight/obese and hypertension data are for the year ended March 1996. Services data (except for doctors per 100,000 population which is at census date) are for the year ended 30 June. Private health insurance data are at the June quarter.

Health — definitions and references

AIDS-related deaths — deaths where AIDS is mentioned anywhere on the death certificate, as a contributing factor or an underlying cause.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Alcohol: apparent consumption — millilitres of pure alcohol (not total alcoholic beverages) consumed, divided by the population 15 and over. Apparent consumption of beer and spirits is based on the quantities on which excise duty was paid, and imports cleared for consumption. Apparent consumption of wine comprises quantities sold by winemakers and imports cleared for consumption. Home-made beer and wine are included.
Reference: *Apparent Consumption of Foodstuffs and Nutrients, Australia* (Cat. no. 4306.0).

Apparent consumption — equals (commercial production + estimated home production + imports + opening stocks) minus (exports + usage for processed food + non-food usage + wastage + closing stocks) divided by the population.
Reference: *Apparent Consumption of Foodstuffs and Nutrients, Australia* (Cat. no. 4306.0).

Asthma — the number of people per 1,000 population reporting asthma as a recent condition (within two weeks) or a long-term condition (lasting or expecting to last six months or more), asthma being a narrowing of the airways within the lung.
Reference: *National Health Survey: Users' Guide, Australia* 1995 (Cat. no. 4363.0).

Average length of stay in hospital — the total number of occupied bed days in both public and private hospitals divided by the total number of separations.
Reference: *Private Hospitals, Australia* (Cat. no. 4390.0); Australian Institute of Health and Welfare, National Public Hospital Establishments Database (unpublished data).

Average Medicare services processed — average number of services processed per Australian resident.
Reference: Health Insurance Commission, *Financial Statements and Statistical Tables, 1995-96*.

Breast cancer deaths — malignant neoplasm of the female breast. ICD-9 code 174.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Cancer deaths — malignant neoplasms. ICD-9 codes 140-208.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Cancer — the number of people per 1,000 population reporting cancer as a recent condition (within two weeks) or a long-term condition (lasting or expecting to last six months or more), including both benign and malignant cancers.
Reference: *National Health Survey: Users' Guide, Australia* 1995 (Cat. no. 4363.0).

Children not fully immunised — the proportion of children reported as not having received all the required vaccinations for diphtheria, tetanus, poliomyelitis, whooping cough, measles and mumps for their age. The required vaccinations are based on the 1986 NH&MRC Standard Childhood Vaccination Schedule.
Reference: *Children's Immunisation, Australia* (Cat. no. 4352.0).

Coronary heart disease — ischaemic heart disease includes heart attack (acute myocardial infarction, coronary occlusion) and angina (angina pectoris). ICD-9 codes 410-414.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Crude death rate — number of deaths registered per 1,000 of the estimated resident population at 30 June of that year.
Reference: *Deaths, Australia* (Cat. no. 3302.0).

Current smokers — persons aged 18 years and over who smoke one or more manufactured (packet) cigarettes, roll-your-own cigarettes, cigars or pipes per day. Smoking excludes chewing tobacco and smoking of non-tobacco products.
Reference: *National Health Survey: Health Risk Factors* (Cat. no. 4380.0).

Diabetes mellitus deaths — deaths where diabetes mellitus is mentioned on the death certificate as the underlying cause. ICD-9 code 250.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Diabetes — the number of people per 1,000 population reporting diabetes as a recent condition (within two weeks) or a long-term condition (lasting or expecting to last six months or more), including Diabetes Mellitus Type 1 and 2 and unspecified diabetes.
Reference: *National Health Survey: Users' Guide, Australia* 1995 (Cat. no. 4363.0).

Disability-free life expectancy — the average number of years at birth a person might expect to live free of disability. Disability is the presence of a limitation, restriction or impairment due to a physical, emotional or nervous condition which had lasted or was likely to last 6 months or more.
Reference: *Australian Health Trends* 1995 Australian Institute of Health and Welfare.

Disability with selected restrictions — people with a disability which restricts their participation in self-care, mobility, communication, employment and/or education. Includes all children with a disability aged under 5.
Reference: *Disability, Aging and Carers, Australia* 1993 (Cat. no. 4430.0).

Doctors per 100,000 population — the number of practising general and specialist medical practitioners per 100,000 estimated mean resident population.
Reference: *Australia's Health* 1998 Australian Institute of Health and Welfare

Exercise (persons who do not exercise) — persons who reported that within the two-week reference period they did not undertake exercise activities for sport, recreation or fitness, so as to cause a moderate increase in heart rate or breathing.
Reference: *National Health Survey: Users' Guide, Australia* 1995 (Cat. no. 4363.0).

Fetal death — the delivery of a child weighing at least 500 grams at delivery (or, when birthweight is unavailable, of at least 22 weeks gestation) which did not, at any time after delivery, breathe or show any other evidence of life such as a heart beat.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Heart disease — the number of people per 1,000 population reporting heart disease as a recent condition (within two weeks) or a long-term condition (lasting or expecting to last six months or more), including heart attack, coronary thrombosis, angina and leaking valve.
Reference: *National Health Survey: Users' Guide, Australia* 1995 (Cat. no. 4363.0).

Hospital beds (per 1,000 population) — the total number of beds in all hospitals (public and private) providing acute care services per 1,000 estimated mean resident population. Hospitals providing acute care services are those in which the treatments typically require short durations of stay.
Reference: *Private Hospitals, Australia* (Cat. no. 4390.0); Australian Institute of Health and Welfare, National Public Hospital Establishments Database (unpublished data).

Health — definitions and references continued

Hospital separations (per 1,000 population) — the total number of separations in all hospitals (public and private) providing acute care services per 1,000 estimated resident population at 31 December of the reference year. A separation is an episode of care which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay ending in a change of status (for example from acute care to rehabilitation). The inclusion of status changes has been progressively introduced since 1995-96. Hospitals providing acute care services are those in which the treatments typically require short durations of stay.
Reference: *Australian Hospital Statistics 1995-96* Australian Institute of Health and Welfare

Hypertension — high blood pressure, either treated or untreated. People are considered hypertensive if they are on tablets for blood pressure and/or their systolic blood pressure is 160 mmHg or greater and/or their diastolic blood pressure is 95 mmHg or greater.
Reference: *National Nutrition Survey: Users' Guide, Australia* 1995 (Cat. no. 4801.0)

ICD-9 — International Classification of Diseases 9th revision, clinical modification.
Reference: *International Classification of Diseases 9th Revision:* (ICD-9) National Center for Health Statistics United States.

Infant mortality rate — the number of deaths of children under one year of age per 1,000 live births.
Reference: *Deaths, Australia* (Cat. no. 3302.0).

Injury — the number of people per 1,000 population reporting injury as a recent condition (within two weeks) or a long-term condition (lasting or expecting to last six months or more), including fractures, dislocations, sprains, wounds, bruising, crushing, burns, poisoning and surgical complications.
Reference: *National Health Survey: Users' Guide, Australia* 1995 (Cat. no. 4363.0).

Life expectancy — the average number of years a newborn infant of a given sex would be expected to live if the age-specific death rates of the reference period continued throughout his or her lifetime. For persons aged 65 of a given sex, it is the average additional years of life expected if the age specific death rates of the reference period continued throughout his or her remaining life.
Reference: *Deaths, Australia* (Cat. no. 3302.0).

Live birth — the delivery of a child weighing at least 500 grams at delivery (or, when birthweight is unavailable, of at least 22 weeks gestation) who after being born, breathed or showed any other evidence of life such as a heart beat.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Lung cancer deaths — malignant neoplasm of the trachea, bronchus and lung. ICD-9 code 162.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Medium/high-risk drinkers — men aged 18 and over who reported drinking 50–75ml of absolute alcohol (medium-risk) or more than 75ml (high-risk) per day, and women aged 18 and over who reported drinking 25-50ml of absolute alcohol (medium-risk) or more than 50ml (high-risk) per day.
Reference: *National Health Survey: Health Risk Factors* (Cat. no. 4380.0).

Motor vehicle traffic accident deaths — ICD-9 codes E810-E819.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Neonatal death — deaths of any child weighing at least 500 grams at delivery (or, when birthweight is unavailable, of at least 22 weeks gestation) who was born alive (as defined under live birth) and who died within 28 days of birth.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Nursing home and hostel beds — the number of beds which are provided for long-term nursing care to chronically ill, frail or disabled persons, and beds provided for people who are unable to live wholly independently but do not require nursing care, per 1,000 of the population aged 70 and over.
Reference: *Australia's Welfare* 1997 Australian Institute of Health and Welfare.

Overweight or obese adults — overweight is defined by a body mass index (BMI) greater than or equal to 25 and less than 30, while obesity is defined by a BMI greater than or equal to 30, as recommended by WHO (1995). BMI is body weight in kilograms divided by the square of the height in metres.
Reference: *National Nutrition Survey Selected Highlights, Australia* 1995 (Cat. no. 4802.0).

Perinatal mortality rate — the annual number of fetal and neonatal deaths per 1,000 live births and fetal deaths combined.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Persons with private health insurance — proportion of the total population with private basic hospital insurance.
Reference: Private Health Insurance Administration Council, *Annual Report 1995–96*.

Prostate cancer — malignant neoplasm of the prostate gland. ICD-9 code 185.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Skin cancer — malignant neoplasm of the skin, including both melanoma and non-melanocytic skin cancer. ICD-9 codes 172-173.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Standardised rates — these enable the comparison of rates between populations with differing age structures by relating them to a standard population. These rates are the overall rates that would have prevailed in a standard population if it had experienced at each age the rates of the population being studied. Mortality and Medicare usage rates use the 1991 Australian population as the standard population. All other standardised rates use the Australian population of the year that the survey was last collected.
Reference: *Deaths, Australia* (Cat. no. 3302.0)

Stroke — cerebrovascular disease, being a diseased condition of the brain due to an interruption of the blood supply. Caused by a blockage (embolism) or rupture (haemorrhage) of blood vessels within or leading to the brain. ICD-9 codes 430-438.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Suicide — ICD-9 codes E950-E959.
Reference: *Causes of Death, Australia* (Cat. no. 3303.0).

Tobacco: apparent consumption — grams of tobacco consumed divided by the population aged 15 and over. Apparent consumption of tobacco is based on the quantity on which import duty and excise was paid and does not include duty or excise-free tobacco.
Reference: Foreign Trade Microfiche ME14.

Total fats: apparent consumption — the total fat content of food apparently consumed, in grams, divided by the total population.
Reference: *Apparent Consumption of Foodstuffs and Nutrients, Australia* (Cat. no. 4306.0).

Total health expenditure as a proportion of GDP/per person — total health expenditure as a proportion of gross domestic product, in current prices. Total health expenditure per person is expressed in Australian dollars at constant 1989–90 prices.
Reference: *Health Expenditure Bulletin* Australian Institute of Health and Welfare.

Health experiences of men and women

HEALTH STATUS

Men have higher death rates at all ages and report more serious conditions than women.

Women report the less serious conditions more often than men and assess their own health more negatively.

Many measures of health status show differences between the health of men and women. Compared to women, men have higher death rates at all ages and have more serious illness conditions. On the other hand, women report the less serious conditions more often, are more likely to visit the doctor, and assess their own health more negatively than do men. These differences result from an interaction of biological and environmental factors.

Males and females do not face the same biological risk of disease. Females are thought to have an advantage which makes them more resistant to a range of conditions. One specific difference is that female sex hormones protect against diseases associated with the build up of harmful cholesterol (this protection is lost at menopause).[1] Women's reproductive function, however, increases their biological risk. Pregnancy and childbirth can cause illness, be generally debilitating and in rare cases cause death.

Differences in the behavioural pattern of men and women and in the environments in which they spend their time also expose them to different risks. For example, men are more likely to smoke, to be overweight and to consume alcohol in amounts considered a health risk (see *Australian Social Trends 1998*, Health – State summary tables, pp. 50–51). Boys and men tend to be more physically active, take more physical risks and spend more time outdoors than girls and women. Men as a whole spend longer periods in the workforce and the mix of occupations is different, with men predominating in the more hazardous occupations. Women spend more time caring for children and doing housework. These differences in occupation and role affect health risk in many ways, for example, in levels of exercise, stress, and exposure to infection and injury. Men and women also perceive and report their health and use health services differently.

Death rates by age group(a), 1996

	Males	*Females*	*Male to female ratio*
	rate	rate	ratio
Fetal death rate	5.8	5.3	1.1
Infant mortality rate	6.5	5.0	1.3
Age-specific rates			
1–14 years	25	18	1.4
15–24 years	102	31	3.3
25–44 years	154	68	2.3
45–54 years	343	214	1.6
55–64 years	993	570	1.7
65–74 years	2 828	1 517	1.9
75+	9 240	7 107	1.3
Crude rate (all ages)	**749**	**659**	**1.1**

(a) Fetal death rate is deaths per 1,000 births; infant mortality rate is deaths per 1,000 live births; age-specific death rate and crude death rate are deaths per 100,000 population.

Source: Causes of Death, 1996 (Cat. no. 3303.0).

Definitions

Biological risk derives from the differences in genes, physiology and hormones between males and females.

Environmental risk broadly defined, includes risk from differences in the social and physical environment, including differences in the behavioural patterns of males and females.

Male to female ratio is the male death or illness prevalence rate divided by the female rate; a ratio greater than one indicates a higher rate for males than females.

Fetal death refers to the delivery of a child who did not show a sign of life such as a heart beat after delivery was complete (where birthweight was at least 500 grams, equivalent to 22 weeks' gestation).

Infant death refers to the death before the first birthday of a live-born child (one who showed a sign of life such as a heart beat after delivery was complete).

Mortality

In 1996 the life expectancy of a newborn boy was 75 years, and that of a newborn girl 81 years. The higher life expectancy for females is consistent with the pattern observed in other developed countries (see *Australian Social Trends 1998,* International health status summary table, p. 187). In Australia the difference in life expectancy has decreased from a peak of seven years in the

Leading causes of death(a), 1996

Cause of death	Males rate	Females rate	Male to female ratio
Cancer	230	139	1.7
Ischaemic heart disease	196	105	1.9
Cerebrovascular disease (stroke)	66	57	1.2
Chronic obstructive pulmonary disease (includes emphysema, bronchitis, asthma)	51	24	2.1
All accidents	36	14	2.6
Motor vehicle traffic accidents	16	6	2.7
Diabetes Mellitus	18	12	1.5
Diseases of the arteries, arterioles and capillaries	19	11	1.7
Organic psychotic conditions (includes senile dementia)	12	13	0.9
Suicide	21	5	4.2
Hereditary and degenerative diseases of the central nervous system	14	9	1.6
Total	**824**	**498**	**1.7**

(a) Age-standardised death rate per 100,000 persons.

Source: Causes of Death 1996 (Cat. no. 3303.0).

early 1980s to about six years in the mid 1990s. This is because decreases in certain causes of death, such as heart disease and motor vehicle accidents, have had a proportionally greater impact on the total death rate for males.[2] Death rates from some of these causes also declined more rapidly for males than females.

Death rates were higher for males than females at all ages in 1996. The differences in the infant mortality rate mainly result from biological factors.[3] However from ages 1–44, accidents (mostly motor vehicle accidents) and suicide were the leading causes of death, together accounting for 47% of deaths. Death rates from these causes were much higher for males, and age groups in the range 1–44 years therefore showed the most pronounced differences between the total death rates for males and females. The most extreme difference was in those aged 15–24 (male to female ratio of 3.3).

In each age group over 44, cancer and heart disease were the leading causes of death. Many cancer sites are common to men and women and for most of these the death rate was higher for men. Among those aged 25–54, the death rate from cancer was slightly higher for women than men, mostly attributable to deaths from breast cancer. Deaths from ischaemic heart disease (mostly heart attacks) were more common in men than women at all ages.

The death rates for nine of the leading ten causes were higher for males (after adjusting for age differences between the male and female populations). The two leading causes of death were cancer and ischaemic heart disease, together accounting for 50% of all deaths. Male to female ratios for these causes of death were 1.7 and 1.9 respectively. The greatest disparities were for accidents and suicide (male to female ratios of 2.6 and 4.2 respectively), which together accounted for only 6% of all deaths despite their prominence in the younger age groups.

Illness

The 1995 National Health Survey revealed that females were more likely than males to have experienced an illness (either temporary or long term) in the previous two weeks. The rate for females was 872 per 1,000 compared to 842 for males (after adjustments for age differences between the male and female population). However, when illnesses were classified by severity, based on how likely they were to require surgery, or result in complications, disability or death, it can be seen that serious conditions were more prevalent among males. Of the 18 conditions rated as serious reported in 1995, ten were more common among males than females. For four conditions there was little difference in their prevalence (male to female ratios of 1.0) and only four were more common in

Severity of conditions

The classification of severity of conditions used in this review was adapted by the Australian Institute of Health and Welfare from a system devised by the Royal College of General Practitioners (United Kingdom).[4] In this classification:

Serious conditions are: those that at the time are invariably serious; those that require surgical intervention; those that carry a high probability of serious complications or significant recurring disability.

Intermediate conditions are: those that, although sometimes potentially serious, span a wide range of severity or are embraced by a diagnostic term used with widely disparate meaning by general practitioners; those that, although not often serious, are usually brought to the attention of the general practitioner.

Minor conditions are: those commonly treated without recourse to medical advice; minor self-limiting illnesses that require no specific treatment; diseases not included above.

females – these were rheumatism, congenital anomalies, thyroid disorders and complications of pregnancy and childbirth.

Females were more likely to have a condition rated as either minor or intermediate but not all intermediate and minor conditions were more common in females. The degree of difference ranged widely. For example, osteoporosis was five times more common in females and deafness was almost twice as common in males. However, out of the ten most common intermediate and minor conditions, eight were more prevalent among females.

Biological sex differences play a role in the prevalence of less serious conditions, as they do in serious conditions. Those less serious conditions with the lowest male to female ratios include those associated with female hormonal cycles (e.g. migraine), pregnancy (e.g. varicose veins) or menopause (e.g. osteoporosis).

The large proportion of the population with sight or hearing disorders made diseases of the nervous system and sense organs the largest group of conditions, with a rate of 548 per 1,000 for females compared to 511 for males. Nervous system conditions rated as serious are epilepsy, paralysis and hereditary and degenerative diseases. Epilepsy and hereditary and degenerative

Prevalence(a) of serious conditions, 1995

Conditions	*Males* rate	*Females* rate	*Male to female ratio* ratio
Bronchitis/Emphysema	43.5	43.7	1.0
Ulcer	33.4	25.0	1.3
Heart disease	34.7	21.7	1.6
Hernia	32.6	22.2	1.5
Diabetes Mellitus	22.9	21.1	1.1
Neoplasms (cancer)	21.2	21.5	1.0
Kidney disease	15.7	16.3	1.0
Gout	27.9	6.4	4.4
Rheumatism	14.5	18.9	0.8
Thyroid disorders	5.2	27.3	0.2
Mental retardation	11.9	6.6	1.8
Epilepsy	6.8	6.7	1.0
Psychoses	3.3	2.0	1.7
Congenital anomalies	3.5	3.9	0.9
Other hereditary and degenerative disease	2.6	2.3	1.1
Paralysis	2.0	1.3	1.5
Atherosclerosis	1.8	1.1	1.6
Complications of pregnancy and childbirth	n.a.	4.8	n.a.
Total(b)	**211.1**	**193.2**	**1.1**

(a) Age-standardised rate per 1,000 population.
(b) As people could have more than one condition, components do not add to total.

Source: 1995 National Health Survey, Summary of Results (Cat. no. 4364.0).

Prevalence(a) of intermediate and minor conditions, 1995

Conditions	*Males* rate	*Females* rate	*Male to female ratio* ratio
Leading conditions			
Far–sightedness (incl. presbyopia)	257.3	294.7	0.9
Short–sightedness	180.3	225.9	0.8
Hayfever	130.7	147.4	0.9
Arthritis	121.9	170.1	0.7
Deafness	126.4	66.1	1.9
Asthma	108.2	117.7	0.9
Hypertension	105.0	107.9	1.0
Headache	106.7	153.2	0.7
Sinusitis	84.2	121.5	0.7
Allergy	48.9	72.7	0.7
Other selected conditions			
Common cold	53.1	61.0	0.9
Varicose veins	26.9	81.4	0.3
Back problems	47.2	39.5	1.2
Influenza	31.6	31.7	1.0
Cough or sore throat	26.6	33.4	0.8
Disc disorders	26.9	16.1	1.7
Migraine	11.4	26.7	0.4
Ill-defined symptoms of heart disease	19.5	20.7	0.9
Blindness	12.5	8.7	1.4
Osteoporosis	3.6	23.5	0.2
Stroke (incl. after effects)	7.5	4.9	1.5
Total(b)	**824.1**	**857.8**	**1.0**

(a) Age-standardised rate per 1,000 population.
(b) As people could have more than one condition, components do not add to total; total includes conditions not included in table.

Source: 1995 National Health Survey, Summary of Results (Cat. no. 4364.0).

diseases were equally common in males and females while paralysis was more common among males (possibly reflecting greater rates of injury). Females were more likely to have a sight disorder (minor conditions) while males were more likely to be blind or deaf (intermediate conditions). Migraines, an intermediate condition, were more common in females.

Conditions of the respiratory system were the second most commonly reported group (356 per 1,000 for males and 392 per 1,000 for females). Bronchitis/emphysema (rated as serious) was equally common in males and females. Females were more likely than males to report hayfever, asthma, sinusitis, the common cold and coughs or sore throats, while influenza was equally common.

The rate for musculoskeletal conditions was 254 per 1,000 for males and 274 per 1,000 for females. Running counter to the general pattern, rheumatism, the only condition classified as serious within this category, was more common in females. All other musculoskeletal conditions are rated as intermediate because of the great variation in severity that can exist among people who report the same condition (e.g. 'back problems'). Males were more likely to have back problems and disorders of the intervertebral disc while females reported higher rates of arthritis and osteoporosis.

Females were more likely than males to have a condition relating to the circulatory system (243 per 1,000 compared to 184 per 1,000 for males). However, heart disease, atherosclerosis (both serious) and stroke (an intermediate condition) were more common in males. Conditions which were more common among females were varicose veins, haemorrhoids, and ill-defined symptoms of heart disease (all rated as intermediate or minor). Hypertension was equally common in males and females.

Two less common groups of conditions made the largest individual contributions to the overall difference in the rates of illness for males and females. These were: symptoms and ill-defined conditions (a miscellaneous group of which headaches are the leading component) with rates of 205 per 1,000 for males compared to 278 per 1,000 for females; and diseases of the genito-urinary system with rates of 28 per 1,000 for males compared to 100 for females.

Assessed health status, 1995

Dimension	*Males* Mean score(a)	*Females* Mean score(a)
Physical functioning	83.6	81.5
Role limitations due to physical problems	80.3	79.1
Bodily pain	77.7	75.9
General health	71.0	72.1
Vitality	66.4	62.5
Social functioning	85.7	84.2
Role limitations due to emotional problems	83.9	81.7
Mental health	77.3	74.6

(a) Age-standardised mean scores.

Source: National Health Survey: SF36 Population Norms, Australia (Cat. no. 4399.0).

Assessed health status

The greater prevalence of minor and intermediate conditions among women may be related to differences in the way men and women perceive their health. The National Health Survey included a set of questions which aimed to measure physical, mental and social well being as opposed to the presence or absence of illness, among those aged 18 years or more. Answers were used to calculate scores for eight dimensions of health and well being. Scores ranged from 0 to 100; the higher the score the more positive the state of health or well being.

Women scored somewhat lower than men on all dimensions except general health, for which their scores were slightly higher (all data were age-standardised). The differences were small but statistically significant. The greatest differences were in vitality, a measure of energy level and fatigue (a mean score for men of 66.4 compared to 62.5 for women) and mental health (a mean score for men of 77.3 compared to 74.6 for women).

Health-related actions

Health-related actions varied from using medication to having hospital treatment. In 1995 females were more likely to have taken a health-related action in the previous two weeks (80% compared to 71% for males). The most common health-related action for both sexes was using medication, reported by 64% of males and 74% of females. Most of the specific types of medications on which information was collected were more likely to have been used by females than males.

People taking a health action(a), 1995

	Males		Females		Male to female ratio
	'000	%(b)	'000	%(b)	ratio
Total persons who took no action	2 665	29.3	1 798	20.1	1.5
Total persons who took action(c)	6 329	70.8	7 269	79.9	0.9
Used medication(d)	5 706	63.9	6 711	73.6	0.9
Consulted doctor	1 836	20.8	2 370	25.9	0.8
Consulted other health professionals	1 176	13.1	1 508	16.6	0.8
Took day off work/school	685	7.5	674	7.6	1.0
Day of reduced activity	431	4.9	601	6.5	0.8
Visited hospital casualty/emergency/outpatients	254	2.9	243	2.6	1.1
Visited hospital day clinic	105	1.2	139	1.5	0.8
Hospital inpatient episode	64	0.7	75	0.8	0.9
Total	**8 994**	**100.0**	**9 067**	**100.0**	**1.0**

(a) People who took a health action in the two weeks prior to interview.
(b) Age-standardised.
(c) People could report more than one type of health action; therefore components do not add to total. Total includes some actions not included in table.
(d) Includes vitamins, minerals and natural and herbal medications.

Source: 1995 National Health Survey, Summary of Results (Cat. no. 4364.0).

However, for certain medications and age groups medication use was greater for males than females (see *Australian Social Trends 1998,* The use of medication, pp. 60–63).

Visiting a doctor was the second most common health-related action taken, reported by 26% of females and 21% of males. Males and females shared the three most common reasons for visiting a doctor. These were respiratory conditions (4% of the male population had attended a doctor for this reason in the previous two weeks compared to 5% of females), check-ups (4% of males and 5% of females) and musculoskeletal conditions (2% of males and 2% of females).

Some of the less common reasons for visiting the doctor made relatively large contributions to the overall differences between male and female rates. These were: tests, reported by 0.8% of males and 1.7% of females; symptoms and ill-defined conditions, reported by 1.2% of males and 1.9% of females; diseases of the genito-urinary system, reported by 0.3% of males and 1.3% of females; and 1.7% of women attended pregnancy supervision. The reason with the highest male to female ratio was injuries, reported by 1.6% of males and 1.1% of females.

Other than attending casualty, emergency or outpatients (2.9% of males compared to 2.6% of females), females were more likely to take other types of health-related actions. The largest difference was for having a day of reduced activity (4.9% of males and 6.6% of females).

Information from the 1995 National Health Survey is broadly consistent with administrative information from the health system. The greater likelihood of females to have visited a doctor is consistent with their more frequent use of Medicare services (see *Australian Social Trends 1998,* Health – national summary tables, pp. 48–49). Hospital administration data also shows greater use by women (as measured by hospital separation rates) mainly because of their use of obstetric services. In 1995–96, separation rates were higher for women than men among those aged 15–54 years and 75 years and over, while at other ages rates were higher for males. When uses related to pregnancy and childbirth were excluded from the 15–54 age group, the difference was reduced, and when diseases and disorders of the reproductive system were also removed, the female rates were lower than the male.[5]

Endnotes

1 Smith, D. W. E., Warner, H. R. 1990, 'Overview of biomedical perspectives: possible relationships between genes on the sex chromosomes and longevity', in M. G. Ory and H. R. Warner (eds) *Gender, health and longevity: a multidisciplinary perspective*, Springer Publishing Co., New York.

2 Jain, S. 1994, *Trends in mortality,* Cat. no. 3313.0, National Centre for Epidemiology and Population Health and ABS, Canberra.

3 Waldron, I. 1983, 'Sex differentials in human mortality: the role of genetic factors', *Social Science and Medicine,* Vol 17 (6), Pergamon Press, Oxford.

4 Mathers, C. 1994, Appendix A of *Health differentials among adult Australians aged 25–64 years*, AIHW, Canberra.

5 Australian Institute of Health and Welfare, 1997, *Australian hospital statistics 1995–96,* AIHW: Health Services Series No. 10, AGPS, Canberra.

The use of medication

HEALTH RELATED ACTIONS

In 1995, 69% of Australians had recently used medication. Prescribed medicines were used by 36%, 26% used a vitamin or mineral supplement, and 9% a natural medication.

When used appropriately, medications are effective in the treatment, restoration and promotion of health, and in the alleviation of symptoms of illness. The 1995 National Health Survey found that the use of medication was the most common health-related action (either separately or in conjunction with other actions). Of the population, 69% had recently used at least one medication, compared to only 23% who had recently consulted a doctor, the next most common health-related action.

Medications in the form of vitamin and mineral supplements and natural medications are increasing in popularity. These types of medications are primarily used as a preventative health measure. Conversely, other medications, such as prescribed or non-prescribed medications, are primarily used in response to a specific health condition.

Expenditure on medication

Expenditure on medication by both government and private sectors represents a substantial proportion of the recurrent health expenditure in Australia (12% in 1994–95). In 1994–95 the total expenditure on medication was over $4,200 million, an increase of 12% from the previous year and 53% since 1990–91. Over half of this expenditure (51%) was by the private sector, almost entirely by individuals, and nearly half was by the Commonwealth government, largely through the Pharmaceutical Benefits Scheme (PBS).

The increase in expenditure on medication is related to a variety of factors including the rising costs of medications, increases in the

Definitions

Recent use of medication refers to the use of any medication in the two weeks prior to the 1995 National Health Survey (NHS) interview.

Medication refers to prescribed medications, non-prescribed medications, vitamin and mineral supplements, and natural medications.

Prescribed medications are available from pharmacists upon the presentation of a doctor's prescription. They can also be provided by a doctor or hospital.

Non-prescribed medications do not require a doctor's prescription and can be obtained from a variety of places such as chemists and some supermarkets, doctor's surgery or hospital. Excluded are vitamin and mineral supplements and natural medications.

Vitamin and mineral supplements refer to vitamins A, B, C, etc.; to iron, calcium, potassium, etc.; or prepared tonics consisting of vitamins or minerals.

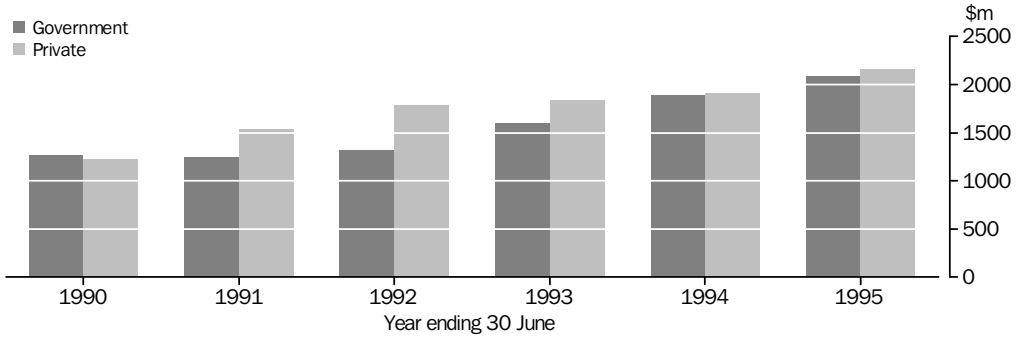
Natural medications include essential oils, aromatherapy and herbal mixtures.

Health-related actions include visiting a doctor, using medication, or changing daily routines in response to a health condition. A person could report more than one health action for a two-week period prior to interview.

Recurrent health expenditure refers to expenditure on the provision and regulation of health services.

The Pharmaceutical Benefits Scheme (PBS) subsidises a range of medications to ensure that individuals are not precluded by cost.

Expenditure on medication by government and private(a) sectors



(a) Private sector includes expenditure by individuals, households, and health and other insurance providers.

Source: Australian Institute of Health and Welfare, *Health Expenditure Bulletin*, No 13, July 1997.

availability of new and more expensive medications, and increases in the proportions of people using medication, such as the elderly.

The social or indirect costs associated with the inappropriate use of medication include avoidable hospital admissions and unnecessary follow-up visits to doctors. These costs can result from the abuse, over-use or under-use of medication; individual hypersensitivity reactions from the prolonged or frequent use of particular medications; or adverse side effects from the concurrent use of two or more specific types of medication.

Who uses medication?

In 1995 nearly 12.5 million Australians (69%) had recently (in the two weeks prior to being interviewed) used at least one medication, 59% had used a prescribed or non-prescribed medication, 26% had used a vitamin or mineral supplement, and 9% a natural medication.

The proportion of people using medication increased with age from 51% of those aged 0–14 to 88% for those aged over 54. Age was also a factor determining the types of medications used. The most common medications used by people aged 0–14, 15–34 and 35–54 were vitamin and mineral supplements (16%, 27%, and 31% respectively) and pain relievers (14%, 27%, and 29%). These were followed by medications for coughs and colds for those aged 0–14, skin ointments and creams for those aged 15–34, and natural medications for those aged 35–54. The most common medications used by people aged over 54 were medications for heart and blood pressure (43%), followed by vitamin and mineral supplements, and pain relievers.

Overall, a higher proportion of females than males had recently used a medication. Prescribed or non-prescribed medications were used by 64% of females and 54% of males. Vitamin and mineral supplements were used by 30% of females and 21% of males and natural medications were used by 12% of females and 7% of males.

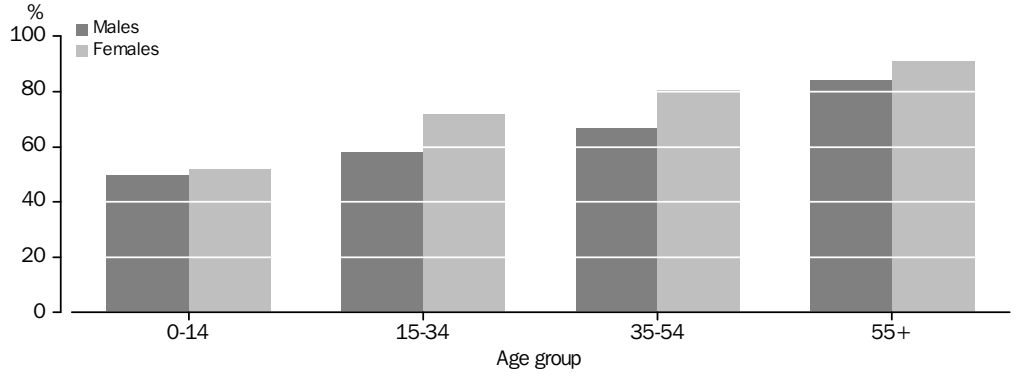
For all age groups most of the specific types of medications were more likely to have been used by females than males. However, for certain medications, and age groups, medication use by males was greater than by females. For example, in the 0–14 age group, males were more likely than females to have recently used an asthma medication (9.2% compared to 7.2%). This reflects the higher prevalence of males with asthma in this age group (18% compared to 14%). In addition, of those aged 35–54, males were more likely to have used medication for cholesterol (2.1% compared to 0.7%) reflecting the higher prevalence of males with high cholesterol in this age group (8% compared to 5% of women).

Prescribed and non-prescribed medication

In 1995, 36% of the population had recently used a prescribed medication and 35% had used a non-prescribed medication. Of the population using a non-prescribed medication, 36% stated that at least one of the non-prescribed medications was used on the advice of a health professional.

The use of prescribed medication increased from 20% for those aged 0–14 to 71% for those aged over 54. The use of non-prescribed medication increased from 28% for those aged 0–14 to peak at 39% for those aged 15–34 and 35–54 and then decreased to 30% for those aged over 54.

Use of medication by age and sex, 1995



Source: Unpublished data, 1995 National Health Survey.

Males were equally likely to have used a prescribed medication as a non-prescribed medication (32% each). Women, though, were more likely to have used a prescribed medication than a non-prescribed medication (41% compared to 37%).

A substantial proportion of the population had used two or more medications that were prescribed or non-prescribed (31%). 12% had used both types of medications. The proportion of people using two or more prescribed medications (19%) was more than double the proportion using two or more non-prescribed medications (9%). This most likely reflects the type of condition (or symptom) for which these medications were being used. Non-prescribed medications were most commonly used to treat acute symptoms, whereas prescribed medications were most commonly used to treat more chronic conditions.

For example, the most commonly used non-prescribed medications were pain relievers (20% of people), the majority of which (60%) were used to treat headaches due to unspecified or minor causes. Other commonly used non-prescribed medications were skin ointments or creams (6%), and medications for cough or colds (5%). The most commonly used prescribed medications were heart or blood pressure medications (11% of people), asthma medications (6%) and pain relievers (4%).

Prescribed medications were four times more likely than non-prescribed medications to be used on a daily basis. Medications most commonly used on a daily basis were medications for diabetes, medications to reduce serum lipids, heart and blood pressure medications, fluid or diuretic medications, and medications for anxiety depression or nervous condition (in over 90% of cases). Medications least likely to be used on a daily basis were medications for pain relief and allergy medication (17% and 30% respectively).

Proportion of the population using a prescribed or non-prescribed medication by the specific type of medication(a), 1995

	Prescribed	*Non-prescribed*	*Total*
Specific type of prescribed or non-prescribed medication	%	%	%
Pain relievers	4.2	20.0	23.6
Medications for heart problems/blood pressure	10.7	1.3	11.2
Skin ointments/creams	4.1	5.9	9.8
Medication for cough/colds	2.2	5.3	7.1
Asthma medications	5.6	1.6	6.6
Stomach medications/laxatives	3.2	1.4	4.5
Medications for arthritis	3.1	0.4	3.4
Medications for allergies	1.5	1.8	3.2
Fluid tablets/diuretics	2.2	–	2.2
Medications for anxiety/nervous tension/depression	2.1	0.1	2.2
Medications to lower cholesterol/triglycerides	1.7	–	1.7
Medication for diabetes	1.4	–	1.5
Sleeping medications	1.3	0.1	1.5
Tranquillisers or sedatives not included above	0.4	–	0.4
Other	14.2	4.1	17.8
Total using prescribed or non-prescribed medications(b)	**36.2**	**34.6**	**59.1**
	'000	'000	'000
Total	**6 536**	**6 255**	**10 672**

(a) Used in the two-week period prior to interview.
(b) People may have reported using more than one type of medication, therefore components do not add to the total.

Source: Unpublished data, 1995 National Health Survey.

People using vitamin or mineral supplements, or natural medications(a), 1995

	Vitamin and mineral supplements	*Natural medications*	*Total vitamin and minerals or natural medications*
Reasons for use	%	%	%
Preventative health	82.0	69.5	78.0
To treat a specific health condition			
Disease of the respiratory system	5.4	11.0	6.1
Diseases of the musculo-skeletal system and connective tissue	3.4	7.7	3.9
Diseases of the genito-urinary system	2.5	5.5	2.8
Diseases of the digestive system	1.3	5.8	2.2
Diseases of the blood and blood forming organs	2.4	1.5	2.1
Mental disorder	1.6	3.1	1.6
Other	12.0	20.2	13.0
Total people using vitamins and minerals or natural medications(b)	**100.0**	**100.0**	**100.0**
	'000	'000	'000
Total	**4 658**	**1 700**	**5 352**

(a) Used in the two-week period prior to interview.
(b) People may have reported using vitamin and mineral supplements or natural medications for preventative health reasons and to treat a specific health condition, therefore components will not add to the totals.

Source: Unpublished data, 1995 National Health Survey.

Vitamin and mineral supplements and natural medications

In 1995, 30% of the population had recently used a vitamin and mineral supplement, or a natural medication. People aged 45–54 were more likely than any other age group to have used a vitamin and mineral supplement, or natural medication (37%), while those aged 0–14 were the least likely (18%).

The primary purpose of using prescribed or non-prescribed medications is to treat a specific health condition. In contrast, people use vitamins and mineral supplements and natural medications generally, as a preventative health measure: 82% of those using a vitamin and mineral supplement and 70% of those using a natural medication did so to prevent illness rather than to treat a pre-existing medical condition.

Following preventative reasons, the next most common reason stated for using a vitamin and mineral supplement or natural medication was to treat a disease of the respiratory system (6%). Of these, 40% stated that they were used specifically to treat the common cold. The next most common reason stated was to treat a disease of the musculo-skeletal system and connective tissue (4%). Of these, 63% stated that they were specifically used to treat arthritis.

Food and energy intake

HEALTH RELATED ACTIONS

Over the last 20 years there have been improvements in Australians' diets. Nevertheless, in 1995, 57% of all adults were overweight or obese.

Despite an abundant supply of information on what constitutes a healthy diet, 64% of men and 49% of women aged over 18 were classified in 1995 as overweight or obese. The over consumption of food, coupled with an inactive lifestyle, causes overweight or obesity. This in turn increases a person's chance of developing diseases such as cardiovascular disease, some cancers and diabetes mellitus.

Food intake

The National Health and Medical Research Council (NHMRC), in part, recommends that Australians eat a diet low in fat, in particular saturated fat; maintain a healthy body weight; limit alcohol intake; eat only a moderate amount of sugars; and eat plenty of breads, cereals, fruits and vegetables.[1]

Over the last twenty years there have been changes in the quantities and types of foods consumed by Australians. The consumption of meat and meat products (a main source of saturated fat) has reduced while the consumption of chicken and seafood, which are generally lower in saturated fats, has increased. The consumption of fruit and fruit products, vegetables, and grain products has increased. In addition, the amount of alcohol consumed has declined.[2]

Consumption of food

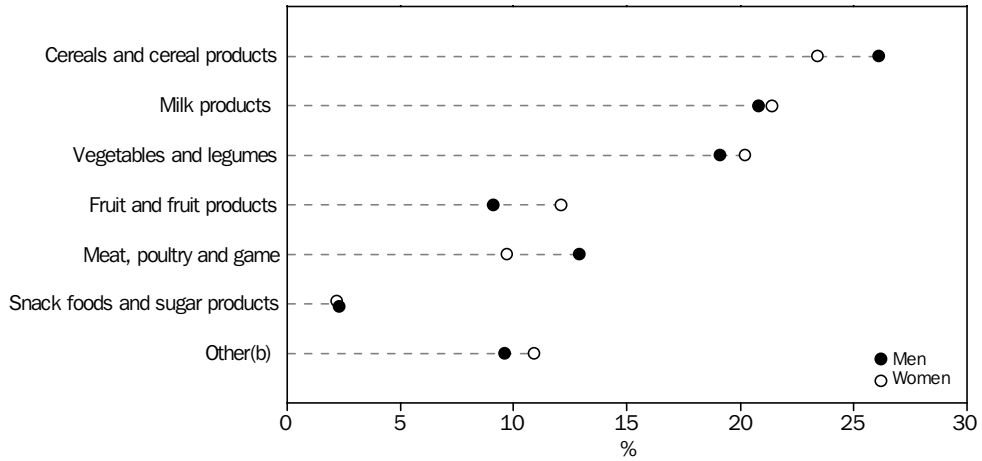
Data in this review is from two major surveys conducted in 1995 and only relates to people aged over 18. The National Nutrition Survey collected information on food and nutrition from the Australian population. Information was collected on food and beverage consumption, nutrient intake, eating habits and dietary attitudes. Physical measurements, such as body mass index (BMI), (derived using actual measurements) were also included. Data on food and beverage intake was collected using two approaches, the daily consumption method (24 hour recall), and a usual food frequency intake method.

The National Health Survey is the second in a series of regular five-yearly population surveys designed to obtain information on a range of health-related issues and to enable the monitoring of health over time. Physical measurements, such as BMI (derived using self-reported measurements) are also included.

Energy provides fuel for metabolism, growth, movement and other processes. Energy intakes in this review are reported in kilojoules (kJ).

BMI is the body weight in kilograms divided by the square of the height in metres. In this review BMI classifications follow those of the World Health Organisation. A BMI of: less than 18.5 indicates underweight; 18.5 to less than 25 indicates an acceptable weight; 25 to less than 30 indicates overweight; and 30 and greater indicates obesity.

Mean daily food intake as a percentage of total food intake(a) for persons aged over 18, 1995



(a) Excludes alcoholic and non-alcoholic beverages.
(b) Other includes seafood and fish, egg products, fats and oils, sauces and condiments, and miscellaneous foods.

Source: *National Nutrition Survey, Selected Highlights, Australia* (Cat. no. 4802.0).

Even so, the diet of many Australians is far from ideal, as indicated by the high proportion of people overweight or obese and the high incidence of related diseases. In all age groups, overweight or obese people were substantially more likely than people with a normal weight to suffer from a disease of the cardiovascular system or diabetes mellitus Type II (see *Australian Social Trends 1998,* Diabetes, pp. 68–71).

In 1995 Australian men consumed a higher quantity of food and beverages than women in all age groups. The daily food and beverage consumption peaked at 4,240 g for men aged 19–24, and 3,320 g for women aged 25–44.

Excluding beverages, cereals and cereal-based products contributed the greatest amount to the mean food intake for men (26%) and women (23%) aged over 18. These were followed by milk products (21% for both men and women) and vegetables and legumes (19% for men and 20% for women). The daily intake of fruit and fruit products increased with age, while daily intake of cereals and cereal-based products, milk and milk products, and meat, poultry and game decreased with age.

Non-alcoholic and alcoholic beverages accounted for over 62% of total food and beverage intake by weight (2,460 g for men and 2,020 g for women). The contribution by weight of beverages to the total weight of food is influenced by climate. The Northern Territory had the highest contribution (74% for men) and the Australian Capital Territory had the lowest (58% for men).

The average contribution of alcoholic beverages to food and beverage intake was 10% for men and 3% for women. For men, this contribution increased from 8% for those aged 19–24 to 11% for those aged 45–64 and then declined to 9% for men aged over 65. For women the contribution of alcohol to food and beverages peaked at a younger age, 4% for those aged 19–24, and then declined to 2% for those aged over 65.

Energy intake

Energy is not a nutrient but is released from food components containing fats, proteins, carbohydrates (includes starch, and related substances) and alcohol. The body uses energy from food for a variety of purposes including metabolic processes, physiological functions, muscular activity, heat production, growth, and synthesis of new tissue.

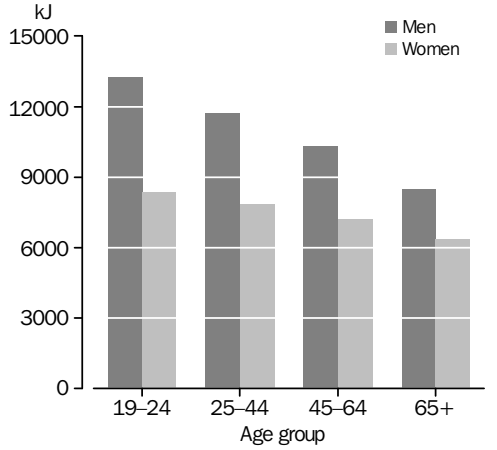
Recommended energy intakes are difficult to calculate even among individuals of the same age, sex, weight, height and general pattern of activity. Therefore the energy requirement for healthy people is often expressed as the amount of energy needed to maintain the status quo.

In 1995 males had a greater average energy intake than females at all ages. Between the 19–24 and 65 and over age groups, the average energy intake of men decreased from 13,280 kJ to 8,510 kJ and for women from 8,370 kJ to 6,370 kJ. The total energy intake of men aged 19–24 was 59% greater than that for women and then declined to 34% greater for those aged 65 and over.

Carbohydrates contributed the largest proportion of energy intake for all age groups. It contributed about 48% of the daily energy intake for adults aged 19–24, reducing to 45% for adults aged 45–64. The contribution of protein to overall energy intake steadily increased from 16% for adults aged 19–24 to 18% for adults aged over 44. Fat contributed between 32% and 33% of energy in all age groups over 18.

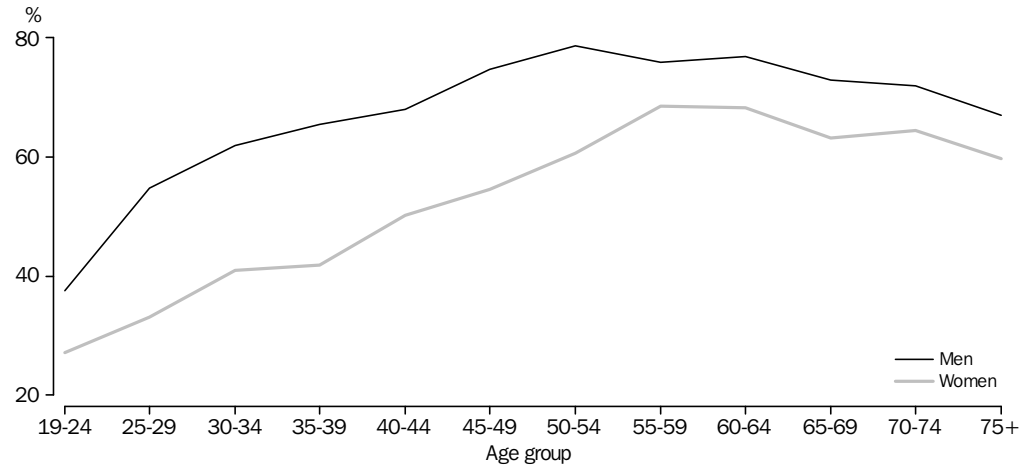
Food and beverages purchased and consumed away from home form a large and increasing contribution to the diet of Australians. In 1993/94 eating out and take-away food and beverages (excluding alcoholic beverages) accounted for 23% of the average weekly food and beverages budget. This is an increase of 5% since 1984. Alcoholic beverages accounted for an additional 14% of this budget, a decline of 1%.[3]

Average daily energy intake by age, 1995



Source: *National Nutrition Survey, Selected Highlights, Australia* (Cat. no. 4802.0).

Adults who were overweight or obese, 1995



Source: Unpublished data, National Nutrition Survey, 1995.

In 1995 food and beverages purchased and consumed away from home had a higher fat content than those consumed at home. Women were less likely than men to purchase and consume food and beverages away from home (57% compared to 64%). However, when they did, this food on average had a higher fat content than food purchased by men (36% compared to 34%). This difference may be partly explained by men's more frequent and higher consumption of alcoholic beverages which contribute to energy intake but not fat to the diet. Consequently, food purchased and consumed away from home contributed a smaller proportion of total energy for women (22%) than men (26%).

Overweight and obesity

In general, excess body weight is the outcome of a long-term imbalance between energy intake and energy expenditure. The extent to which people are overweight or obese can be measured by the body mass index (BMI). In 1995 BMI measures of Australians aged over 18 indicated that 57% were overweight or obese. Men were more likely than women to be overweight or obese at every age.

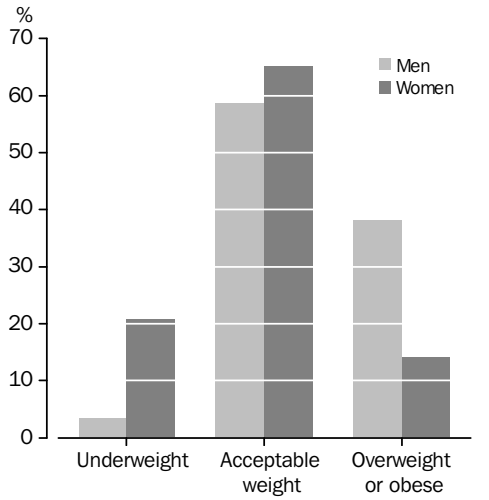
Even though being overweight or obese was more of a health risk for men, women were generally more concerned about their body weight and diet. Women were more likely than men to be on a weight-reduction or fat-modified diet (24% compared to 16%). Also, of those who consider themselves to be within an acceptable weight range, women were seven times more likely than men to be underweight (21% compared to 3%) and men were nearly three times more likely than women to be overweight or obese (38% compared to 14%).

Energy intake of the overweight and obese

The average energy intake of men classified as overweight or obese was lower than that recorded for men who were in an acceptable weight range. The same pattern was also evident for women, although the differences were smaller. The average energy intake was 11,780 kJ for men and 7,790 kJ for women classified with an acceptable body weight, 10,850 kJ for men and 7,130 kJ for women classified as overweight, and 10,390 kJ for men and 6,980 kJ for women classified as obese.

Reasons for the lower average energy intake of people who were overweight or obese may be that they are less physically active, have

Adults aged over 18 who consider themselves to be an acceptable weight by BMI, 1995



Source: Unpublished data, National Health Survey, 1995.

different metabolic rates, or have a tendency to understate their food intake. In addition, a higher proportion of overweight and obese men and women were on weight-reduction or fat-modified diets than those who were in an acceptable weight range (23% compared to 16%).

Exercise

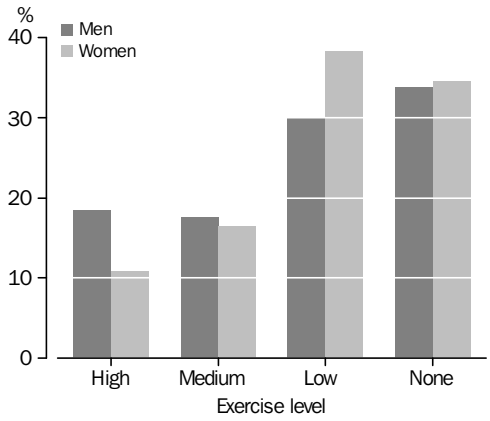
Regular physical exercise is also an essential factor when determining whether or not a person has an excess energy intake. Contrary to the Australian image as active outdoor sports-oriented people, many Australians have a sedentary lifestyle.

Men and women were equally likely to have exercised (66% for men and 65% for women) but men were more likely to have exercised at a higher level (exercise that caused perspiration or a large increase in heart rate, 18% compared to 11%). 30% of men and 38% of women had exercised at a low level (leisurely walk).

The proportion of people who had exercised also decreased with age. Of those aged 19–24, 74% had exercised, but this gradually declined to 57% of those aged over 64.

People who were within a normal weight range were slightly more likely to have exercised than those who were overweight or obese (70% compared to 65%) and to have exercised at a higher level. Of those within a normal weight range, 34% had exercised at a low level, 19% at a medium level and 16% at a high level. In comparison, 34% of those who were overweight or obese had exercised at a low level, 16% at a medium level and 14% at a high level.

Exercise level(a) of men and women aged over 18, 1995



(a) Exercise for sport recreation or fitness in a previous two-week period.

Source: Unpublished data, National Health Survey, 1995.

Endnotes

1 National Health and Medical Research Council, 1991, *Dietary Guidelines for Australians*, AGPS, Canberra.

2 Australian Bureau of Statistics 1994/1995 and 1995/96, *Apparent Consumption of Foodstuffs,* Cat. no. 4306.0, ABS, Canberra.

3 Australian Bureau of Statistics, 1993/94, *Household Expenditure Survey - Detailed Expenditure Items*, Cat. no. 6535.0, ABS, Canberra.

Diabetes

HEALTH STATUS

In 1995 about 430,700 Australians (2.4%) reported having a form of diabetes at some time in their lives.

Diabetes mellitus is a chronic condition resulting from deficiencies in the production or use of insulin, a hormone which enables the body to absorb glucose and other nutrients. If untreated, people with this form of diabetes suffer from raised blood glucose levels while their tissues lack nourishment. Diabetes can cause diseases of the eyes, kidneys, nerves and circulatory system. These in turn can result in a reduced quality of life or premature death.

Prevalence

In 1995 about 430,700 (2.4%) Australians reported having diabetes at some time in their lives. This was slightly higher than the percentage of people reporting diabetes in 1989–90 (1.9% when adjusted to allow for the change in age distribution across the population). Diabetes was slightly more prevalent among women (2.5%) than men (2.3%), although gestational diabetes contributed 0.3 percentage points to the prevalence among women.

The prevalence of diabetes varied between the Australian-born and the overseas-born. Diabetes was more than twice as common among the overseas-born (4.1% compared to 1.9%), partly accounted for by their older age distribution. However, when age and sex differences are taken into account, the prevalence among the overseas-born was still higher (3.0%) than among the Australian-born (2.1%).

Prevalence(a) of diabetes mellitus by type, 1995

	Males	*Females*	*Persons*
Type of diabetes	%	%	%
Type I	0.5	0.4	0.4
Type II (includes gestational diabetes)	1.0	1.3	1.2
Type of diabetes unknown	0.8	0.8	0.8
Total	**2.3**	**2.5**	**2.4**
	'000	'000	'000
Total diabetes	**206**	**225**	**431**

(a) People with diabetes as a percentage of relevant population.

Source: Unpublished data, 1995 National Health Survey.

Types of diabetes

Diabetes mellitus (code 250 in the International Classification of Diseases, ninth revision) is a chronic metabolic disorder. There are other less common forms of diabetes, such as diabetes insipidus, which have quite different causes. People who reported having these types of diabetes are not included in the estimates presented here. The two major types of diabetes mellitus are:

◆*Type I* People with Type I produce little or no insulin and require life-long medication with insulin. This type is also known as Insulin Dependent Diabetes Mellitus (IDDM) or juvenile onset diabetes.

◆*Type II* People with Type II may produce some insulin but not enough to maintain normal blood sugar levels. Type II may be controlled through diet, weight reduction and increased exercise, but often requires treatment with insulin injections or oral medications as well. Type II is also known as Non-Insulin Dependent Diabetes Mellitus (NIDDM) or mature onset diabetes.

Gestational diabetes is a temporary form of Type II which occurs only in pregnancy.[1]

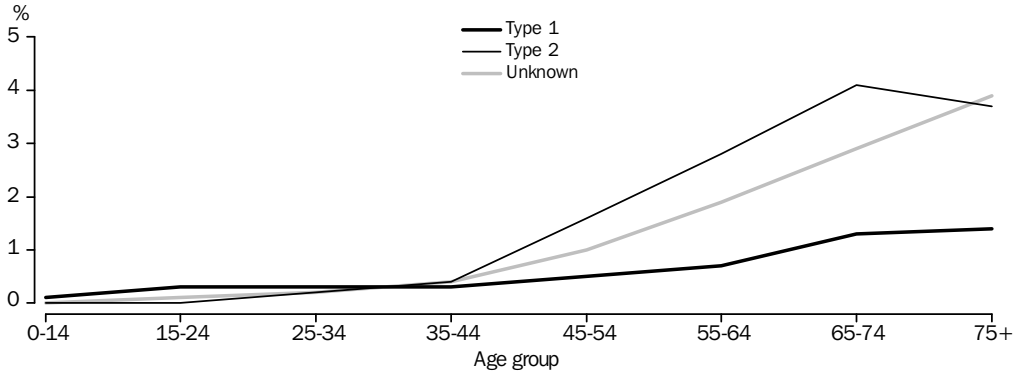
Diabetes mellitus moved from being the seventh to the sixth leading cause of death in 1996. The death rate was 15 deaths per 100,000 people, slightly higher than the death rate of 14 in 1995. The death rate for males was consistently higher than that for females (in 1996, 18 deaths per 100,000 compared to 12 deaths per 100,000). There were also many deaths where diabetes was mentioned as a contributing factor. If these deaths were included, diabetes contributed to about 50 deaths per 100,000 people in 1996.

Types of diabetes

People are far more likely to develop Type II diabetes than Type I. Of those reporting diabetes, 42% reported Type II, 18% Type I, and 6% gestational diabetes (excluding women who subsequently developed Type II). The remaining 33% did not know what type of diabetes they had, although the late onset and the type of medication used indicated that most of these had Type II.

Type I diabetes usually has an earlier onset than Type II. The majority (55%) of people with Type I were diagnosed when aged under 40, while 88% of those with Type II were

Prevalence(a) of diabetes mellitus by type(b) by age group, 1995



(a) People with diabetes as a percentage of the population in each age group.
(b) Excludes gestational diabetes. 'Unknown' refers to people who did not know which type of diabetes they had.

Source: Unpublished data, 1995 National Health Survey.

diagnosed when aged 40 or over. Of those who did not know the type, 82% were diagnosed when aged 40 or over.

Diabetes mellitus is incurable at present. The prevalence of Types I and II diabetes in the population therefore increases with age. The prevalence of Type II in the population was low at ages under 40 and increased rapidly with greater age. Type I also increased with age, but compared to Type II there was a higher prevalence at younger ages and a less rapid increase after 40. Of those who did not know what type they had, the prevalence by age was more like that of Type II.

In those aged over 74, Type II appeared to decrease in prevalence whereas there was a further increase in prevalence where type was unknown. A greater proportion of people with diabetes in this age group did not know what type they had, compared to younger age groups. People who did not know what type they had made up 22% of those with diabetes aged under 15 and this proportion increased steadily with age to reach 43% of those aged over 74.

About 224,800 people had been diagnosed as having high sugar levels in their blood or urine at some time in their lives, but did not report a diagnosis of diabetes. Of these 16% (35,400) reported that they currently had high sugar levels. Some of these may actually have diabetes mellitus, as Type II is often known as a blood sugar condition.[2]

People at risk of diabetes

Health planners draw an important distinction between the two major types of diabetes mellitus, which have different causes and risk factors. Type I is thought to result from an auto-immune reaction which destroys the insulin producing cells. What triggers this reaction is unknown, although it is known that some people are at greater risk of Type I because of genetic factors.[3]

In contrast, Type II is a gradual deterioration in blood glucose regulation. Age and various lifestyle factors are thought to play an important role in the development of Type II. Identifying people at risk of Type II is a necessary part of planning health interventions for the condition. The diabetes research and education organisation, Diabetes Australia, identifies five main risk factors for Type II. These are being aged over 40, being overweight, having hypertension, giving birth to a baby weighing over 4 kg at birth (or having had gestational diabetes) and having a close relative with the disease.[4] Diabetes Australia also recommends that anyone having three or more of these risk factors be tested for the disease.

The number of people with relatives with Type II is not known. However, some information is available on the other risk factors. In 1995, 5% of Australians (982,300 people) had the three risk factors (being aged over 40, overweight and hypertensive). Of these, 12% had been diagnosed with diabetes. However less than 1% of the remaining 862,100 people with these three risk factors had ever suspected they had diabetes and half of these had been tested.

In 1995, 27,000 women (who had not subsequently developed another form of diabetes), reported having had gestational diabetes. However, gestational diabetes often goes undetected. In addition, information on births in 1994 suggested that in that year

alone 30,000 women gave birth to a baby weighing 4kg or more (about 12% of confinements).[5] This indicates that there may be many more than 27,000 women at risk of developing Type II later in life.

Another risk factor for Type II diabetes is being an Indigenous Australian. Many studies suggest a higher prevalence in the Indigenous population than in the non-Indigenous, although data from the 1995 NHS on this topic is not yet available. Indigenous Australians may also be at risk of developing Type II at younger ages than are non-Indigenous Australians.[6]

Health status

People with diabetes were more likely to be overweight and sedentary than people without diabetes, but were less likely to drink alcohol or smoke. Of people aged over 14 who gave their height and weight, 74% of those with Type II were overweight, compared to 61% of those with Type I and 42% of those without diabetes. Part of this difference may be due to the older age profile of those with diabetes, although people with diabetes were more likely to be overweight than those without diabetes, in each age group examined.

People with diabetes are at greater risk of cardiovascular disease than those without diabetes. To reduce the risk of cardiovascular disease, exercise is recommended. However, people with diabetes were less likely to have exercised for sport or leisure than those without diabetes. Also, those who exercised tended to do so at a lower level. Of people with diabetes aged over 14, 41% were sedentary compared to 34% of those without diabetes. A further 36% exercised at a low level, 20% exercised at a moderate level and 2% exercised at a high level. In comparison, of people without diabetes, 34% exercised at a low level, 24% at a moderate level, and 8% at high level.

As well as being advised to exercise, people with diabetes are advised not to smoke, and to restrict alcohol intake. Of people with diabetes aged over 17, fewer reported drinking alcohol in the past two weeks or smoking regularly than people without diabetes. Even so, 37% of people with diabetes had drunk alcohol in the previous two weeks (compared to 56% of those without diabetes) and 18% were regular smokers (compared to 24% of people without diabetes).

Data sources

The National Health Survey (NHS) 1995 was the second in a series of five-yearly population based surveys designed to obtain information on a range of health-related issues and to enable the monitoring of trends over time. Both the 1989–90 and the 1995 NHS enabled the estimation of the prevalence of diabetes mellitus; the 1995 survey included additional questions regarding type of diabetes and treatment details. These are the only Australian sources to date which estimate diabetes prevalence based on a national sample. Interviews were conducted with residents of a random sample of 23,800 private dwellings.[7]

The ABS Causes of Death collection is based on deaths registered in each State and Territory. The underlying cause of death is determined by a doctor or coroner. In the case of diabetes, those deaths in which diabetes was mentioned as a contributing factor (rather than underlying cause) by the doctor or coroner have also been identified in the collection, since 1994.[8]

Associated conditions

There is an association between diabetes and other health conditions; especially conditions that affect the cardiovascular system, kidneys or eyes. Taken together, in 1995, 63% of people with diabetes had at least one of these conditions, compared to 17% of those without diabetes. The difference was substantial in all age groups.

The cardiovascular conditions hypertension, heart disease and stroke were the most commonly reported group of conditions for those with and without diabetes. However, they were more than four times more common for those with diabetes than those without. The proportion of people with at least one of these cardiovascular conditions increased with age for both groups. Hypertension was the most common cardiovascular condition, affecting 44% of those with diabetes and 10% of those without.

People with diabetes were more likely to have glaucoma or cataracts or to be blind than people without diabetes (17% compared to 3%). Cataracts were the most common of these eye conditions, affecting 10% of people with diabetes and 2% of those without. Blindness affected 6% of people with diabetes and 1% of those without. In those aged under 40, these eye conditions were relatively uncommon, but they were twice as likely in those with diabetes (1.4% compared to 0.5%). Between ages 40–64, 12% of people with diabetes had one of the eye conditions, compared to only 3% of those without. In those aged over 64, the eye conditions were

Selected health conditions among people with diabetes(a), by age, 1995

	Persons with diabetes(a)				*Persons without diabetes*			
	Age group				*Age group*			
	<40	*40–64*	*65>*	*Total*	*<40*	*40–64*	*65>*	*Total*
Type of condition	%	%	%	%	%	%	%	%
High cholesterol	3.8	19.9	16.5	16.5	1.3	10.0	12.1	4.9
Hypertension, heart disease, stroke	9.5	46.7	65.3	50.8	2.0	17.8	47.8	11.5
Cataracts, glaucoma, blindness	1.4	12.2	26.1	17.3	0.5	2.8	17.2	3.0
Kidney disease	7.2	5.6	7.7	6.8	0.9	2.3	2.9	1.5
Absence of limbs	0.0	1.4	2.7	1.8	0.3	0.7	1.3	0.5
At least one of the above	16.0	61.2	77.5	63.3	4.4	27.4	60.5	17.0
None of the above	84.0	38.8	22.5	36.7	95.6	72.6	39.5	83.0
Total persons	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	'000	'000	'000	'000	'000	'000	'000	'000
Total persons	**48**	**171**	**185**	**404**	**10 794**	**4 893**	**1 970**	**17 657**

(a) Excludes those with gestational diabetes.

Source: Unpublished data, 1995 National Health Survey.

more common, affecting a greater proportion of those with diabetes than those without (26% compared to 17%).

For people aged under 40 with diabetes, kidney disease was the second most common condition (after hypertension). Kidney disease was eight times more common in people with diabetes than in those without in this age group. Of those aged over 64, kidney disease was more than twice as common in those with diabetes.

Circulation problems and nerve damage mean that people with diabetes are prone to develop infections in their extremities. People with diabetes were more likely to have lost a limb than people without the disease (1.8% compared to 0.5%), although this was relatively uncommon for both groups.

Endnotes

1 World Health Organisation, 1985, *Diabetes Mellitus: report of a WHO study group*, World Health Organisation Technical Report Series 727, WHO, Geneva.

2 Phillips, P., Popplewell, P. 'Diabetes: what's new in Type II', *Modern Medicine of Australia,* July 1996.

3 McCarty, D. J., Zimmet, P., Dalton, A., Segal, L., Welborn, T. A., 1996, *The Rise and Rise of Diabetes in Australia: a review of statistics, trends and costs*, Diabetes Australia, Canberra.

4 Diabetes Australia, 1990, *What is Diabetes?*, information pamphlet; Diabetes Australia 1996, *Facts on diabetes*, fact sheet.

5 AIHW, National Perinatal Statistics Unit, 1997, *Australia's Mothers and Babies 1994*, Perinatal Statistics Series No. 5, National Perinatal Statistics Unit, Sydney.

6 Australian Bureau of Statistics, 1997, *1996 Causes of Death*, Cat. no. 3303.0, ABS, Canberra.

7 Guest, C. S., O'Dea, K., 1992, 'Diabetes in Aborigines and other Australian populations', *Australian Journal of Public Health* vol. 16 No. 4.

8 Australian Bureau of Statistics, 1997, *1995 National Health Survey: Summary Results*, Cat. no. 4368.0, ABS, Canberra.

Education

Education — national summary

PARTICIPATION	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
School students	'000	3 005	3 022	3 031	3 042	3 075	3 099	3 098	3 099	3 109	3 143	3 172
VET students(a)	'000	937	952	932	967	986	1 043	1 121	1 132	1 273	1 355	n.y.a.
Higher education students	'000	394	421	441	485	535	559	576	585	604	634	659
Year 12 apparent retention rate	%	53.1	57.6	60.3	64.0	71.3	77.1	76.6	74.6	72.2	71.3	71.8
Aged 15–24 (of all aged 15–24)(b)												
Participating in any education	%	41.9	43.5	44.9	45.5	47.6	49.1	48.2	48.4	47.9	50.3	53.4
Participating in TAFE	%	8.7	9.6	9.7	9.2	9.6	9.9	9.5	8.6	8.9	9.6	9.9
Participating in higher education	%	8.8	9.2	10.8	12.0	12.7	13.7	13.1	14.9	14.2	15.5	16.4
Women aged 15–24 participating in tertiary education (of all tertiary students aged 15–24)(b)	%	45.1	45.7	43.9	46.4	46.6	47.2	48.2	48.9	46.7	47.7	49.0

ATTAINMENT	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Aged 15–64 with post-school qualifications (of all aged 15–64)(c)	%	n.a.	n.a.	39.2	39.7	40.8	41.7	39.1	39.0	41.0	42.3	40.4
Degree or higher	%	n.a.	n.a.	7.9	8.4	9.0	9.6	10.1	11.5	11.9	12.8	13.6
Skilled vocational qualification	%	n.a.	n.a.	12.7	12.6	12.6	12.7	13.6	12.9	13.5	14.1	10.3
Undergraduate or associate diploma(c)	%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.0	8.6	9.1	8.8	7.7
Basic vocational qualification	%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6.4	6.0	6.4	6.5	8.8
Aged 15–64 and did not complete highest level of secondary school (of all aged 15–64)(c)	%	n.a.	n.a.	39.6	37.4	36.0	34.3	37.3	37.6	36.0	34.7	36.3
Women aged 15–64 with post-school qualifications (of all people aged 15–64 with post-school qualifications)(c)	%	n.a.	n.a.	41.8	42.4	43.0	43.6	42.6	44.0	44.0	44.1	44.6

EDUCATION AND WORK	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Unemployment rate (aged 15–64)												
With degree or higher	%	n.a.	n.a.	2.4	3.2	3.9	4.3	4.8	4.7	3.6	3.8	3.5
With skilled vocational qualification	%	n.a.	n.a.	3.3	4.2	7.1	9.6	8.8	6.3	6.0	5.5	6.1
With undergraduate or associate diploma(c)	%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.9	5.8	5.4	5.2	4.7
With basic vocational qualification	%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.3	8.3	7.8	8.6	8.6
Without post-school qualifications(c)	%	n.a.	n.a.	7.9	8.2	12.0	13.4	13.7	12.6	10.7	10.9	11.2
Apprentices	'000	139.7	153.0	175.5	162.6	139.1	137.0	111.2	113.9	114.6	126.3	121.1

SERVICES	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
School student/teacher ratio	no.	15.1	15.3	15.3	15.3	15.4	15.3	15.3	15.5	15.4	15.4	15.3
Government schools	no.	7 575	7 535	7 513	7 490	7 470	7 448	7 366	7 159	7 122	7 088	7 029
Non-government schools	no.	2 504	2 519	2 523	2 517	2 510	2 509	2 499	2 520	2 526	2 542	2 580

EXPENDITURE	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Govt expenditure on education (of GDP)	%	5.2	4.9	4.6	4.6	5.0	r5.2	5.3	r5.1	5.0	r4.9	n.y.a.
Total expenditure on education (of GDP)	%	5.7	5.4	5.1	5.1	5.6	5.9	r5.9	5.8	5.6	r5.5	n.y.a.

(a) Data prior to 1994 are not strictly comparable to more recent data due to changes in scope and collection methodology. Community education providers were included in the collection in 1995, and private providers were included in 1996.

(b) From 1993 figures refer to participation in courses leading to recognised qualifications only.

(c) Prior to 1993 the undergraduate or associate diploma category included basic vocational qualifications and other certificates/diplomas, some of which are no longer classified as post-school qualifications.

Reference periods: Schools data are at July, except for 1991, 1995, 1996 and 1997 (August). TAFE data comprise enrolments in the calendar year to 31 December. Higher education data are at 31 March from 1989; prior to that the reference date was 30 April. Data on educational attainment, participation rates, unemployment rates and apprentices are at May. Expenditure data are for financial years.

Education — State summary

PARTICIPATION	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
School students	'000	1997	1 074.2	781.4	575.1	247.9	311.1	84.2	36.5	61.2	3 171.6
VET students	'000	1996	487.1	396.3	195.0	99.4	112.6	24.4	21.2	18.6	1 354.6
Higher education students(a)	'000	1997	204.5	179.0	114.6	48.5	65.2	12.8	4.7	20.0	658.8
Year 12 apparent retention rate	%	1997	67.2	76.3	77.9	66.9	71.6	58.6	42.0	91.6	71.8
Aged 15–24 (of all aged 15–24)											
Participating in any education	%	1997	54.2	57.5	49.6	51.7	50.4	46.3	44.4	60.9	53.4
Participating in TAFE	%	1997	9.9	9.6	8.4	10.2	14.3	6.1	*4.6	12.2	9.9
Participating in higher education	%	1997	15.6	19.8	16.4	14.8	12.6	11.4	13.9	20.3	16.4
Women aged 15–24 participating in tertiary education (of all tertiary students aged 15–24)	%	1997	48.8	48.2	50.6	51.3	45.5	53.0	*39.2	56.7	49.0

ATTAINMENT	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Aged 15–64 with post-school qualifications (of all aged 15–64)	%	1997	42.1	39.8	38.2	38.2	41.0	36.0	41.0	50.3	40.4
Degree or higher	%	1997	14.3	14.9	11.0	11.4	12.5	10.8	12.3	26.7	13.6
Skilled vocational qualification	%	1997	9.4	9.7	12.2	9.9	11.8	10.7	13.0	6.9	10.3
Undergraduate or associate diploma	%	1997	7.9	7.9	7.5	7.6	7.5	6.3	8.2	7.5	7.7
Basic vocational qualification	%	1997	10.5	7.3	7.5	9.3	9.1	8.2	7.5	9.2	8.8
Aged 15–64 and did not complete highest level of secondary school (of all people aged 15–64)	%	1997	35.2	36.3	38.0	39.7	35.4	41.7	36.0	19.8	36.3

EDUCATION AND WORK	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Unemployment rate (aged 15–64)											
With degree or higher	%	1997	2.8	4.4	3.8	4.2	3.5	*3.1	*1.7	3.0	3.5
With skilled vocational qualification	%	1997	5.0	7.8	6.6	6.6	3.7	8.5	*1.9	*5.4	6.1
With undergraduate or associate diploma	%	1997	6.0	4.5	3.1	6.0	*3.3	*3.7	*1.3	*6.1	4.7
With basic vocational qualifications	%	1997	7.6	7.2	14.6	8.1	7.0	10.6	*0.0	*7.5	8.6
Without post-school qualifications	%	1997	11.0	11.6	12.1	12.2	8.7	11.7	*9.7	8.1	11.2
Apprentices	'000	1997	38.6	29.2	21.6	9.4	17.3	*1.5	*1.5	1.9	121.1

SERVICES	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
School student/teacher ratio	no.	1997	15.4	15.1	15.5	15.1	15.6	14.7	13.8	15.7	15.3
Government schools	no.	1997	2 186	1 661	1 309	641	767	222	144	99	7 029
Non-government schools	no.	1997	882	684	417	196	264	67	29	41	2 580

(a) State totals exclude students of the Australian Catholic University which has campuses in more than one State.

Reference periods: Schools data are at August. TAFE data comprise enrolments in the calendar year to 31 December. Higher education data are at 31 March. Data on educational attainment, participation rates, unemployment rates and apprentices are at May.

Education — definitions and references

Apprentice — an employed person aged 15–34 who has entered into a legal contract (called an 'indenture' or 'contract of training') with an employer to serve a period of training for the purpose of attaining tradesperson's status in a recognised trade.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

Associate diploma — course lasting from one to two years full time (or equivalent) for those wanting to work in advanced trades, technical, or associate professional occupations.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

Basic vocational qualification — course lasting from one semester to one year full time (or equivalent) providing practical skills and knowledge for those wanting to work at the operative level in various fields. Prior to 1993, basic vocational qualifications were included with undergraduate or associate diplomas.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

Degree or higher — a bachelor degree (including honours), a graduate or post-graduate diploma, master's degree or a doctorate.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

Did not complete highest level of secondary school — a person without post-school qualifications who did not complete the highest level of secondary schooling available at the time they left school.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

Full-time equivalent (FTE) — a measure of the total level of staff resources used. The FTE of a full-time staff member is equal to 1.0. The calculation of FTE for part-time staff is based on the proportion of time worked compared to that worked by full-time staff performing similar duties.
Reference: *Schools, Australia* (Cat. no. 4221.0).

GDP (gross domestic product) — the current price measure which is the sum of all final expenditure, changes in stocks and imports less exports.
Reference: *Expenditure on Education, Australia* (Cat. no. 5510.0).

Government expenditure on education — government final expenditure, personal benefit payments, advances to persons for the Higher Education Contribution Scheme (HECS) and other government expenditure.
Reference: *Expenditure on Education, Australia* (Cat. no. 5510.0).

Government school — one administered by the Department of Education in each State/Territory.
Reference: *Schools, Australia* (Cat. no. 4221.0).

Higher education student — a person for whom there is a full-time, part-time or external enrolment in a course at a higher education institution at the reference date.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0); Department of Employment, Education and Training, *Selected Higher Education Statistics*.

Non-government school — one not administered by a Department of Education but including special schools administered by government authorities other than the State/Territory education departments.
Reference: *Schools, Australia* (Cat. no. 4221.0).

Post-school qualification — a qualification gained by a person after leaving school, including higher degrees, postgraduate diplomas, bachelor degrees, undergraduate and associate diplomas, and skilled and basic qualifications.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

School — an educational institution which provides primary or secondary education on a full-time daily basis, or by radio or correspondence.
Reference: *Schools, Australia* (Cat. no. 4221.0).

School student — a person who is enrolled in a school and active in a course of study, other than pre-school or technical and further education (TAFE) courses.
Reference: *Schools, Australia* (Cat. no. 4221.0).

School student/teacher ratio — number of school students divided by full-time equivalent teachers.
Reference: *Schools, Australia* (Cat. no. 4221.0).

Skilled vocational qualification — course lasting two to four years, and typically involving some on-the-job training, for those wanting to work in a specific vocation, recognised trade or craft that requires a high degree of skill in a range of related activities. Prior to 1993, skilled vocational qualifications referred to trade qualifications only.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0.40.001).

Tertiary education — education provided by any institution offering post-school courses. Includes TAFE, higher education and other post-school systems.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

Total expenditure on education — government expenditure on education plus private final expenditure on education.
Reference: *Expenditure on Education, Australia* (Cat. no. 5510.0).

Undergraduate diploma — course lasting three years full-time (or equivalent) for those wanting to work as professionals or associate professionals.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

Unemployment rate — the number of unemployed persons in any group expressed as a percentage of the labour force in the same group.
Reference: *Transition from Education to Work, Australia* (Cat. no. 6227.0).

VET student — a person for whom there is a full-time or part-time vocational stream enrolment in a TAFE college or a course provided by some private or adult and community education providers in the reference year.
Reference: National Centre for Vocational Education Research, *Australian Vocational Education and Training Statistics: in detail*.

Year 12 apparent retention rate — the percentage of full-time students of a given cohort group who continue from the first year of secondary schooling to Year 12.
Reference: *Schools, Australia* (Cat. no. 4221.0).

Literacy skills

EDUCATIONAL ATTAINMENT

In 1996, almost half of Australians aged 15–74 had poor or very poor literacy skills and could be expected to experience difficulty using many of the printed materials they encounter in everyday life.

The demands on people's literacy skills in everyday life are increasing, and it is recognised that literacy is strongly related to social well being and participation in an increasingly complex society. Adequate literacy skills are of particular importance in enabling Australians to function effectively in a flexible labour force which can respond to changing workplace demands. This is especially so in a climate of growth in service industries and white-collar occupations (see *Australian Social Trends 1997*, Changing industries, changing jobs, pp. 93–98).

Skill levels

Results from the Survey of Aspects of Literacy show that in 1996, about 20% of Australians aged 15–74 had very poor literacy skills (Level 1) and could be expected to experience considerable difficulties in using many of the texts and documents printed in English that they encounter in daily life. A further 28% had poor skills (Level 2) and could be expected to experience some difficulties. About one in three people were at Level 3, with skills that would enable them to cope with many of the literacy demands of daily life and work, but not always at a high level of proficiency. One in six possessed good to very good literacy skills (Level 4/5).

First language spoken

There was a strong relationship between the first language spoken and literacy skill level. This was not surprising, because the survey assessed people's *English* literacy skills.

How literacy was measured

The ABS Survey of Aspects of Literacy focussed on those skills that Australian adults need to understand and use information from material printed in English and encountered in everyday life. In this respect, it differs from surveys of school children, which aim to measure their achievement according to expected standards.

Literacy skills were assessed using tasks which ranged in difficulty and required open-ended answers. The tasks were based on common examples of printed material. Three types of literacy skills were assessed:

Prose literacy is the ability to understand and use information from various kinds of prose texts, including texts from newspapers, magazines and brochures.

Document literacy is the ability to locate and use information contained in materials such as tables, schedules, charts, graphs and maps.

Quantitative literacy is the ability to perform arithmetic operations using numbers contained in printed texts or documents.

Proficiency in each of the three types of literacy was ranked according to the following levels:

Level 1, very poor skills, and could be expected to experience considerable difficulties in using many of the printed materials encountered in daily life and at work.

Level 2, some difficulties in using many of the printed materials encountered in daily life and at work.

Level 3, the ability to cope with a variety of material found in daily life and at work.

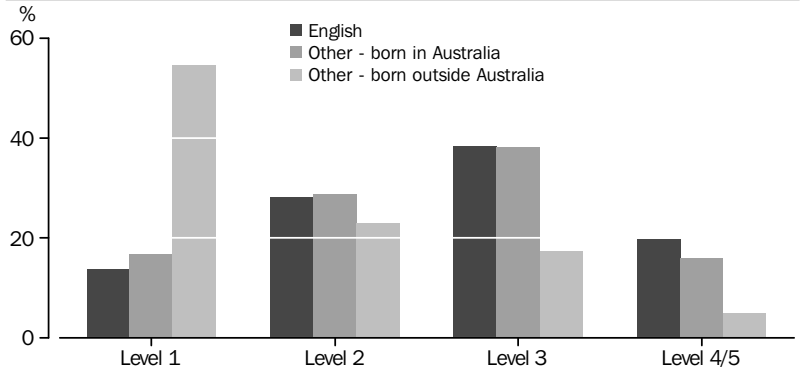
Level 4/5, good to very good literacy skills.

Number and proportion of people at each literacy skill level, 1996

	Prose		*Document*		*Quantitative*	
Skill level	'000	%	'000	%	'000	%
Level 1	2 607.4	19.7	2 580.3	19.5	2 531.8	19.2
Level 2	3 631.9	27.5	3 738.3	28.3	3 590.8	27.2
Level 3	4 668.9	35.3	4 774.2	36.1	4 764.0	36.0
Level 4/5	2 312.5	17.5	2 128.0	16.1	2 334.2	17.7
Total	**13 220.8**	**100.0**	**13 220.8**	**100.0**	**13 220.8**	**100.0**

Source: Aspects of Literacy, Assessed Skill Levels, Australia, 1996 (Cat. no. 4228.0).

Prose literacy skills by first language spoken, 1996



Source: Aspects of Literacy, Assessed Skill Levels, Australia, 1996 (Cat. no. 4228.0).

The survey was administered in English because it is the primary language used in Australia, and poor English literacy skills may result in disadvantage irrespective of a person's level of proficiency in another language.

Of those whose first language was English, 14% were at Level 1 on the prose scale. The skill levels of people whose first language was not English, but who were born in Australia, were similar to those of people whose first language was English (17%). In contrast, of people whose first language was not English and who were born outside Australia, 55% had Level 1 prose skills.

Education

Educational attainment was strongly related to literacy skill level. However, some people with little formal education have good literacy skills, and some with high levels of education have relatively poor literacy skills.

Of people who did not complete the highest level of secondary school available, most (70%) had poor or very poor prose skills. By comparison, 66% of those who completed the highest level of secondary school but obtained no post-school qualification were at Level 3 or higher. This was a higher proportion than those with vocational qualifications (54%). However, many of those with vocational qualifications did not complete the highest level of secondary school.

Relatively large proportions of people with bachelor degrees (44%) or postgraduate qualifications (54%) had good or very good prose literacy skills. However, some with high qualifications were at lower skill levels. For example, 12% of those with postgraduate qualifications had poor or very poor prose literacy skills. Factors such as age and whether English was the first language spoken may have contributed to this.

Among people without high levels of educational attainment, those whose parents had higher levels of education tended to have better literacy skills. However, parents' levels of education appeared to have less effect on literacy skills if a person's own level of educational attainment was high.

Male/female differences

The survey results confirmed a common perception that women are better at 'language' tasks, while men are better at 'numeracy'.

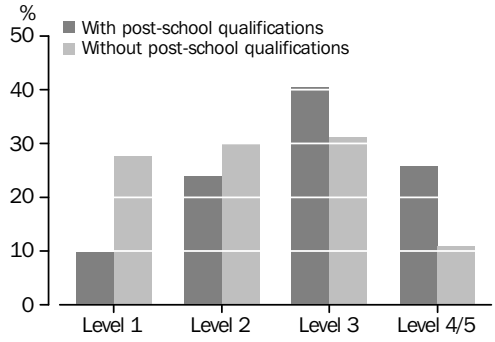
The prose tasks of the literacy survey were more aligned to language ability than either the document or quantitative literacy tasks. A larger proportion of women than men had good or very good prose skills (19% and 16% respectively), and a smaller proportion of women had very poor or poor prose skills (45% compared with 49% of males) .

For document literacy the differences were less pronounced. However, men performed slightly better than women at Level 4/5 (18% and 14% respectively).

The quantitative literacy tasks, while still strongly related to reading comprehension, did involve some degree of numeracy. The proportion of men with good or very good quantitative literacy skills (22%) was larger than the proportion of women (14%).

Older men generally had higher level literacy skills than older women, which may reflect to some extent the traditional differences in educational and labour force opportunities for men and women in older age brackets.

Prose literacy skills by educational attainment, 1996



Source: Unpublished data, Survey of Aspects of Literacy *1996.*

Age

In general, younger people tended to have better literacy skills. The 20–24 year age group had the smallest proportion at Level 1 and was among the age groups with the highest proportions at Level 4/5.

While 15–19 year olds generally performed better than those aged 55 and over, smaller proportions had good or very good skills compared with age groups between 20 and 54. This suggests that the skills of people aged 15–19 may develop further as they complete their secondary and tertiary education and establish themselves in the workforce.

The literacy skills of people aged 45 and over declined markedly with age. This may be related to older people generally having lower levels of education than younger people. Another factor may be their higher rate of disabilities, some of which would affect literacy skills (e.g. poor eyesight).

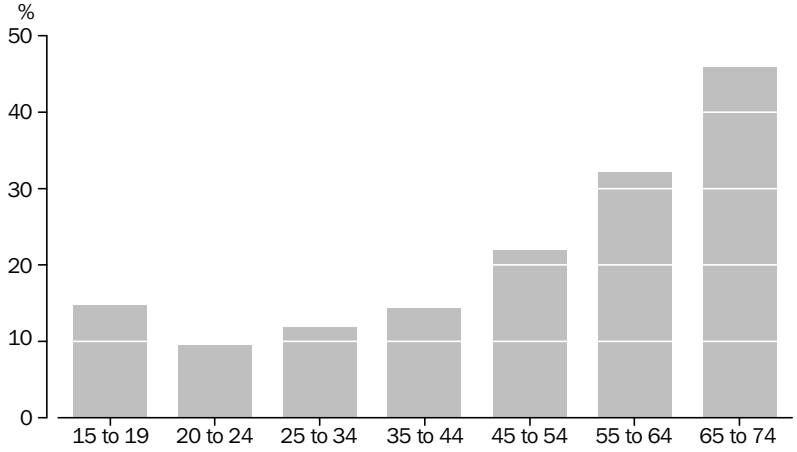
Literacy and labour force status

Employed people tended to have better literacy skills than unemployed people and those not in the labour force. Nevertheless, a substantial proportion of employed people had poor or very poor literacy skills.

Some occupations were characterised by higher proportions of people with good or very good literacy skills than others. For example, about half of all professionals possessed good or very good prose literacy skills, while only a very small proportion had very poor skills. Para-professionals and clerks also tended to have better prose skills than other occupations – relatively small proportions of para-professionals (20%) and clerks (27%) had poor or very poor skills. In contrast, two thirds of plant and machine operators and drivers and 59% of labourers and related workers had poor or very poor prose skills. Industries such as construction; agriculture, forestry and fishing; and manufacturing, in which there were larger proportions of people in these occupations, had poor or very poor prose literacy skills.

The proportion of unemployed people with very poor prose skills (30%) was considerably higher than that of employed people (12%). For unemployed people, literacy skill levels were also linked to duration of unemployment. Over half of people who had been unemployed for two years or more had very poor literacy skills, compared with about one quarter of those who had been unemployed for less than one year.

Proportion at prose level 1, by age, 1996



Source: Aspects of Literacy, Assessed Skill Levels, Australia, 1996 (Cat. no. 4228.0).

Literacy and activities in daily life

People with high levels of literacy undertook activities requiring literacy skills more frequently than people with lower levels.

In the workplace, occupations in which relatively large proportions of people performed literacy activities frequently were also those with the largest proportions of people at Level 4/5.

In everyday life, people with high levels of literacy were almost twice as likely to regularly read books, visit public libraries and prepare written material than people with poor literacy skills.

Needing help with literacy-related activities

In general, most people who reported needing help with various literacy-related tasks were at Level 1, that is, they had very poor skills. About 19% of people at Level 1 needed help often with reading or using information from government agencies, businesses and other institutions; 18% needed help often with writing notes or letters; and 17% needed help often with filling out forms.

However, the results of the literacy survey also indicated that there are certain types of printed material with which people at all skill levels sometimes have difficulty. For example, small proportions of people at Level 2 (12%), Level 3 (7%) and Level 4/5 (3%) reported needing help sometimes with reading information from government agencies,

businesses or other institutions. This may indicate that this type of material tends to be more demanding.

How people rated their own skills

Prior to their objective assessments, respondents were asked to rate their own reading, writing and basic mathematical skills for the needs of daily life. People's self-assessment of their skills is important, because someone who is assessed as having poor skills, but perceives their skills to be good, may be less likely to undertake training to improve those skills.

In contrast to the objective assessment of prose, document and quantitative literacy skills, people's self-ratings of their skills may be affected by the literacy demands of their daily lives. For example, someone whose daily life typically required them to perform only a few basic literacy-related tasks might rate their skills better 'for the needs of daily life' than someone whose daily life required them to perform more complex tasks, even if they were assessed as being at the same literacy level.

Just 28% of those who rated their reading skills as excellent for the needs of daily life were assessed as having good or very good prose literacy skills, while over one quarter had poor or very poor literacy skills. However, of those who rated their reading skills as poor for the needs of daily life, the vast majority (92%) did have very poor skills.

Of those who rated their mathematical skills as excellent for the needs of daily life, one third had good or very good quantitative literacy skills, but a substantial proportion (23%) were found to have poor or very poor quantitative literacy skills (levels 1 and 2).

International comparisons

By conducting the Survey of Aspects of Literacy, Australia became part of the International Adult Literacy Survey (IALS) coordinated by the Organisation for Economic Cooperation and Development and Statistics Canada. This international study involves many countries undertaking similar surveys over a four-year period. The table shows the results for prose literacy for countries who have participated in the IALS to date. While Australia included people aged 15–74 in the survey, most countries included people aged 16–65, and therefore the following table is restricted to people aged 16–65 to enable valid comparisons across countries. Because of this, the results for Australia shown in the following table will differ from results given elsewhere in this article.

A comparison of Australia's results with those of other countries shows that Australia's prose literacy performance was broadly similar to Canada's (although in Canada slightly more people were at Level 4/5) and New Zealand's. In the United Kingdom there were more people at Level 1 than Australia, while in the United States of America there were more people at both the lowest level (Level 1) and the highest level (Level 4/5).

Persons aged 16–65 years, 1994–95

Country	*Level 1* %	*Level 2* %	*Level 3* %	*Level 4/5* %
Australia	**17**	**27**	**37**	**19**
Belgium (Flanders)	18	28	39	14
Canada(a)	17	26	35	23
Germany	14	34	38	13
Ireland	23	30	34	14
Netherlands	11	30	44	15
New Zealand	18	27	35	19
Poland	43	35	20	3
Sweden	8	20	40	32
Switzerland (French)	18	34	39	10
Switzerland (German)	19	36	36	9
United Kingdom	22	30	31	17
United States of America	21	26	32	21

(a) Combined results for English and French languages.

Source: OECD, *International Adult Literacy Survey, 1994–1995*.

Gender differences in educational achievement

EDUCATIONAL ATTAINMENT

Levels of participation and achievement in education are generally increasing at a faster rate for girls than for boys – in schools, in vocational education and training and in universities.

Before the 1980s boys had more favourable outcomes than girls from Australia's educational institutions. They enjoyed superior Year 12 results and greater participation in, and graduation from, post-compulsory education. Traditionally, girls have achieved higher results in English and humanities-related subjects and boys in science-related subjects. However, there have been major changes in these areas over the last 10–15 years.

Over the last decade girls have extended their lead in the subjects they had previously dominated, and have begun to perform better than boys in some of the areas of mathematics and science. There is now a growing concern over the significant shift in educational achievement of boys relative to girls and a recognition of the need for programs to enhance the participation and performance of boys as well as girls.

Literacy in schools

Literacy comprises both reading and writing tasks. In a 1980 Australian Education Council study of 10 year olds, girls outperformed boys on all literacy tasks tested.[1] These outcomes were still evident in a similar survey, which included children of the same age, conducted by Australian Council for Education Research (ACER) in 1996. In this national survey of Year 3 and Year 5 students, girls gained consistently higher marks than boys.[2] The greatest difference between boys and girls was for writing, with higher median estimates for Year 5 girls (382) than for Year 5 boys (345). The relative difference was similar for the Year 3 group. These differences were still apparent in older children. ACER analysed results, on items common to both tests, from studies of 14 year olds conducted in 1975 and 1995. These results showed that boys obtained lower scores than girls in reading comprehension tests, with the gap widening slightly from two percentage points to three. In 1975, the mean score was 65% for boys and 67% for girls. By 1995, the percentages were 63% and 66% respectively.[3]

Literacy levels in school students, 1996

	Males	*Females*
	Scores	Scores
Writing(a)		
Year 3	260	308
Year 5	345	382
Reading(a)		
Year 3	286	311
Year 5	373	399

(a) Median scores (where students' performance is largely in the range 0 to 600 and Year 3 mean is set at 300 and SD at 100) in 1996.

Source: ACER, *Mapping Literacy Achievement, 1997*.

Educational achievement of boys and girls

This review uses data from a number of different sources in order to compare educational outcomes of boys and girls. The main sources of data used were obtained from the Australian Bureau of Statistics, Australian Council for Educational Research and NSW Board of Studies.

Education participation rate is the estimate of persons attending an educational institution in any group expressed as a percentage of the civilian population in the same group.

Post-compulsory schooling is participation in a recognised educational course by people aged 15 or over in all States and Territories except Tasmania where school is compulsory to age 16.

Tertiary entrance (TE) score is an aggregate of the highest set of marks derivable from ten Year 12 units. As a unit is worth 50 marks, each aggregate has a maximum possible value of 500.

Numeracy in schools

Direct evidence as to whether boys perform better at mathematics than girls in Australian schools is limited and is compounded by the fact that girls have tended to prefer less intensive mathematics courses.

A study of trends in participation and performance in NSW Higher School Certificate courses between 1982 and 1994 found that girls generally preferred the less difficult courses (such as Mathematics in Society and Mathematics in Practice), while the most difficult courses (such as 3 unit and 4 unit Mathematics) were favoured by boys. Nonetheless, it is apparent that the willingness of girls to participate in more difficult mathematics courses has been

Educational participation and graduations, 1996

	Males	*Females*
	%	%
Secondary school participation rate of 15–17 year olds	79	85
Year 12 apparent retention rate	66	77
Tertiary(a) participation rate of 17–24 year olds	32	30
	'000	'000
Higher education graduates	63	82

(a) Participation in TAFE and higher education.

Source: Participation in Education, Australia (Cat. no. 6272.0); *Schools, Australia* (Cat. no. 4221.0); *Transition from Education to Work* (Cat. no. 6227.0); DEETYA, *Selected Higher Education Student Statistics,*

increasing. Over the period the proportion of girls (of all students) participating in the 3 unit mathematics courses increased from 36% to 46% and in 4 unit mathematics from 20% to 35%.[4]

While the above indicates that boys are still more likely to study higher level mathematics than girls, various recent studies of test results of high school students completing the same tests, have generally found little difference between the results obtained by girls and boys, and that where differences (albeit minor) were observed they have not always favoured boys.[3,4,5]

Post-compulsory schooling outcomes

There are a number of measures on which the educational outcomes of boys and girls, after the compulsory years of schooling, can be compared. These include Year 12 retention rates and educational participation rates for 15–17 year olds; HSC or Tertiary Entrance (TE) scores in Year 12; literacy levels for 15–19 year olds; and TAFE and higher education participation and pass rates for 17–24 year olds.

Year 12 apparent retention rates

Apparent retention rates to Year 12 were higher in 1996 (66% for boys and 77% for girls) than in 1986 (46% and 52% respectively), with a peak in 1992. In 1986 the Year 12 retention rate for girls was six percentage points higher than that for boys.

School and TAFE participation rates(a)

a) Combined rates of 15–17 year olds.

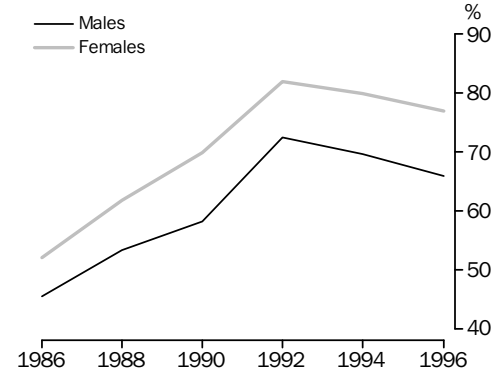
Source: Transition from Education to Work, Australia (Cat. no. 6227.0).

By 1996, the difference had widened, with the rate for girls 11 percentage points above that for boys.

School and TAFE participation

Year 12 retention rates do not provide the whole story on the educational participation of people aged less than 18 years. Staying on at school is not the only option for students after they complete Year 10. Some start an apprenticeship or commence studies at TAFE. Boys are more likely than girls to make this choice. For this reason the difference between their respective post-compulsory education participation rates is not as large as their Year 12 retention rates would suggest. When the participation rates of young people aged 15–17 in school and TAFE are combined, participation by boys was 83% in 1996 compared with 86% for girls. The participation rate by both sexes has increased since 1986 (74% for boys and 71% for girls).

Year 12 apparent retention rates



Source: Schools Australia (Cat. no. 4221.0).

HSC and TE scores

Students' successful completion of Year 12, as measured by their TE score, is crucial to their chances of gaining entry to the course of their choice at a university. Attainment of a university degree has been associated with greater employment opportunities, higher salaries and shorter durations of unemployment (see *Australian Social Trends 1997,* Education and employment, pp. 84–87).

Comparisons at the national level have been difficult due to the different assessment and reporting systems used in each State. However, a national study in 1993 analysed data from up to five 1991 final year high school subjects in each State.[5]

The conclusions were that girls achieved superior results in English, Geography and Economics, but results in Chemistry were mixed. In Mathematics there were more boys achieving at the highest score levels.

Changes over time were also assessed in a study of TE scores in NSW from 1981 to 1994.[4] Overall, the study found that the mean TE score for girls was slightly higher than boys in 1981 (0.6 marks) and this difference gradually increased to 4.4 marks in 1991. There was a large increase in 1992 to 12.2 marks and by 1996 the difference in mean TE scores was 19.4 marks.

The increasing gap in their mean TE scores was not just because girls improved in non-traditional subjects, but because their relative performance improved in many different courses.

Boys still dominated at the higher TE score levels but their representation decreased and there is now a greater proportion of boys at the lower level. In NSW in 1994, boys represented 53% of Year 12 students with a TE score between 440 to 500 (the highest level), compared with 60% in 1981. During the same period girls dominated in the TE scores from 220 to 439, while boys dominated in the scores below 220.

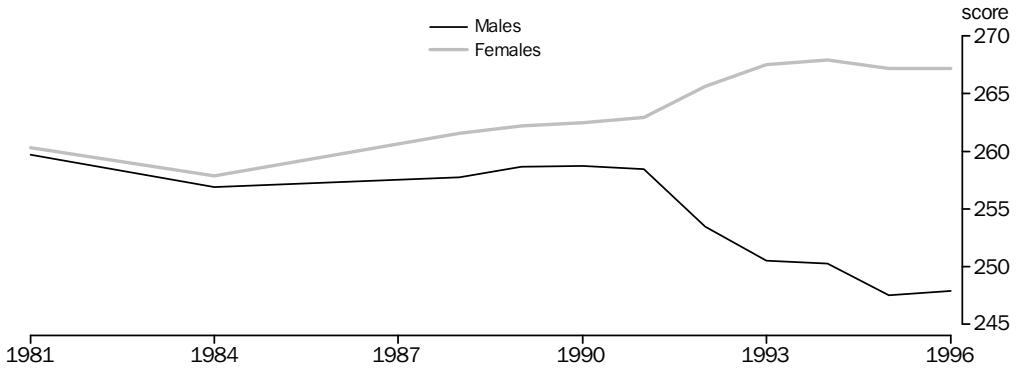
Boys comprised 64% of the top 500 students in the HSC in 1988, but by 1993 this had decreased to 54%.[4] By 1995 there were half as many boys (57) placed first in NSW in individual courses as girls (122).[6]

Several explanations have been suggested to account for the overall changes in HSC results. These include: changes to the HSC curriculum, assessment or scaling processes; increased retention rates; changes to TE score calculations; and the impact of different patterns of subject choices.[6] Some of these changes may have favoured girls' approaches to learning, their preferred mode of assessment and their more broadly based subject choices. Analysis of many of these factors suggests that, while they may account for some of the current difference, as yet there is no clear explanation why the relative performance of boys in the HSC has been falling over recent years.

Literacy levels of young adults

Literacy skills influence students' ability to participate in post-compulsory education, particularly at the higher levels (see *Australian Social Trends 1998,* Literacy skills, pp. 77–80).

NSW TE mean score(a)(b)



(a) Data for 1988 and 1989 excludes TAFE and private study students.
(b) Data for 1990 is not available and has been extrapolated from 1988 and 1991 data.

Source: R. MacCann, NSW Board of Studies, 1995, *A longitudinal study of sex differences at the higher school certificate and school certificate: trends over the last decade*; and unpublished data, NSW Board of Studies.

In the 1996 ABS Survey of Aspects of Literacy, three types of literacy were assessed: prose, document and quantitative literacy.

As was the case for other age groups, results for 15–19 year olds from the prose and quantitative literacy tasks supported the commonly held view that girls possess higher skill levels in language tasks while boys perform better in quantitative tasks. Interestingly, the greatest differences occurred at opposite ends of the skill spectrum for these two tasks. For prose literacy the proportion of boys with very poor skills (Level 1) was double that of girls (20% compared with 10% respectively). For quantitative literacy, however, the proportion of boys with good to very good skills (Level 4/5) was almost double that of girls (15% and 8% respectively). For document literacy the results were less clear cut. There were more boys than girls at both ends of the skill spectrum, whereas girls were concentrated in the middle skill levels.

Types of literacy

Prose literacy is the ability to understand and use information from various kinds of prose texts, including texts from newspapers, magazines and brochures.

Document literacy is the ability to locate and use information contained in materials such as tables, schedules, charts, graphs and maps.

Quantitative literacy is the ability to perform arithmetic operations using numbers contained in printed texts or documents.

TAFE participation and pass rates

A further area of comparison of gender differences in educational achievement is participation and success in further education, such as TAFE and university.

Males aged 17–24 were more likely than females in this age group to enrol in a TAFE course, whereas the reverse was true for university courses. The participation rates in TAFE were only slightly higher in 1996 (15% for males and 9% for females) than in 1988 (13% and 8% respectively). In 1996, males aged under 25 years had lower pass rates than females for most fields of TAFE study, including Mathematics and Computing. Males had higher rates for Engineering and Built Environment. However, given the high level of participation by males in Engineering and Built Environment the average pass rate for males and females was similar (84% and 85% respectively of subject modules attempted were passed).[7]

Higher education participation, pass rates and graduation

Both males and females in the 17–24 year age group had steady increases in their university participation rates from 1988 (11.7% each for males and for females) to 1996 (17.3% and 20.9% respectively) (see *Australian Social Trends 1994,* Gender differences in higher education, pp. 90–93). The rates for female students have increased more than those for males and have been higher than those for males since 1989.

Females had greater success at their studies, passing a greater proportion of their units than males in almost all subjects, even those in which there were low levels of female

Literacy skill level of persons aged 15–19, 1996

	Level 1(a)		*Level 2*		*Level 3*		*Level 4/5*		***Total***
Literacy scales	'000	%	'000	%	'000	%	'000	%	**%**
Prose									
Male	121.8	19.6	184.5	29.6	232.3	37.3	83.7	13.4	**100.0**
Female	57.6	9.7	184.5	31.1	254.0	42.8	97.2	16.4	**100.0**
Document									
Male	82.2	13.2	196.8	31.6	246.3	39.6	97.0	15.6	**100.0**
Female	63.6	10.7	201.6	34.0	247.9	41.8	80.1	13.5	**100.0**
Quantitative									
Male	97.7	15.7	204.8	32.9	226.3	36.4	93.5	15.0	**100.0**
Female	101.7	17.1	221.9	37.4	220.7	37.2	49.1	8.3	**100.0**

(a) Level 1 is the lowest level, and level 4/5 is the highest.

Source: Aspects of Literacy: Assessed Skill Levels, Australia (Cat. no. 4228.0).

Participation rates in tertiary institutions(a)

	1988	*1990*	*1992*	*1994*	*1996*
	%	%	%	%	%
TAFE					
Males	13.4	12.9	14.8	11.7	14.8
Females	8.5	7.8	8.4	8.4	9.1
Higher education					
Males	11.7	14.1	15.1	16.9	17.3
Females	11.7	15.5	18.5	19.7	20.9

(a) For males and females aged 17–24.

Source: Transition from Education to Work, Australia (Cat. no. 6227.0).

participation. In 1993, for those aged under 25, females passed 89% of their units and males passed 83%. Females of all ages also passed a higher proportion of their units than males of all ages in each level of study and, with the exception of Veterinary science, each field of study. For example, females passed 88% of their Engineering units and 85% of their Science units, which included Mathematics. Males passed 84% and 79% respectively.[8]

The number of higher education graduates of each sex reflects the greater number of females entering universities since 1989. In 1996, 63,000 males and 82,000 females graduated from universities.[9]

Endnotes

1 Bourke, S. F., Mills, J. M., Stanyon, J. & Holzer, F. 1981, *Performance in Literacy and Numeracy: 1980,* Australian Education Council, Canberra.

2 Masters, G. N. & Forster, M. 1997, *Mapping Literacy Achievement,* Australian Council for Educational Research, Melbourne.

3 Marks, G. & Ainley, J. 1997, *Reading comprehension and numeracy among junior secondary school students in Australia,* Australian Council for Educational Research, Melbourne.

4 MacCann, R. 1995*, A longitudinal study of sex differences at the HSC and SC: trends over the last decade,* NSW Board of Studies, Nth Sydney.

5 Senior Secondary Assessment Board of South Australia, 1993, *Gender equity in senior secondary school assessment (ESSSA) project* cited in R. MacCann, 1995*, A longitudinal study of sex differences at the HSC and SC: trends over the last decade,* NSW Board of Studies, Nth Sydney.

6 NSW Board of Studies 1996, *The report of the Gender Project Steering Committee,* NSW Board of Studies, Nth Sydney.

7 National Centre for Vocational Education Research Ltd, 1997, *Australian Vocational Education and Training Statistics 1996: in detail,* (unpublished data), NCVER Ltd, Leabrook S.A.

8 Department of Employment, Education and Training, *Higher Education Series, Report no. 24,* October 1995, DEET,Canberra.

9 Department of Employment, Education, Training and Youth Affairs, 1997, *Selected Higher Education Student Statistics 1997,* DEETYA, Canberra.

Expenditure on formal education

EXPENDITURE

Over the decade to 1995–96, total expenditure on education increased substantially. Over that time there has been a shift in funding from schools to tertiary education and an increase in funding by private individuals and organisations for public and private sector education.

Government expenditure, at both the Commonwealth and State level, makes up a substantial part of total resource allocation to education. Underlining the importance which Australians place on education, many families and individuals also devote considerable proportions of their budgets to education expenses.

Access to educational opportunities, and the manner in which available resources are distributed to the different types and levels of education and training, generate considerable discussion. The level of resources available, the distribution of government funds to government and non-government schools, and the balance between private and government expenditure, has a direct bearing on the degree to which groups have access to the range of education and training available.

In Australia, substantial funding is provided by the Commonwealth to the States and Territories for education programs. This generates some tension over their respective roles, particularly in the schools and Vocational Educational and Training (VET) sectors, as these come under State/Territory control.

Education expenditure

Total outlays comprise capital and current outlays by the Commonwealth, State/Territory and local governments, and the private sector.

Capital outlays comprise: expenditure on assets such as school buildings and land, furniture and fittings, and other capital assets.

Current outlays comprise net current expenditure on goods and services (e.g. expenditure which does not result in the creation of fixed or intangible assets such as buildings or equipment), plus current transfer payments (e.g. interest payments, subsidies, personal benefit payments and current grants).

Own source outlays comprise expenditure on education by the level of government specified (or by the private sector) less grants received from other levels of government (most commonly the Commonwealth).

Operating costs comprise expenditure on direct delivery of education services, administration and general services, and property, student, delivery support and other services.

This review draws upon data from a variety of sources. Some of this data relates to the academic year, while some relates to the financial year.

Education expenditure

	1985–86	*1987–88*	*1989–90*	*1991–92*	*1993–94*	*1995–96*
Outlays on education(a)	$m	$m	$m	$m	$m	$m
Government outlays	*15 797*	*16 118*	*17 238*	*18 589*	*19 690*	*20 551*
Commonwealth	6 119	6 527	6 675	7 724	8 797	9 240
State/Territory(b)(c)	9 678	9 591	10 563	10 865	10 893	11 311
Private outlays(c)	*1 141*	*1 550*	*1 853*	*2 240*	*2 416*	*2 532*
Total outlays on education	**16 938**	**17 668**	**19 091**	**20 829**	**22 106**	**23 082**
Proportion of GDP(d)	%	%	%	%	%	%
Government	5.4	4.8	4.7	5.2	5.1	4.9
Private(c)	0.4	0.5	0.5	0.6	0.6	0.6
Total outlays on education	**5.7**	**5.3**	**5.2**	**5.9**	**5.8**	**5.5**

(a) Expenditure expressed in 1989–90 dollar values.
(b) Total includes local government outlays.
(c) Outlays financed from own resources.
(d) Expenditure and GDP at current prices for each financial year.

Source: Expenditure on Education, Australia (Cat. no. 5510.0); and unpublished data, Government Finance Statistics collection.

Source of funding by sector

The three sectors of education – schools, VET and higher education – each receive funding from a number of different sources.

Government schools are almost wholly funded by government, whereas non-government schools receive funding from various sources. State and Territory Governments provided 74% of government funding in 1995–96. The Commonwealth Government provided supplementary funding through a variety of programs to both government and non-government schools (26% of government funding). In addition, the Catholic and independent school systems generate private funds for their schools, mainly through fees and charges but also through church and parish grants and private donations.[1] In 1996, 45% of the income of these schools came from private sources.[2]

The VET sector receives most of its funds from the State and Territory Governments (56% of total income in 1996) although the Commonwealth Government provides the majority of funds for capital works as well as financial support for VET running costs (27% of total income in 1996).[3] The private sector also provides funding through service fees (9%), individual student fees (4%) and the provision of ancillary trading services (4%).[3]

The higher education sector is largely funded by grants from the Commonwealth Government (57% of total income in 1996), contributions from students under the Higher Education Contribution Scheme (12%) and fees from fee-paying overseas and postgraduate students, and other charges (13%). This sector also receives some funds from consultancies, research contracts and other sources (13%), from investments (4%) and from the State and Territory Governments (1.4%).[4]

Higher Education Contribution Scheme

The Higher Education Contribution Scheme (HECS) was introduced in 1989. Students contribute to the Higher Education Trust Fund either first through up-front payments paid directly to the institutions at commencement of each year's study, or later through voluntary contributions and deferred payments, both of which are paid through the taxation system. Total payments by students have risen from $100 million in 1989–90[6] to $419 million in 1996[7] .

Since the introduction of HECS, the amount charged and the rate of repayment through the tax system have varied. Since 1997, instead of a standard charge for all courses ($2,478 for continuing students in 1997), the fees charged to new students differ according to the cost of, and demand for, the course studied[8]. In 1997 fees were $3,300 for arts or humanities subjects (including nursing and education), $4,700 for computing or business subjects (including mathematics, engineering and most sciences), or $5,500 for law or medicine (including dentistry and veterinary science). Repayment rates and thresholds through the tax system were also increased from 1997–98, starting at 3% of incomes in the range of $20,701–$21,830 to 6% of incomes $37,263 and above.[7]

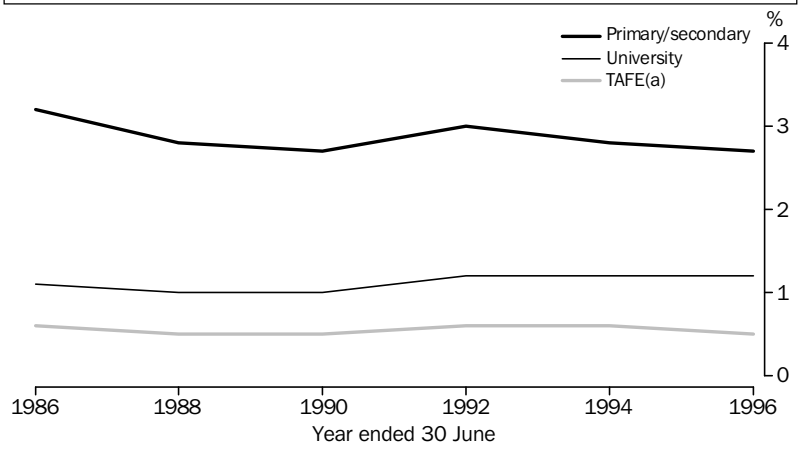
In its first full year of operation (1989–90) $435 million was paid to higher education institutions through the Higher Education Trust Fund[6]. By 1996, payments to the Trust Fund totalled $764 million[7]. The Commonwealth Government contributes part of its operating grants for higher education institutions to the Trust Fund. The amount paid represents the cost of students who elect to defer payments, and the discounts provided for up-front payments.[8] The dollar value of the Commonwealth's contribution to higher education funding is expected to decline from 1998 with expected increases in HECS revenue from students and proposed reductions to operating grants.[9]

Government and private expenditure

Between 1985–86 and 1995–96 total outlays on education (after adjustment to 1989–90 values) rose 36%. However, prices in the education sector increased less than prices in the rest of the economy. This was a factor in the overall decline of education expenditure as a proportion of Gross Domestic Product (GDP)[5] from 5.7% to 5.5% (as expressed in current prices each year). While most education expenditure is incurred by governments, over the last few years an increased proportion has been taken over by the private sector. Government share of total outlays on education during this period fell as a percentage of GDP from 5.4% to 4.9%, while private outlays increased from 0.4% to 0.6% of GDP.

Although the government sector contributed the vast majority (89%) of total outlays on education, between 1985–86 and 1995–96 contributions from private sources increased at a greater rate than public sector contributions. The increased private sector growth (122%) came mainly from private school fees, due to the drift of students to private schools; and from the growth in overseas university student numbers.[4] Expenditure on schooling by private households varied according to the type of school attended, with higher costs incurred

Government outlays on education as a proportion of GDP



(a) Comprises courses offered by Technical and Further Education (TAFE) institutions.

Source: Expenditure on Education (Cat. no. 5510.0); and unpublished data, Government Finance Statistics collection.

by pupils at non-government schools (see *Australian Social Trends 1997,* Government and non-government schools, pp. 69–74).

In contrast to private source contributions, total government outlays on education rose 30% between 1985–86 and 1995–96 (after adjustment to 1989–90 values). The main growth was in the Commonwealth sector (up 51%), reflecting increased grants to the States and Territories, mainly for tertiary education. Outlays from State/Territory Governments and local governments from their own resources rose by 17%.

The largest proportion of total government outlays on education went to primary and secondary school education. In 1995–96, this comprised 55%. During the same period, higher education attracted 24%, and vocational education and training provided through Technical and Further Education (TAFE) institutions 11% of government outlays on education. The balance was spent on pre-schools, other special education, and student transportation.

However, the distribution of government outlays has shifted over the 10 year period, with an increased proportion allocated to tertiary education and less to primary and secondary school education. Over this period, outlays on tertiary education rose 50% (58% for universities and 38% for TAFE) (after adjustment to 1989–90 values), while the corresponding rise for primary and secondary education was 19%. The substantial rise in funding for universities occurred because of the large increases in Commonwealth-funded university education student places between 1988 and 1995.

How is the money spent?

The majority of funds spent by the government and private sectors on education are used to pay teaching and non-teaching staff salaries in schools, TAFE and universities. In addition, funds are required for support services for students and staff, research activities in universities, cleaning and maintenance of buildings and general administrative costs. Money is also spent on providing new buildings and equipment or upgrading existing facilities.

Government school expenditure

In 1995–96, government school expenditure totalled $12,084 million. In that year, 52% of expenditure by government schools was on teaching staff salaries, and a further 11% on non-teaching staff salaries. The remaining expenditure was on non-salary costs which included other operating expenditure (the costs of goods, services and cleaning) and the provision of buildings and grounds.

Per student school expenditure in 1995–96 was $5,063. It was higher in secondary schools ($6,110) than in primary schools ($4,410) reflecting the greater costs in secondary schools.

Government and non-government school expenditure

Government expenditure data for primary and secondary schools do not represent total government expenditure on school level education. They exclude expenditure on:

- Commonwealth direct payments to parents and/or students;
- pre-schools and TAFE establishments;
- payroll tax, long service leave provisions, depreciation and sinking fund payments, interest on Commonwealth loans and teaching housing;
- student hostel provisions; and
- funds raised by schools, school councils or community organisations.

Non-government expenditure data for primary and secondary schools do not represent total expenditure on school education. They exclude expenditure on:

- Commonwealth and State direct payments to parents and/or students;
- salaries of staff and operating expenses of the boarding house components of schools.

Educational expenditure by sector, 1996

	Teaching staff salaries	*Non-teaching staff salaries*	*Total salary costs*	*Other costs(a)*	***Total***
	%	%	%	%	**$m**
Primary/secondary					
Government(b)	52.5	10.8	(c)70.5	29.5	**12 084.0**
Non-government	49.8	10.5	(d)67.2	32.8	**5 221.4**
VET	n.a.	n.a.	60.7	39.3	**3 917.0**
Higher education	34.4	29.1	63.5	36.5	**7 590.3**

(a) Includes provision of buildings and grounds and other operating expenditure.
(b) 1995–96 expenditure.
(c) Superannuation for both teaching and non-teaching staff included in total salary costs only.
(d) Superannuation and long service leave for both teaching and non-teaching staff included in total salary costs only.

Source: MCEETYA, '*Summary 1995–96 Finance Statistics*' from government section of National Schools Statistics Collection, *1996;* NCVER, *Australian VET Statistics: financial data, 1996*; DEETYA, *Selected Higher Education Finance Statistics, 1996.*

Non-government school expenditure

In 1996, non-government school expenditure totalled $5,221 million. As with government schools, the salaries of teachers and other staff was a major category of expenditure (50% and 10% respectively).

Expenditure per student by Catholic schools was 79% of that for independent schools at the primary level and 70% at the secondary level.

Per student expenditure was $7,353 in independent schools, and $4,785 in Catholic schools. The Commonwealth and State/Territory Governments funded some of this expenditure ($2,377 per student for independent schools and $3,344 per student for Catholic schools).

Vocational Education and Training

In 1996, VET expenditure totalled $3,917 million, excluding those services which were financed solely by private providers.[3] Salaries accounted for 61% of total costs.

There was a significant increase between 1995 (1.8%) and 1996 (3.1%) in total payments to non-TAFE providers for VET, such as commercial training providers. The proportions ranged from 6% in Northern Territory down to 1.3% in Tasmania. Provision of supplies and services absorbed a further 23% of VET expenditure.

The Commonwealth Government provides funding for apprenticeships and traineeships, both as part of its VET in Schools program and its Support for New Apprenticeships program[10] (see *Australian Social Trends 1998,* Workplace training, pp. 91–95).

Higher education

In 1996, expenditure of general, recurrent and research funds by higher education institutions in Australia amounted to $7,590 million.[4] Of that amount, 34% was accounted for by salary and salary-related expenses for academic staff, and a further 29% for non-academic staff. Depreciation and other expenditure accounted for the final 37%.

In terms of activities undertaken, more than half of total expenditure in 1996 was devoted to academic activities and research (60%). Libraries, student, public and other academic support services accounted for 16% of expenditure, with buildings and grounds accounting for 6%. Expenses relating to administration and other general institution services, plus superannuation costs, made up the balance (18%).

The Commonwealth Government funds a major proportion of research work undertaken by universities. Expenditure on research includes funds spent on large-scale projects involving several institutions, funds allocated to institutions for post-graduate research students, research projects by groups of staff or students, and research by individuals.

In 1997, the Commonwealth Government provided $623.5 million to universities for research activities. Just over one half (52%) was allocated to institutions, 27% went to specific projects and the remainder to individual researchers.[9]

Endnotes

1 Ministerial Council on Education, Employment, Training and Youth Affairs, 1997, *National Report on Schooling in Australia 1995,* Curriculum Corporation, Carlton, Victoria.

2 Department of Employment, Education, Training and Youth Affairs, 1998, *Non-government Schools Financial Questionnaire Collection 1996,* DEETYA, Canberra.

3 National Centre for Vocational Education Research, 1997, *Australian Vocational Education and Training Statistics 1996,* NCVER, Leabrook, S.A.

4 Department of Employment, Education, Training and Youth Affairs, 1997, *Selected Higher Education Finance Statistics 1996,* AGPS, Canberra.

5 National Board of Employment, Education and Training, 1992, *Education, Training and Employment Programs, Australia, 1970–2001: funding and participation,* Commissioned report no. 11, AGPS, Canberra.

6 Commonwealth Treasury, 1990, *Budget Statements, 1990–91, Budget paper no. 1,* AGPS, Canberra.

7 Higher Education Council, 1997, *Eleventh Report to the National Board of Employment, Education and Training on the Operation of Section 14 of the Higher Education Funding Act 1988 and the Higher Education Contribution Scheme,* AGPS, Canberra.

8 Commonwealth Treasury, 1997, *Budget Strategy and Outlook 1997–98*, *Budget paper no. 1,* AGPS, Canberra.

9 Department of Employment, Education, Training and Youth Affairs, 1996, *Higher Education Funding Report for the 1997–99 Triennium,* AGPS, Canberra.

10 Department of Employment, Education, Training and Youth Affairs, 1997, *Portfolio Budget Statements 1997–98: Budget-related paper no. 1.4, AGPS, Canberra.*

Workplace training

EDUCATION AND WORK

Between 1993 and 1996, employers decreased training expenditure per employee and the number of training hours provided for their employees.

Following expansion in the higher education sector in the late 1980s and early 1990s, Commonwealth Government attention has recently turned to the Vocational Education and Training (VET) sector in order to address a perceived lack of skilled labour in the Australian workforce. This change in focus has also been fuelled by high levels of unemployment, increased competition for jobs, industry restructuring and technological improvements requiring upgrading of workplace skills. These factors have all had an impact on the need and demand for VET.

To guide the direction of growth and change in the VET sector, the Australian National Training Authority (ANTA) was established in 1992 to develop and implement a national vocational education system to strengthen the quality of VET across Australia. ANTA, along with Industry Training Advisory Boards (ITABs) which identify training needs and priorities in each industry, is responsible for defining the financial needs, course design and future requirements in the VET sector.

Traditionally, Technical and Further Education (TAFE) institutions have provided the majority of VET courses. However, the changing nature of the sector has seen an increase in the number of higher education institutions, schools, private organisations and employers providing VET. Employers were further encouraged to provide VET in the workplace by the introduction of the Training Guarantee in 1990. This guarantee required most employers to spend a minimum percentage of their payroll on training their employees (see *Australian Social Trends 1995*, Employee training, pp. 81–84).

Workplace training

Vocational Education and Training (VET) includes all education and training (other than degree courses at higher education institutions), undertaken after compulsory school years are completed, specifically directed towards the acquisition of work-related skills.

Workplace training refers to VET provided by employers for their employees. This includes VET provided under training contracts for apprentices and trainees on entry to the workforce. Workplace training can be either structured or unstructured.

Structured training relates to all training activities that have a predetermined plan and format designed to develop employment-related skills and competencies.

Unstructured training relates to informal training that does not have a specified content or predetermined plan. It is usually conducted on the job and involves activities such as being shown how to do the job, watching others work, reading relevant material and teaching oneself. As unstructured training is difficult to measure and is generally under-reported, most training data in this review relates to structured training only.

Workplace training data is mainly from the 1997 ABS Employer Training Practices Survey (TPS), which collected information on structured and unstructured training for the 12 months ending February 1997, and the ABS Employer Training Expenditure Surveys (TES) conducted in 1993 and 1996. TES collected information on structured training for the three-month period from 1 July to 30 September in each of those years.

Small employers are organisations with 1–19 employees. *Medium employers* are organisations with 20–99 employees. *Large employers* are organisations with 100 or more employees.

Workplace training(a) by employer size

	September quarter 1993			*September quarter 1996*		
	Hours per employee	*Expenditure per employee*	*Total expenditure*	*Hours per employee*	*Expenditure per employee*	*Total expenditure*
	hours	$	$m	hours	$	$m
Small employers	4.1	83	108.3	2.4	71	115.0
Medium employers	5.3	179	176.3	3.8	136	168.4
Large employers	6.2	236	818.1	6.5	256	895.4
All employers	**5.6**	**191**	**1102.7**	**4.9**	**185**	**1178.8**

(a) Structured training only.

Source: *Employer Training Expenditure, Australia, July–September 1996* (Cat. no. 6353.0).

However, its suspension in 1994 and subsequent abolition in 1996 has seen a reduction in workplace training.

Training provided by employers

During the 12 months ending February 1997, 61% of all employers provided training for their employees. More employers provided unstructured training (53%) than structured training (35%), with 27% of employers providing both types. Of those who provided structured training, the two most important reasons given for training employees were to improve their current job performance (38%) and to improve the quality of goods and services (37%). Responding to new technology was another important reason given (22%).

Employers spent close to $1.2 billion on structured training over the three months from July to September 1996, an increase from the $1.1 billion spent over the corresponding period in 1993. Much of this increase was due to the inflation of wage and salary costs, which made up 70% of total training expenditure in both years. Moreover, the increase in expenditure did not keep pace with the expansion of the workforce over the period. Consequently, training expenditure per employee decreased from $191 in 1993 to $185 in 1996. Hours of training per employee also decreased, from 5.6 hours to 4.9 hours. These decreases have occurred since the Training Guarantee was suspended and abolished.

Employer size

In the September quarter of 1996, large employers spent more on training per employee ($256) and provided more training hours per employee (6.5 hours) than either small or medium employers. Large employers were also the only organisations to have increased training hours and expenditure per employee between 1993 and 1996. However, as only 2% of all employers are large, these increases were more than offset by decreases in training hours and expenditure per employee by small and medium employers. This drop in commitment to workplace training by small and medium employers accounts for the lower levels of training in 1996.

In-house and external training

Structured training provided by employers for their employees can be either in-house or external. In-house training courses are those organised by an employer primarily for their own employees, and are usually conducted by the employer's training staff or training consultants. External training courses are those organised and conducted by outside training or educational institutions, agencies or consultants.

In the September quarter 1996, 70% of total training expenditure was spent on in-house training ($825 million) and 30% on external training ($354 million). Employees received an average of 3.1 hours of in-house training and 1.8 hours of external training per person over this three-month period. The proportions of training expenditure and training hours per employee for in-house and external training did not change between 1993 and 1996.

In 1996, large employers spent a greater proportion of their total training expenditure on in-house training (74%) than medium (62%) and small employers (51%). This is most likely because in-house training is more economically viable for large organisations.

Training by industry

In the September quarter of 1996, industries with the highest total expenditure on structured training were manufacturing ($161 million), education ($132 million) and property and business services ($128 million). However, the mining industry had by far the largest training expenditure per employee ($896) and provided the highest number of training hours per employee (17.1 hours). Industries with the least number of

In-house and external training(a) expenditure by employer size, 1996

(a) Structured training only.

Source: *Employer Training Expenditure, Australia, July–September 1996* (Cat. no. 6353.0).

Workplace training(a) by industry and sector

	September quarter 1993			September quarter 1996		
	Hours per employee	*Expenditure per employee*	*Total expenditure*	*Hours per employee*	*Expenditure per employee*	*Total expenditure*
	hours	$	$m	hours	$	$m
Mining	13.9	687	55.7	17.1	896	65.3
Manufacturing	6.6	206	184.3	5.4	194	161.4
Electricity, gas and water supply	10.0	383	39.7	10.4	481	25.5
Construction	5.9	135	32.1	4.2	100	28.5
Wholesale trade	4.5	205	74.0	3.5	173	69.7
Retail trade	4.1	74	58.2	3.4	88	78.2
Accommodation, cafes and restaurants	2.9	64	18.5	2.4	55	18.4
Transport and storage	5.7	222	61.8	6.1	251	68.4
Communication services	9.2	452	48.7	6.3	318	41.9
Finance and insurance	6.0	250	75.5	6.2	282	93.5
Property and business services	5.5	226	101.1	4.1	191	128.2
Government administration and defence	6.0	238	93.2	6.0	264	78.6
Education	4.6	180	91.5	5.9	222	131.9
Health and community services	5.1	150	102.2	4.1	130	103.2
Cultural and recreational services	2.8	125	15.5	2.8	103	16.9
Personal and other services	9.2	295	50.7	9.7	299	69.2
All industries	**5.6**	**191**	**1 102.7**	**4.9**	**185**	**1 178.8**
Public sector	*6.8*	*263*	*448.2*	*6.3*	*264*	*399.6*
Private sector	*5.0*	*161*	*654.5*	*4.5*	*161*	*779.1*

(a) Structured training only.

Source: *Employer Training Expenditure, Australia, July–September 1996* (Cat. no. 6353.0).

structured training hours per employee were cultural and recreational services (2.8 hours) and accommodation, cafes and restaurants (2.4 hours) where, because of the lower skill requirement, most training is unstructured and provided on the job. These industries also have large numbers of casual employees (many of whom are women) who consequently tend to receive less training than others.

The overall reduction in workplace training levels between 1993 and 1996 did not occur in all industries. Those that reduced training hours and expenditure per employee were communication services; property and business services; construction; wholesale trade; health and community services; manufacturing; and accommodation, cafes and restaurants. All other industries increased levels of workplace training between 1993 and 1996, with mining having the largest increases in training expenditure per employee (up by $209 per employee) and training hours (up by over 3 hours per employee).

Training by sector

In the September quarter of 1996, total training expenditure in the private sector was $779 million, almost double that in the public sector ($400 million), reflecting the greater proportion (over 75%) of employees in the private sector. However, the public sector spent more on training per employee ($264, compared to the private sector's $161) and provided more training hours per employee (6.3 hours, compared to the private sector's 4.5 hours).

While training hours and training expenditure per employee remained around the same levels, total training expenditure increased in the private sector (up by $125 million) and decreased in the public sector (down by $49 million) between the September quarter 1993 and the September quarter 1996. These changes reflect shifts in employment across the two sectors (see *Australian Social Trends 1998*, Public sector employment, pp. 115–118).

Entry level training

One important group of employees who receive workplace training are apprentices and trainees. These employees start training contracts on entry to the workforce in order to provide them with relevant qualifications and on-the-job skills.

Taking on apprentices and trainees is a large commitment by an employer, as there is considerable cost involved and an obligation to provide a complete range of work experiences. The Group Training Scheme, which evolved in the 1980s, was introduced to encourage this commitment. Under this scheme, apprentices and trainees are indentured to a single employing body, the Group Training Company (GTC). Organisations that form a GTC share the costs, which are subsidised by government, of employing and training their apprentices and trainees. The apprentices and trainees are placed in each host organisation, usually on a rotation basis, to gain work experience.

The number of apprentices and trainees in the workforce was 175,354 in 1996–97, up from 135,783 in 1994–95, representing a 29% increase over the period. This increase can be almost entirely attributed to the rise in the number of trainees (up by more than 36,000). At the same time, apprentices and trainees employed by the Group Training Scheme increased by 34%, from 17,712 in 1994–95 to 23,676 in 1996–97.[1]

Increases in apprentice and trainee numbers have resulted in increased amounts of entry level training provided by employers, as seen in the 1997 ABS Employer Training Practices Survey. In the 12 months ending

Apprentices and trainees by occupation(a) and sector, 1996–97

	Apprentices	*Trainees*	*Total(b)*	*Change from 1994–95 to 1996–97*
	no.	no.	no.	%
Building	24 288	–	24 288	–8.1
Vehicle	21 152	–	21 176	7.0
Electrical and electronics	16 703	–	16 778	5.7
Food	16 269	–	17 059	12.8
Metal fitting and machining	10 235	–	11 707	13.0
Hairdressing	9 721	–	9 721	–3.7
Other metal	9 690	–	9 690	4.6
Other trades and related workers	7 558	19	7 617	–1.6
Printing	3 160	–	3 160	0.7
Horticultural	2 948	–	3 196	–6.2
Salespersons and personal service workers	323	16 005	16 769	323.0
Clerks	–	13 851	13 897	124.5
Para-professionals	470	2 688	3 164	318.5
Managers and administrators(c)	521	418	1 974	21.7
Labourers and related workers	–	12 663	12 922	773.7
Plant/machinery operators and drivers	30	2 108	2 235	305.6
Total	**123 069**	**47 756**	**175 354**	**29.1**
Private sector	*n.a.*	*n.a.*	*141 019*	*28.3*
Public sector	*n.a.*	*n.a.*	*10 659*	*30.1*
Group Training Scheme	*n.a.*	*n.a.*	*23 676*	*33.7*

(a) Based on first edition Australian Standard Classification of Occupations – (ASCO). As apprentices are concentrated in the 'Tradespersons' Major Group, this classification has been broken down to lower levels of detail (Minor and Unit Group). Occupations with large numbers of trainees have not been broken down into the lower levels.
(b) Includes a number for unknowns - those who could not be classified as either apprentices or trainees.
(c) Includes a small number of professionals.

Source: National Centre for Vocational Education Research, *Australian Training Statistics, Annual 1996/97*.

February 1997, 48% of employers with an apprentice or trainee increased their expenditure on structured training and 37% increased levels of unstructured training. By comparison, only 15% of employers without an apprentice or trainee increased their expenditure on structured training and 17% increased levels of unstructured training. Larger increases by employers with an apprentice or trainee reflect their additional training responsibilities.

In 1996–97, a quarter of all apprentices and trainees were employed in the building and vehicle occupations. However, between 1994–95 and 1996–97, the number of apprentices in the building occupational group decreased by 8%.

Most other occupational groups increased apprentice and trainee numbers over this period. There were dramatic rises in some occupations, notably labourers and related workers; salespersons and personal service workers; para-professionals; plant/machinery operators and drivers; and clerks. This was largely a result of the increase (309%) in the number of trainees between 1994–95 and 1996–97, almost all (99%) of whom were in these occupational groups in 1996–97.[1]

The proportion of female apprentices and trainees has been increasing. Most increases in female numbers have occurred in traineeships, as apprenticeships still remain a male-dominated area. In 1996–97, 22% of all apprentices and trainees were female, up from 17% in 1994–95. Female apprentices and trainees in 1996–97 were concentrated in the hairdressing (90% female), clerks (71% female) and salespersons and personal service workers (58% female) occupations. The occupational groups that were largely male-dominated were metal fitting and machining; other metal; building; and vehicle. Each of these had 2% or less female apprentices or trainees.[2]

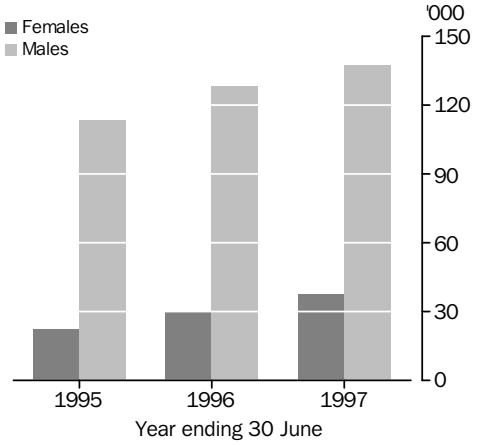
Competency standards

In the past, skills acquired through workplace training were not formally recognised in the same way as qualifications gained from educational institutions. However, since the early 1990s, the Australian National Training Authority (ANTA) has been developing a set of national competency standards to allow vocational education and training to be recognised in a way consistent with qualifications gained in the schools and higher education sectors.

Competency-based training (CBT) forms the basis of competency standards in the workplace. CBT is a combination of formal and on-the-job training, and has a set of core criteria which an employee must achieve to meet the standard. Standards achieved through CBT lead to awards under the Australian Qualifications Framework. These awards can count towards a course from a tertiary institution, leading to a recognised qualification. This makes it easier for employees to transport vocational skills, promoting flexibility and articulation between education sectors, within occupations, within industries and across States and Territories.

From late 1997, ANTA started introducing nationally endorsed Training Packages to the workplace. These industry-based training programs outline the CBT assessment and competency standards required to gain necessary skills and qualifications in the industry. They allow employees to choose their own training and assessment pathway to a qualification. Training packages are designed to make workplace training simpler and more flexible.

Apprentices and trainees



Source: National Centre for Vocational Education Research, *Australian Training Statistics, Annual 1996/97*.

Endnotes

1 Australian Committee on Vocational Education and Training Statistics, 1996, *Australian Training Statistics, Annual 1994/95*, ACVETS, Canberra.

2 National Centre for Vocational Education Research, 1997, *Australian Training Statistics, Annual 1996/97*, Vol. 3, NCVER, Leabrook, South Australia.

Work

Work — national summary

LABOUR FORCE	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total labour force	'000	7 680	7 867	8 083	8 346	8 492	8 518	8 574	8 696	8 888	9 066	9 186
Participation rate	%	62.0	62.2	62.6	63.5	63.6	63.0	62.6	62.8	63.3	63.7	63.5
Male participation rate	%	75.6	75.3	75.2	75.5	75.3	74.4	73.9	73.6	73.8	73.9	73.4
Female participation rate	%	48.7	49.4	50.4	51.9	52.3	51.9	51.7	52.2	53.2	53.8	53.9
Women (of total labour force)	%	39.8	40.3	40.8	41.4	41.7	41.9	41.9	42.3	42.7	42.9	43.1

PAID WORK	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total employed	'000	7 044	7 256	7 549	7 832	7 782	7 637	7 634	7 781	8 093	8 300	8 389
Part-time employed (of total employed)	%	19.2	19.8	20.1	20.9	21.7	22.9	23.5	23.8	24.4	24.6	25.1
Male part-time employed (of total male employed)	%	6.7	7.1	7.2	8.0	8.5	9.7	10.2	10.4	10.9	11.0	11.7
Female part-time employed (of total female employed)	%	38.3	38.7	38.9	39.5	40.2	41.1	41.7	42.0	42.5	42.5	42.9
Part-time employed who prefer more hours (of part-time employed)	%	18.4	18.7	17.6	18.0	21.7	26.4	29.2	28.3	26.1	26.2	26.3
Casually employed (of total employed)	%	n.a.	18.9	20.0	19.4	20.3	22.3	22.7	23.7	24.0	26.1	25.7
Job mobile in previous year	%	17.1.	18.2	19.7	22.0	21.9	19.7	n.a.	22.1	n.a.	24.3	n.a.
Average hours worked per week by full-time workers	hours	39.7	39.7	39.7	39.8	39.9	40.6	40.3	40.7	40.9	40.5	41.0
Average weekly hours of paid overtime per employee	hours	1.3	1.4	1.5	1.3	1.1	1.1	1.2	1.3	1.2	1.1	1.1
Employed in service industries (of total employed)	%	67.2	67.7	67.7	68.7	69.5	70.9	70.6	70.9	71.4	72.1	72.3
Employed in manufacturing industries (of total employed)	%	16.0	16.0	15.9	15.3	14.7	14.2	14.2	14.0	13.8	13.4	13.5
Employment/population ratio	%	56.9	57.4	58.5	59.6	58.3	56.5	55.8	56.2	57.7	58.3	58.0

INDUSTRIAL RELATIONS	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Trade union membership	%	n.a.	41.6	n.a.	40.5	n.a.	39.6	37.6	35.0	32.7	31.1	30.3
Working days lost due to industrial disputes (per 1,000 employees)	days	223	269	190	207	248	147	100	76	79	131	74

UNEMPLOYMENT	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total unemployed	'000	635.1	610.5	534.6	513.7	709.0	881.7	940.5	915.5	794.6	766.7	796.5
Long-term unemployed	'000	176.8	169.1	145.6	116.4	149.5	255.7	336.3	334.8	273.6	226.5	233.1
Unemployment rate	%	8.3	7.8	6.6	6.2	8.4	10.4	11.0	10.5	8.9	8.5	8.7
Youth unemployment rate	%	20.3	18.9	15.7	14.9	20.0	23.8	24.4	23.8	20.9	20.7	20.9
Youth unemployment/population ratio	%	12.3	11.2	9.4	9.1	11.7	13.3	13.5	13.3	12.3	12.3	12.3
Median duration of unemployment	weeks	18.6	17.7	15.9	12.3	14.3	23.4	27.4	27.5	23.8	20.3	19.8

NOT IN LABOUR FORCE	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Marginally attached	'000	696.4	721.7	708.4	752.5	819.3	846.4	907.8	773.3	862.8	879.6	890.5
Discouraged jobseekers	'000	94.4	83.8	76.1	100.9	138.2	145.6	147.4	106.5	111.9	118.9	118.4

Reference periods: All data are annual averages for the year ending 30 June except: average weekly hours of paid overtime and working days lost due to industrial disputes (year ending 31 December); trade union membership and casually employed (August); job mobility (February); and not in the labour force data (September).

Work — State summary

LABOUR FORCE	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Total labour force	'000	1996–97	3 049	2 303	1 708	730	918	221	89	168	9 186
Participation rate	%	1996–97	62.2	63.7	64.5	61.9	66.2	59.8	69.6	72.0	63.5
Male participation rate	%	1996–97	72.4	73.8	74.3	71.0	76.3	70.4	75.5	78.8	73.4
Female participation rate	%	1996–97	52.3	54.0	55.0	53.1	56.1	49.5	63.5	65.4	53.9
Women (of total labour force)	%	1996–97	42.8	43.3	43.0	43.7	42.7	42.1	45.1	46.3	43.1

PAID WORK	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Total employed	'000	1996–97	2 806	2 093	1 545	661	849	197	84	155	8 389
Part-time employed (of total employed)	%	1996–97	23.4	25.6	25.4	28.7	26.2	28.6	23.1	24.8	25.1
Male part-time employed (of total male employed)	%	1996–97	10.0	11.8	11.8	13.2	11.3	12.5	13.0	13.2	11.7
Female part-time employed (of total female employed)	%	1996–97	28.4	43.5	43.4	48.3	46.4	50.3	35.5	38.1	42.9
Part-time employed who prefer more hours (of part-time employed)	%	1996–97	24.4	26.1	29.2	29.8	24.0	29.4	20.0	28.8	26.3
Average hours worked per week by full-time workers	hours	1996–97	40.7	41.0	41.5	41.1	41.7	39.7	41.7	39.0	41.0
Average weekly hours of paid overtime per employee	hours	1997	1.1	1.2	0.9	1.0	1.2	0.8	1.3	0.6	1.1
Employed in service industries (of total employed)	%	1996–97	73.2	70.8	72.5	70.4	70.3	71.1	82.0	89.1	72.3
Employed in manufacturing industries (of total employed)	%	1996–97	13.7	17.1	11.1	14.9	10.2	12.7	3.6	3.1	13.5
Employment/population ratio	%	1996–97	57.2	57.9	58.4	56.0	61.2	53.4	65.6	66.3	58.0

INDUSTRIAL RELATIONS	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Trade union membership	%	1997	31.2	29.1	30.9	34.3	23.4	39.4	31.4	30.4	30.3
Working days lost due to industrial disputes per 1,000 employees	days	1997	64	115	71	15	85	35	7	15	74

UNEMPLOYMENT	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Total unemployed	'000	1996–97	243.1	209.8	163.1	69.6	69.0	23.6	5.0	13.3	796.5
Long-term unemployed	'000	1996–97	74.8	70.2	39.2	22.8	14.3	7.9	0.8	3.0	233.1
Unemployment rate	%	1996–97	8.0	9.1	9.6	9.5	7.5	10.7	5.7	7.9	8.7
Youth unemployment rate	%	1996–97	19.7	21.4	22.4	23.7	17.4	24.6	14.0	25.8	20.9
Youth unemployment/population ratio	%	1996–97	11.3	12.2	14.0	14.0	11.5	13.9	7.5	15.4	12.3
Median duration of unemployment	weeks	1996–97	20.3	23.5	15.9	23.8	12.3	23.3	9.3	17.1	19.8

NOT IN LABOUR FORCE	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Marginally attached	'000	1997	284.5	219.5	170.7	77.1	83.6	29.4	9.3	16.2	890.5
Discouraged jobseekers	'000	1997	39.3	32.4	18.6	10.2	10.8	4.2	0.9	1.9	118.4

Reference periods: All data are annual averages for the year ending 30 June except: average weekly hours of paid overtime and working days lost due to industrial disputes (year ending 31 December); trade union membership (August); and not in the labour force data (September).

Work — definitions and references

Average hours worked per week by full-time workers — average hours worked, including overtime, by full-time workers during the survey reference week. The hours are those actually worked and are not necessarily the hours paid for.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Average weekly hours paid overtime per employee — total overtime hours paid for divided by the total number of employees, including those who were not paid for any overtime. Overtime is time worked in excess of award, standard or agreed hours of work for which payment is received. Figures are the annual average of quarterly figures.
Reference: *Job Vacancies and Overtime, Australia* (Cat. no. 6354.0).

Casually employed — employees who were not entitled to either paid holiday leave or sick leave in their main job.
Reference: *Weekly Earnings of Employees* (Cat. no. 6310.0).

Discouraged jobseekers — people who wanted to work and who were available to start work within four weeks but whose main reason for not taking active steps to find work was that they believed they would not be able to find a job for reasons of: age; language or ethnicity; schooling; training; skills or experience; no jobs in their locality or line of work; or they considered that there were no jobs at all available.
Reference: *Persons Not in the Labour Force, Australia* (Cat. no. 6220.0).

Employed — persons aged 15 and over who worked during the reference week for pay, profit, commission, payment in kind or without pay in a family business, or who had a job but were not at work.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Employees — employed persons who worked for wages or salary in the reference period.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Employment/population ratio — the number of employed persons in a group expressed as a proportion of the civilian population in the same group.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Full-time workers — employed persons who usually worked 35 hours a week or more and others who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Job mobile — the proportion of people aged 15–69 who had worked at some time during the previous year who were job mobile, that is, they changed their job (employer/business or locality) within the previous year.
Reference: *Labour Mobility* (Cat. no. 6209.0).

Labour force — for any group, persons who were employed or unemployed, as defined.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Long-term unemployed — people unemployed for 52 weeks or longer.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Manufacturing industries — the manufacturing division of the *Australian and New Zealand Standard Industrial Classification (ANZSIC)* (Cat. no. 1292.0).
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Marginally attached — persons who were not in the labour force, wanted to work and: were actively looking for work but were not available to start; or were not actively looking for but were available to start work.
Reference: *Persons Not in the Labour Force, Australia* (Cat. no. 6220.0).

Median duration of unemployment — the period of unemployment at which half of the unemployed had been unemployed for more weeks and half had been unemployed for fewer weeks.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Participation rate — for any group, the labour force expressed as a percentage of the civilian population in the same group.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Part-time employed — employed persons who usually worked less than 35 hours a week and who did so during the reference week.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Part-time employed who prefer more hours — part-time employed who indicated they would prefer to work more hours.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Service industries — the combination of the following divisions of the *Australian and New Zealand Standard Industrial Classification (ANZSIC)* (Cat. no. 1292.0): wholesale trade; retail trade; accommodation, cafes and restaurants; transport and storage; communication services; finance and insurance; property and business services; government administration and defence; education; health and community services; cultural and recreational services; and personal and other services.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Trade union membership — employees with membership of an organisation (or employee or professional association), the principle activities of which include the negotiation of rates of pay and conditions of employment for its members.
Reference: *Trade Union Members, Australia* (Cat. no. 6325.0).

Unemployed — persons aged 15 and over who were not employed during the reference week, but who had actively looked for work and were available to start work.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Work — definitions and references continued

Unemployment rate — the number unemployed expressed as a proportion of the labour force. Separate rates may be calculated for sub-groups of the population.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Working days lost due to industrial disputes — total working days lost by employees due to industrial disputes during the year.
Reference: *Industrial Disputes, Australia* (Cat. no. 6322.0).

Youth unemployment/population ratio — the number of unemployed people aged 15–19, expressed as a proportion of all people aged 15–19.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Youth unemployment rate — the number of unemployed people aged 15–19, expressed as a proportion of people aged 15–19 in the labour force.
Reference: *Labour Force, Australia* (Cat. no. 6203.0).

Young jobseekers

Over 50% of the young people who were identified as jobseekers in May 1995 were working in September 1996. Around 25% had worked since May 1995 but were no longer working. Success in securing work was related to education and previous work experience.

Equipping young jobseekers with the skills and experience to secure work is a major focus of employment and training policies. The extent to which jobseekers are successful in securing employment is related to their education and work experience and access to training.

In May 1995, 146,000 people aged 15–19 and 160,000 people aged 20–24 were jobseekers. Young jobseekers made up about one third of all jobseekers aged 15–59. Close to the time when they were identified, some 70% of these young jobseekers were looking for work, 18% were working and 11% were absent from the labour market, but were likely to enter it in the near future.

Over the period from May 1995 to September 1996, young jobseekers had varied labour market experiences and some also attended training courses. In terms of outcomes, 78% had held a job at some time during this period, and just over half were still working at the end.

Labour market transitions

The labour market outcomes of young jobseekers in September 1996 can be linked with their labour market activities in May 1995. Those who were working in May 1995 were most likely to find stable work (53%), compared to just 30% of those who were looking for work and 24% of those who were absent from the labour market. Of those who were absent from the labour market in May 1995, 45% had not worked at all in the period to September 1996.

Survey of Employment and Unemployment Patterns (SEUP)

SEUP is a longitudinal survey. That is, information was collected from the same individuals (called the panel) over three years. The SEUP panel, selected in May 1995, provided a range of social and demographic information, including their employment history before September 1994 and their level of education. Interviews in October 1995 and 1996 collected information about their labour market activities since September 1994.

Jobseekers, the main component of the SEUP panel, were persons aged between 15 and 59 who, at May 1995, were either unemployed, underemployed (working less than 10 hours per week and looking for a job with more hours), or not in the labour force (but were likely to enter the labour force in the near future).

Young jobseekers were aged 15–24.

Labour market outcomes

Between May 1995 and September 1996 (the reference period for this article) jobseekers experienced one or more labour market activities. Based on these, jobseekers were classified into one of the following labour market outcomes in September 1996:

- in *stable work*, in which the current job had lasted for three months or more and they were not concurrently looking for work; or
- in *unstable work*, where the job had lasted less than three months or they were concurrently looking for work; or
- *no longer working*, but had worked during the period; or
- *not worked*, where they had not worked during the period.

Young jobseekers: transitions in labour market activity from May 1995 to September 1996

	Labour market outcome, September 1996				
	Stable work	*Unstable work*	*No longer working*	*Not worked*	*Total*
Labour market activity, May 1995	%	%	%	%	%
Working(a)	53.4	20.6	25.9	0.0	100.0
Looking for work	29.6	19.0	27.5	23.9	100.0
Absent from the labour market	23.6	12.4	19.2	44.8	100.0
Total	**33.3**	**18.5**	**26.3**	**21.9**	**100.0**

(a) Includes jobseekers who were working and looking for work at the same time.

Source: Unpublished data, Survey of Employment and Unemployment Patterns.

A stable job

One third of young jobseekers (101,900) were successful in finding a stable job which they held in September 1996. Just over three quarters of these were in full-time work at that time. The most common occupations of those in full-time stable work were intermediate clerical, sales and service workers (21%), tradespersons and related workers (20%) and labourers and related workers (19%). The most common occupations of those in part-time work were elementary clerical, sales and service workers (30%), intermediate clerical, sales and service workers (25%) and labourers and related workers (20%).

Labour market outcomes, September 1996

	15–19 years		*20–24 years*		*15–24 years*	
	'000	%	'000	%	'000	%
Stable work						
Full-time	32.5	22.3	45.1	28.2	77.6	25.4
Part-time	10.7	7.3	13.7	8.5	24.3	7.9
Unstable work	29.6	20.3	27.1	16.9	56.7	18.5
No longer working	44.7	30.6	35.8	22.4	80.5	26.3
Not worked						
Ended period looking for work	18.1	12.4	23.8	14.9	42.0	13.7
Ended period absent from labour market	10.4	7.1	14.7	9.2	25.1	8.2
Total	**146.0**	**100.0**	**160.3**	**100.0**	**306.2**	**100.0**

Source: Unpublished data, Survey of Employment and Unemployment Patterns.

Elementary clerical, sales and service workers performed tasks with established rules and procedures, whereas those at the intermediate level required a limited degree of discretion and judgement.

Unstable work

A further 56,700 young jobseekers were in unstable work. While some of these jobs may have developed into stable work after September 1996, in other cases, jobseekers may have ultimately left or lost that job or continued to look for work.

One half of young jobseekers in unstable work were working full time. The occupations most commonly held by young jobseekers in unstable work were labourers and related workers (27%), intermediate clerical, sales and service workers (25%) and elementary clerical, sales and service workers (16%).

No longer working

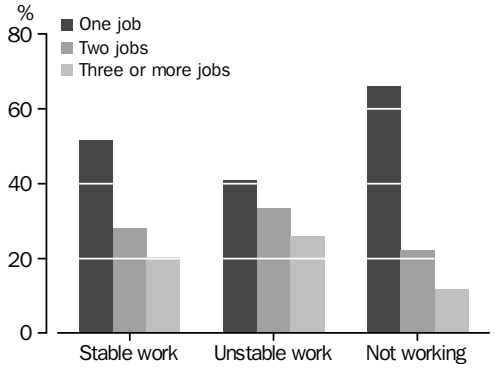
Just over a quarter of young jobseekers were not working at the end of the period but had worked during the period. The main reasons that they stated for losing their most recent job were that they were retrenched or their employer went out of business (28%), their job was temporary or seasonal (28%) and their own ill health or injury prevented them from working (19%).

Approximately three quarters of this group (61,500) were looking for work at the end of the period, and the remaining quarter (19,000) were absent from the labour market.

Job mobility

Many of those who had worked in the period had held more than one job. Those young jobseekers who ended the period in unstable work were also the most likely to have changed jobs during the period; 26% had worked in three or more jobs and 33% in two jobs.

Number of jobs held: labour market outcome, September 1996



Source: Unpublished data, Survey of Employment and Unemployment Patterns.

Young jobseekers' characteristics and proportion with stable work outcomes

	15–19 years	*20–24 years*	*Total 15–24 years*	*Total 15–24 years*	*Proportion in stable work in September 1996*
	%	%	%	'000	%
Educational attainment at September 1995					
Still at school	6.2	0.0	2.9	9.0	27.9*
Post-school qualifications completed	10.6	33.4	22.5	69.0	46.5
No post-school qualifications completed					
Attended highest level of secondary school	29.6	27.3	28.4	86.9	38.6
Did not attend highest level of secondary school	53.7	39.3	46.2	141.4	23.9
Total	**100.0**	**100.0**	**100.0**	**306.2**	**33.3**
Employment history before September 1994					
Worked full-time work only	14.4	33.9	24.6	75.3	37.4
Worked part-time work only	30.0	19.1	24.3	74.3	36.9
Worked both full-time and part-time	13.2	31.1	22.6	69.1	38.4
Had not worked	42.4	15.7	28.4	87.1	22.7
Total	**100.0**	**100.0**	**100.0**	**306.2**	**33.3**

Source: Unpublished data, Survey of Employment and Unemployment Patterns.

Young jobseekers who had not worked

There were 67,000 young jobseekers (22%) who did not work during the period from May 1995 to September 1996. Of these, 42,000 ended the period looking for work. The main difficulties in finding work that they stated at the end of the period were: no vacancies, either at all or in their line of work (24%); insufficient work experience (21%); lack of necessary education, training or skills (20%); and transport problems (14%).

The remaining 25,000 young jobseekers ended the period absent from the labour market. Their most common main activities at this time were home duties/child care (45%) and study (31%). In total, 71% of this group were women, of whom 60% stated home duties/child care as their main activity while absent from the labour market.

Educational attainment

There were many factors associated with the labour market outcomes of young jobseekers. One of these was their educational attainment. Jobseekers with low levels of educational attainment were less successful in finding stable work. Those who had not attended the highest level of secondary school were the least likely to have found a stable job by September 1996 (24%), compared to 39% of those who had attended the highest level of secondary school.

Prospects were more favourable for those with post-school qualifications. By September 1996, 46% of these were in stable work.

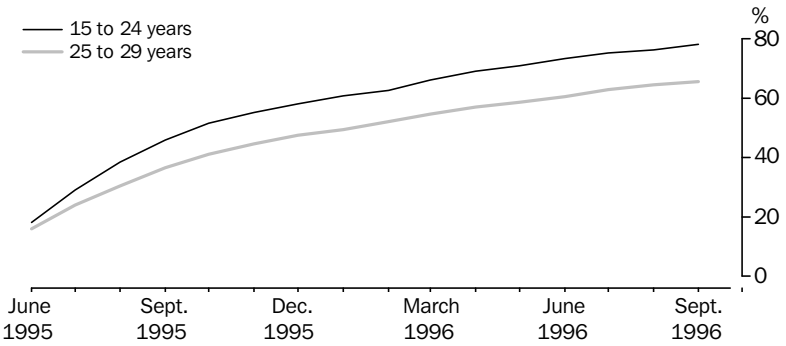
Labour market history

Young jobseekers who had some work experience before September 1994 (the start of the reference period of the survey) appeared to have better chances of finding stable work. Of those who had worked before September 1994, 38% found stable work, compared to 23% of those who had not previously worked.

Because they were older, and may have had a longer period to participate in the labour market, jobseekers aged 20–24 were more likely to have had previous work experience than jobseekers aged 15–19. Of those aged 15–19, 58% had worked before September 1994, compared to 84% of those aged 20–24.

Another factor associated with young jobseekers' labour market outcomes was their history of looking for work. Young jobseekers who had only looked for work for a short period of time were more likely to find stable work.

Cumulative percentage of jobseekers who had worked at some time since May 1995



Source: Unpublished data, Survey of Employment and Unemployment Patterns.

Of those who had looked for work for one year or less in total between finishing full-time education and September 1994, 39% had found stable work by September 1996. Only 24% of those who had looked for work for between two and three years in total and 18% of those who had looked for work for four or more years in total had found stable work.

Parental background

Labour market outcomes of jobseekers were also correlated with the labour force status of their parent/s, particularly of their father.

Over half (164,000) of young jobseekers were living at home with one or both parents in September 1995. For 125,200 of these, their father was living at home. Of those whose father was employed, 43% had found stable work by September 1996. In contrast, of those whose father was unemployed or not in the labour force, only 20% were in stable work.

For 154,900 young jobseekers, their mother was living at home. Of those whose mother was employed, 41% had found stable work compared to 31% of those whose mother was unemployed or not in the labour force.

Where people lived also influenced this relationship. In areas experiencing generally higher unemployment rates, both parents and children were likely to be similarly affected.

Jobseekers who had worked

Although they were less likely than older jobseekers to have had previous work experience, young jobseekers found work more quickly than those aged 25 years or more. After May 1995, the proportion working was similar in both age groups. However, 46% of those aged 15–24 had held a job at some time between May 1995 and September 1995, compared to 36% of older jobseekers. By September 1996, these proportions had risen to 78% and 66% respectively. By September 1996 more young jobseekers had found stable work (33%, compared to 29% for older jobseekers).

Training courses

In total, 64,000 young jobseekers participated in an in-house training course and 73,600 participated in an external training course between May 1995 and September 1996.

Opportunities for training at work were enhanced for those who found stable work. Of these, 36% had participated in in-house training. Overall, 24% of young jobseekers participated in an external training course, with those who found unstable work having the highest rate of participation (28%).

The skills from training courses helped some young jobseekers to find work or a better job. Of those who participated in an in-house training course, 18% attended at least one that had helped them obtain a better job, a promotion or a payrise. Of those who had participated in an external training course while they were not working, 13% attended at least one that resulted in a job (see *Australian Social Trends 1998*, Workplace training, pp. 91–95).

Participation in training courses, May 1995 to September 1996

	Participated in course/s				
	In-house	*External*	*Total*	*Did not participate*	*Total*
Labour market outcome, September 1996	%	%	%	%	%
Ended period in stable work	36.2	18.0	47.4	52.6	100.0
Ended period in unstable work	25.0	28.1	45.7	54.4	100.0
No longer working	16.1	25.8	39.6	60.4	100.0
Not worked	0.0	27.7	27.7	72.3	100.0

Source: Unpublished data, Survey of Employment and Unemployment Patterns.

Migrants in the labour force

PAID WORK

Migrants who arrived as adults (aged 18 years or over) between 1986 and 1996 represented about 6% of the labour force in November 1996.

Immigration has played a major role in the growth of Australia's population and economy. Earlier migration policy had an underlying assumption that a successful migrant is one who contributes to Australian productivity through employment.[1] The more recent increase in family reunion and humanitarian migrants has changed that emphasis to a broader view of immigration (see *Australian Social Trends 1998,* Changes in immigration intake, pp.18–23). However, a major issue relating to immigration continues to be the impact of the program on the labour force.

Migrants in the labour force

In November 1996 there were 9.1 million people in the Australian labour force, of whom around 24% had been born outside Australia. However, Australia's long history of migration meant that most of these overseas-born people had been in Australia for a considerable period of time and had overcome the initial difficulties of settling into Australian life. This review mainly looks at those migrants who arrived as adults (aged 18 years or over) between 1971 and 1996 and who represented about 11% of the labour force in November 1996. These migrants were likely to have received their education outside Australia and had a high probability of entering the labour force soon after arrival in Australia.

Because the labour force experience of migrants varies greatly with their length of residence, this review also makes comparisons between migrants who arrived between 1971 and 1985 and those who arrived more recently, between 1986 and 1996. Recent migrants represented about 6% of the labour force in November 1996.

Success in finding employment was related to the visa category under which migrants arrived in Australia, their proficiency in spoken English and level of skills.

Labour force participation

In November 1996, recent migrants (who arrived between 1986 and 1996) from the main English speaking countries had an unemployment rate of 6%, similar to that of migrants who had arrived earlier (between 1971 and 1985) and lower than that of Australian-born people (8%). The participation rate of recent migrants (75%) was slightly higher than that of migrants who arrived earlier (72%) and higher than that of Australian-born people (67%).

Among migrants from the predominantly non-English speaking countries, recent migrants had a much higher unemployment rate (15%) than migrants who had arrived earlier (9%) and Australian-born people in the labour force (8%). The participation rates of recent migrants (66%) and those who arrived earlier (64%) were both similar to the rate for

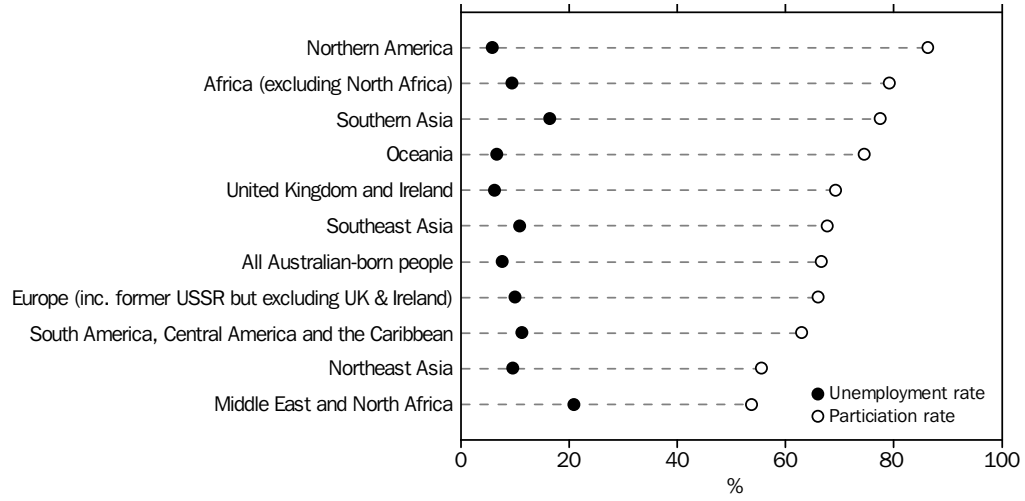
Labour force status of migrants who arrived after 1970 aged 18 or over, November 1996

	In the labour force							
	Employed							
	Full-time	*Part-time*	*Total employed*	*Unemployed*	*Not in the labour force*	*Total*	*Participation rate*	*Unemployment rate*
	'000	'000	'000	'000	'000	'000	%	%
Born in MESC(a)								
Arrived 1971–1985	144.5	47.8	192.3	11.7	80.6	284.6	71.7	5.7
Arrived 1986 –1996	149.9	29.3	179.2	12.0	62.8	254.0	75.3	6.3
Born in other countries								
Arrived 1971–1985	195.7	34.6	230.3	21.5	144.3	396.1	63.6	8.5
Arrived 1986–1996	234.4	54.9	289.3	50.3	175.7	515.2	65.9	14.8
Total	**724.4**	**166.6**	**891.0**	**95.5**	**463.4**	**1 449.9**	**68.0**	**9.7**

(a) Main English-speaking countries, comprising the United Kingdom, Ireland, Canada, South Africa, United States of America and New Zealand.

Source: Unpublished data, *Labour Force Status and Other Characteristics of Migrants, Australia, November 1996.*

Unemployment rates and participation rates of migrants(a) by birthplace regions, November 1996



(a) Who arrived after 1970 and were aged 18 years or over on arrival.

Source: Labour Force Status and Other Characteristics of Migrants, Australia November 1996 (Cat. no. 6250.0) and *Labour Force Australia, November 1996* (6203.0).

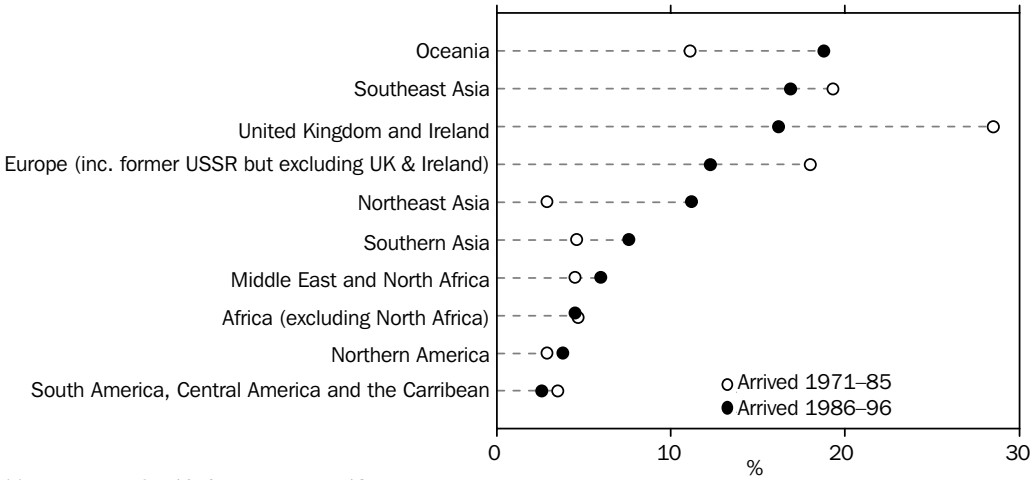
Australian-born people (67%). However, recent migrants from predominantly non-English speaking countries who could speak English well had a lower rate of unemployment (11%) and a higher participation rate (75%).

Of all migrants arriving after 1970, the highest unemployment rate (21%) and the lowest participation rate (54%) occurred among migrants from the Middle East and North Africa. The lowest unemployment rate (6%) and the highest participation rate (86%) occurred among migrants from Canada and the United States of America.

Region of birth

Over the last twenty years there have been some distinct shifts in the regions from which migrants have come. Migrants (aged 18 or over at the time of arrival) in the labour force who arrived between the years 1971 and 1985 were more likely to have come from Europe than those who arrived more recently, between 1986 and 1996. The proportion of migrants in the labour force who came from Europe (mainly from the United Kingdom and Ireland) dropped from 47% between 1971 and 1985 to 29% between 1986 and 1996.

Distribution of birthplace regions among migrants(a) in the labour force, November 1996



(a) Who arrived after 1970 and were aged 18 years or over on arrival.

Source: Labour Force Status and Other Characteristics of Migrants, Australia November 1996 (Cat. no. 6250.0).

The proportion of migrants from Southeast Asia (mostly from the Philippines and Vietnam) also dropped, from 19% to 17%.

There were corresponding proportional increases in migrants in the labour force from other countries when comparing the periods 1971–1985 and 1986–1996. The largest increases were from Oceania, which increased from 11% to 19% (mainly New Zealand migrants), and Northeast Asia (mainly migrants from China and Hong Kong), which increased from 3% to 11%.

Type of employment

Migrants have traditionally been most likely to find employment in the manufacturing industries and in blue-collar occupations, reflecting the post-war boom in manufacturing and construction and the type of skills that immigration policy then favoured.

In November 1996 the distribution of migrants (those who had arrived in Australia aged 18 or over between 1971 and 1996) among industries and occupations shows that their concentration in blue-collar occupations and in the manufacturing industries was greater than that for Australian-born employed people. Northern Americans were the only migrant group to have a lower proportion employed in manufacturing (9%) than Australian-born employed people (12%). Among other birthplace groups the proportions employed in manufacturing ranged up to 31% among migrants from Europe (but excluding those from the United Kingdom and Ireland) and Southeast Asia.

There were some differences between migrants who arrived in Australia between 1971 and 1985 and those who arrived more recently (1986–96). In general, recent migrants were more likely to work in blue-collar occupations and the manufacturing industries than migrants who had arrived earlier.

Migrant jobseekers

The Survey of Employment and Unemployment Patterns is a longitudinal survey in which the same individuals are interviewed over a number of years. This unique survey can show how successful individuals were at finding and keeping jobs over several years. Jobseekers are defined in the survey as those people who were unemployed, underemployed, or marginally attached (such as discouraged jobseekers) to the labour force in May 1995. Survey results show that Australian-born jobseekers were more likely to have found employment than migrant jobseekers.

In May 1995 almost three quarters of jobseekers were Australian-born and, of these, 73% held a job at some stage between May 1995 and September 1996. Of those jobseekers who were born overseas, 31% were born in the English speaking countries and the remainder were born in other countries. Migrant jobseekers who were born in predominantly non-English speaking countries but did speak English very well had greater success in finding employment at some stage after May 1995 (60% found employment) than those that said they did not speak English well or at all (32% found employment).[2]

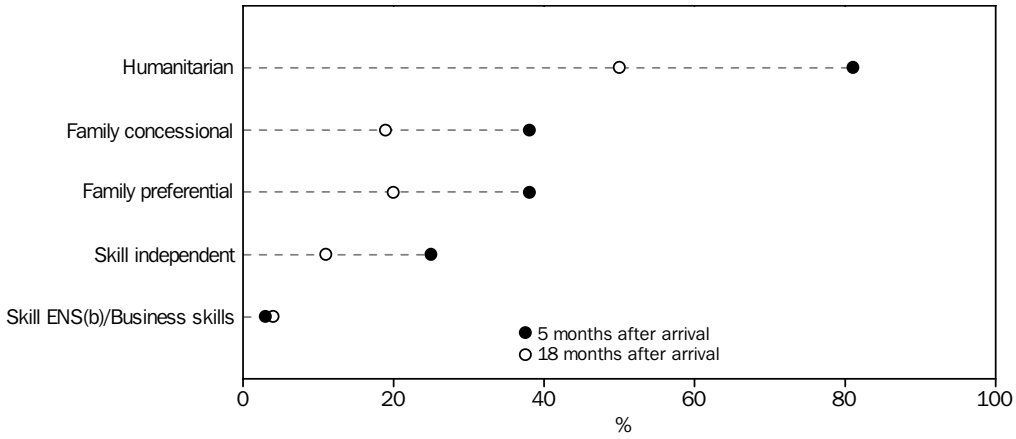
Selected characteristics of employed migrants(a) by birthplace region, November 1996

Birthplace region	*Employed in blue-collar(b) occupations*	*Employed in manufacturing industries*
	%	%
Oceania	42.3	17.9
Europe (including. former USSR but excluding UK & Eire)	55.1	30.8
UK and Ireland	27.5	17.7
Southern Asia	37.3	23.7
Southeast Asia	44.1	31.0
Northeast Asia	43.2	29.3
South America, Central America and the Carribean	55.6	21.9
Northern America	11.2	9.0
Africa (excluding North Africa)	25.5	23.4
Middle East and North Africa	48.7	19.3
All migrants(a)	**39.8**	**23.4**
All Australian-born	**32.0**	**11.7**

(a) Who arrived after 1970 and were aged 18 years or over on arrival.
(b) Comprises tradespersons and related workers; intermediate production and transport workers; and labourers and related workers.

Source: Labour Force Status and Other Characteristics of Migrants, Australia November 1996 (Cat. no. 6250.0) and *Labour Force, Australia, November 1996* (Cat. no. 6203.0).

New migrant(a) unemployment rates by visa category 5 months and 18 months after arrival



(a) Migrants who arrived between September 1993 and August 1995.
(b) Employer Nomination Scheme.

Source: The Longitudinal Survey of Immigrants to Australia, Immigration Update Sept Quarter 1996 (Department of Immigration and Multicultural Affairs).

New migrants

Results from a new longitudinal survey of migrants arriving in Australia[3] shows that immigrants who arrived between September 1993 and August 1995 had an unemployment rate of 38% and an overall labour force participation rate of 57% about five months after arriving. The survey followed the family member who was assessed for migration eligibility. About 18 months after arrival, these same migrants had an unemployment rate of 21% and a participation rate of 63%.[4]

The success with which new migrants find jobs does vary with migration category. This is a predictable outcome given that migration categories select on skills for the skilled and family concessional migrants, whereas family preferential and humanitarian migrants are not tested on skills.

Consequently, new humanitarian migrants had the highest unemployment rate (81%) among migrants who had been resident in Australia for about five months. However, this had reduced to 50% about 18 months after arrival. Among family migrants and skilled independent migrants the unemployment rates generally had halved over the period between the two interviews. For employer-nominated migrants and business-skills migrants the unemployment rate increased fractionally, though the rate in both cases was the lowest overall (3% to 4%).[4]

Among new migrants who were not currently employed, nearly half stated that their main problem in finding work was difficulty with the English language. A much smaller proportion (12%) considered that there were not enough jobs available. Among new migrants who had found work, 12% stated that English language difficulty had been a problem, while a quarter stated that they had no particular problem finding work.[5]

Endnotes

1 Bureau of Immigration and Population Research, 1994, *The Rationale for Australia's Skilled Immigration Program*, AGPS, Canberra.

2 Australia Bureau of Statistics, 1997, *Australians' Employment and Unemployment Patterns 1994–1996*, Cat. no. 6286.0, ABS, Canberra.

3 *The Longitudinal Survey of Immigrants to Australia*, 1993–1995, conducted by the Department of Immigration and Multicultural Affairs.

4 Department of Immigration and Multicultural Affairs, 1996, *The Improvement Over Time in Immigrant Unemployment Rates,* in Immigration Update, September Quarter, 1996, AGPS, Canberra.

5 Department of Immigration and Multicultural Affairs, 1997, *Initial Labour Market Experiences of Immigrants*, DIMA, Canberra.

Trends in women's employment

PAID WORK

In 1954 women made up 23% of those employed. By 1998 their share had increased to 43%. Much of the increase has come from women with families working in part-time jobs.

In March 1998 there were 3.7 million women employed, representing 43% of total employment. The employment rate for women aged 15–64 was 59% and for men 76%. As has been the case for several decades now, the majority of employed women are married (61%), many of them with children. Of all employed women, 57% worked in full-time jobs while the remainder, often students and women with young children, were employed on a part-time basis.

As in many other countries, the levels and patterns of women's participation in work have undergone substantial change over the last forty years. During the post World War II baby boom relatively few women were employed and of those employed relatively few were married. In 1954 less than one in three women aged 15–64 in Australia (29%) were employed and only 31% of these women were married. At that time, married women were generally expected to support the family at home, while their partners were recognised as being the breadwinner.

Since then, social attitudes to the roles (and rights) of women have changed. These changes have been supported by legislation recognising demands for equal opportunity in education and employment. These have included the lifting of marriage bars from employment (1966 in the Commonwealth Public Service), the ruling of the Commonwealth Conciliation and Arbitration Commission in 1969 that women should receive equal pay to men for equal work, and the passing of the Sex Discrimination Act in 1984, and the Affirmative Action (Equal Employment Opportunity for Women) Act in 1986.

Over the years, changes in work processes (generally favouring fewer manual jobs) and the growth of service industries (see *Australian Social Trends 1997,* Changing industries, changing jobs, pp. 93–98) together with changes in human resource management practices have expanded opportunities for

Employment concepts

Employed people are those, aged 15 years and over who, during a particular reference week, worked for pay, profit, commission, payment in kind or without pay in a family business, or who had a job but were not at work.

The *employment rate* (sometimes referred to as the employment population ratio) is the number of people in any group who were employed expressed as a percentage of the total number of people in that group. The employment rate differs from the *labour force participation rate* which gives a broader view of the economically active population as it also includes unemployed people.

The category *employees in their main job* does not include employers, own account workers or contributing family workers.

Full-time workers usually work 35 hours or more a week. *Permanent employees* are entitled to either paid holiday leave or paid sick leave, or both; *casual employees* are entitled to neither.

Employed women: selected indicators

	Employment rates of women aged 15–64			*Per cent of employed women(b) who worked part time*	*Employed women as % of all employed persons*			*Per cent of employed women who were married*	***Total women employed***
	Full-time	*Part-time*	*In any job*		*Married*	*Not married*	*Total*		
Year(a)	%	%	%	%	%	%	%	%	**'000**
1954	n.a.	n.a.	29.0	n.a.	7.0	15.8	22.8	30.9	**824.0**
1968	28.0	13.7	41.7	32.9	17.2	14.0	31.2	55.1	**1 577.5**
1978	30.8	15.6	46.4	33.6	21.8	13.6	35.4	61.5	**2 139.9**
1988	33.3	21.1	54.4	38.7	24.4	15.9	40.2	60.6	**2 977.2**
1998	33.5	25.5	58.9	43.2	26.3	17.0	43.3	60.7	**3 687.0**

(a) June 1954, August 1968, and March in subsequent years.
(b) Among women aged 15–64.

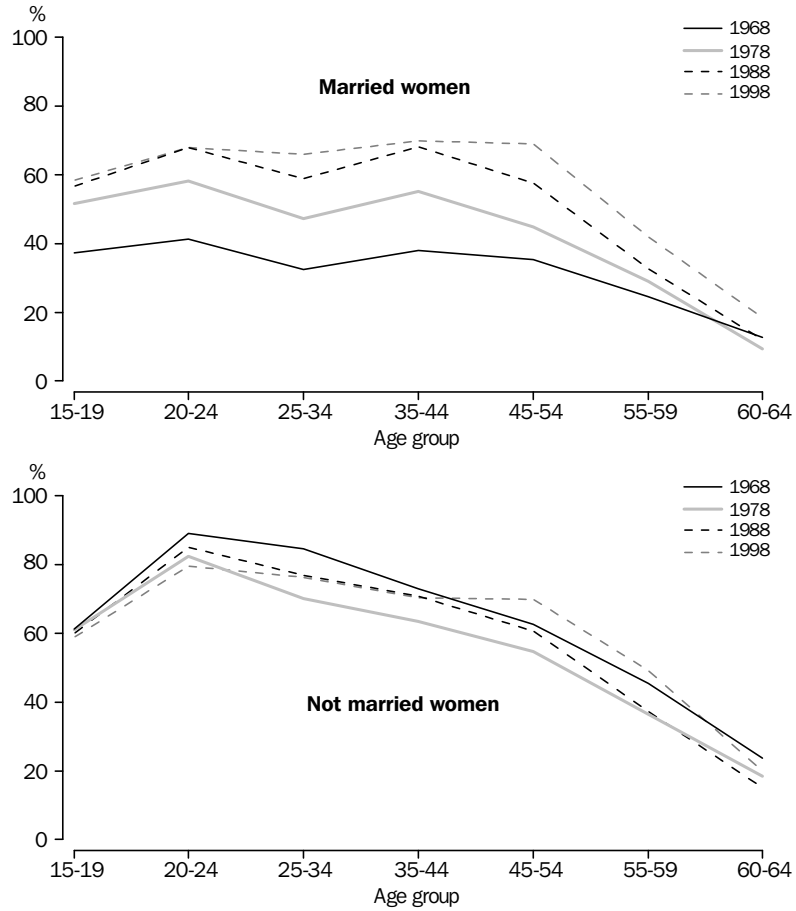
Source: Census of the Commonwealth of Australia, 1954, Statisticians Report; and unpublished data, Labour Force Surveys.

women to work and to combine work with traditional family responsibilities. While more women work in full-time (rather than part-time) jobs, a far larger part of the growth in numbers of women at work, has been among women working in part-time jobs (see *Australian Social Trends 1994,* Trends in part-time work, pp. 103–108).

Age and marital status

Insights into some of the major changes that have occurred can be gained by comparing the labour force participation rates of women according to their life cycle stage, as indicated by age and whether they are married or not. The most notable change over the last 30 years has been among married women. The participation rate for married women aged 15–64 increased from 34% in 1968 to 63% in 1998, while that for other women increased from 65% to 67%.

Labour force participation rates by age



Source: Unpublished data, Labour Force Surveys, August 1968 and March in subsequent years.

For many years, the distribution of age-specific participation rates for married women showed a characteristic M-shaped pattern, with peaks among women aged 20–24 and 35–44 years, and a trough at the prime child-bearing ages of 25–34 years. However, as participation rates among all women increased, the depth of the trough (most evident in the late 1970s) decreased. In 1968, 32% of married women aged 25–34 were in the labour force, and by 1998 this proportion had increased to 66%.

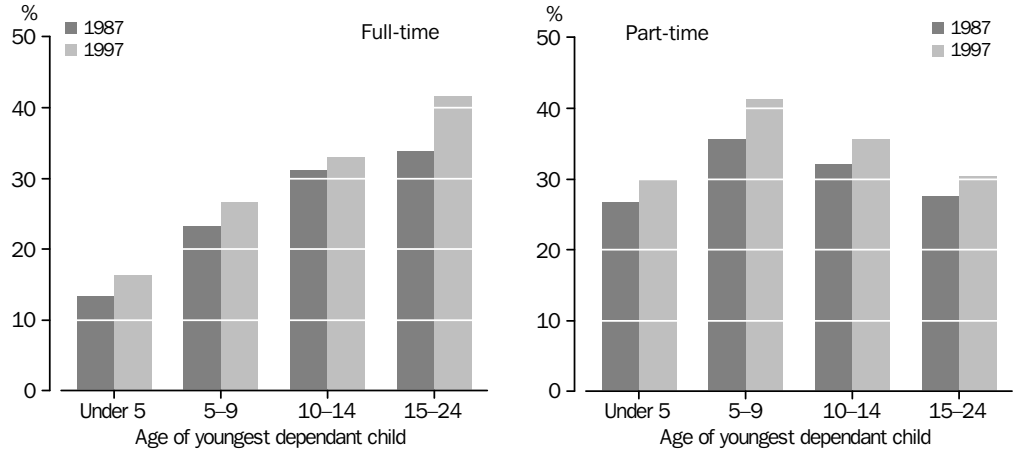
Changes in these participation rates have occurred along with changing patterns of family formation, such as the delay in child-bearing and reductions in family size (see *Australian Social Trends 1996,* Trends in fertility, pp. 36–40). For women with young children, increased levels of participation have also been facilitated by the expansion of child care services (see *Australian Social Trends 1994* and *1998*, Child care, pp. 47–49 and pp. 38–41 respectively).

Young women

Against the general trend, labour force participation rates among young unmarried women in 1968 were higher than those for young women in 1998. Among teenagers (those aged 15–19) the rates declined from 61% in 1968 to 59% in 1998 and among those aged 20–24 from 89% to 80%. The rates for men have also declined (for teenagers from 61% to 58% and for those aged 20–24 from 90% to 86%). The continuing (albeit small) decline over the last decade or so reflects the increasing tendency for young people to stay at school longer, and to take up post-school education or training (see *Australian Social Trends 1998,* Education – national summary table, p. 74).

As well as the declines in participation rates, more young women (and men) are working in part-time jobs; partly because a larger number of them are students and partly because more jobs for young people are now casual/part-time. The proportion of the female teenage workforce employed part-time increased from 46% to 74% between 1988 and 1998. (The proportion for teenage males also increased, from 29% to 51%.) In March 1998, 34% of female teenagers attending school were working part-time. For young women attending tertiary education full-time, 46% of the teenagers and 43% of 20–24 year olds were also working part-time.

Employment rates of married(a) women with children



(a) Includes those with defacto marriage partners.

Source: Labour Force Status and Other Characteristics of Families, June 1987 and 1997 (Cat. no. 6224.0).

Women with children

Women's participation is closely related to the age of their youngest child. As would be expected, the proportions of women working are comparatively low in families with a child under five years of age. This is so for both married and lone mothers, although married mothers are more likely to be employed (see *Australian Social Trends 1997,* One-parent families, pp. 34–38). In June 1997, 46% of married mothers, and 32% of lone mothers, with a child aged 0–4 were employed. Most of these mothers were employed in part-time jobs.

Women with older children are more likely to be employed. However, women with teenage and older dependents are more likely to work in full-time jobs than women with younger primary school children (aged 5–9). These patterns have held for the last ten years. However, the proportions of mothers working have increased for all ages of youngest child.

Employment arrangements

	Women		*Men*	
	1988	*1997*	*1988*	*1997*
	%	%	%	%
Permanent	*72.7*	*68.3*	*89.2*	*79.1*
Full-time	59.8	50.0	88.2	76.9
Part-time	13.0	18.3	1.0	2.2
Casual	*27.3*	*31.7*	*10.8*	*20.9*
Full-time	3.5	4.9	5.7	10.0
Part-time	23.8	26.8	5.1	10.9
Total employees	**100.0**	**100.0**	**100.0**	**100.0**
	'000	'000	'000	'000
Total employees(a)	**2 558.4**	**3 134.4**	**3 543.5**	**3 837.8**

(a) Includes persons whose status could not be determined.

Source: Weekly Earnings of Employees, August 1988 and 1997 (Cat. no. 6310.0).

Work arrangements

Partly reflecting the interests of employers in seeking greater flexibility in work arrangements (associated with the growth of jobs in service industries) has been the growth of jobs offered on a casual, rather than on a permanent, basis. When classifying people according to their main job, 32% of working women worked in casual jobs in August 1997, up from 27% in 1988. The proportion of male casual employees almost doubled (up to 21%) over the same period.

Along with the general increase in part-time jobs, employers have also been acting to balance their interests and those of their employees by offering more jobs on a permanent part-time basis. This arrangement has been commonly adopted by women, many of whom may prefer such arrangements in order to spend more time with their children. Between 1988 and 1997 the proportion of working women in permanent part-time jobs increased from 13% to 18%.

Occupational segregation

As more women have taken up jobs and careers they have also taken up a broader (and more highly skilled) range of occupations than in the past. However,

Occupational distribution, February 1998

	Women	*Men*	*Proportion who are women(a)*
Occupational group	%	%	%
Managers and administrators	4.1	9.9	23.9
Professionals	19.2	16.0	47.6
Associate professionals	8.6	11.4	36.2
Tradespersons and related workers	3.1	21.9	9.6
Advanced clerical and service workers	10.0	0.9	88.9
Intermediate clerical, sales and service workers	28.2	8.5	71.4
Intermediate production and transport workers	2.7	13.7	13.1
Elementary clerical, sales and service workers	15.7	6.3	65.3
Labourers and related workers	8.4	11.1	36.3
Total	**100.0**	**100.0**	**43.1**
	'000	'000	'000
Total	**3 646.4**	**4 815.7**	**8 462.1**

(a) In each occupation group.

Source: Labour Force Australia, February 1998 (Cat. no. 6203.0).

women continue to be more highly concentrated in those occupations traditionally dominated by women.

Compared to other OECD countries Australia has had one of the more highly segregated labour forces[1] and this has not changed much over the last 20 years.[2] Segregation by type of job and level (in terms of managerial responsibility) has implications for women relating to level of earnings, employment opportunity and, more broadly, for their access to decision-making positions.

In February 1998 more than one half (54%) of female employees in their main job worked in the clerical, sales and service groups of occupations, and substantially outnumbered men in these areas. In contrast, the trades, production and transport occupations, including labourers (which covered 47% of male employees) were largely dominated by men.

Similar numbers of women and men (699,000 and 771,000 respectively) were classified in the professional category. However, certain occupations within this category were strongly segregated by gender. For instance, 91% of the 170,000 nurses and 69% of the 255,000 school teachers in Australia were female. In contrast, 83% of science, building and engineering professionals were men. Less than one quarter (24%) of managers and administrators were women.

Endnotes

1 Organisation for Economic Co-operation and Development, 1980, *Women and Employment: policies for equal opportunities,* OECD, Paris.

2 Lambert, S. and Petridis, R. 1995, '*Slow progress: the integration of women into the Australian labour market*', Working paper No. 117, Economics Programme Murdoch University, Perth.

Public sector employment

PAID WORK

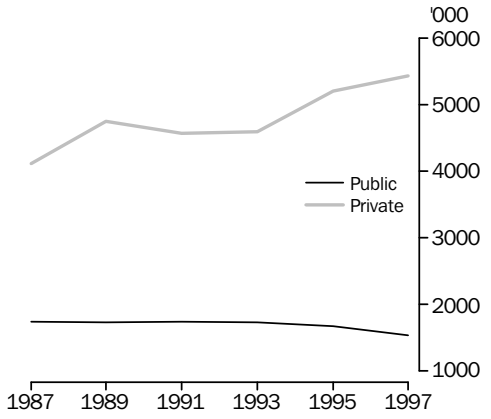
In August 1997, 22% of all employees in Australia worked in the public sector. This was a decline from 30% in August 1987.

The Australian public sector comprises all enterprises controlled by the Commonwealth Government, State/Territory and local governments. The main functions of these governments, with varying degrees of responsibility, are to provide a range of public facilities and social services, regulate social and economic conditions and redistribute incomes. Public sector enterprises include government departments and authorities as well as bodies which have been corporatised (i.e. they operate on a commercial basis) such as Australia Post, Telstra (concerned with telecommunications) and some State rail and electricity authorities. Historically, such public trading enterprises were set up to create new industries, to foster competition to allow governments to influence pricing policy, or meet other economic or social objectives.

In August 1997, 1.5 million employees worked in the public sector, a decrease of 206,000 people (12%) since 1987. In the same period the number of private sector employees increased by 1.3 million people (32%). As a result of these changes, the proportion of all workers employed in the public sector declined from 30% to 22%. This decline was not spread evenly between levels of government or across different industry sectors.

The decline in the public sector was a result of many factors, including the introduction of policies which sought more efficient management and work practices; rationalisation and out-sourcing of services; and technological advances. In addition, changes to government policies on public ownership resulted in the private sector competing with, or taking over, various public sector functions. This occurred, for example, with the Commonwealth Employment Service which served to assist people in finding jobs. It also occurred at State and local government levels with services such as prisons, rail, gas, electricity and waste management. Changes in public ownership have also occurred by selling public trading enterprises to the

Public and private sector employees, August 1987 to August 1997



Source: Weekly Earnings of Employees, Australia (Cat. no. 6310.0) and unpublished data, Survey of Weekly Earnings of Employees.

Sector of employment

Public sector refers to enterprises which the Commonwealth Government, State/Territory and local governments, separately or jointly have control over. It includes local government authorities and all government departments, agencies and authorities created by, or reporting to, the Commonwealth Parliament and State parliaments. It also includes public trading enterprises such as Australia Post and Telstra. Partially privatised organisations (such as Telstra – currently 1/3 privatised) are classified as being in the public sector if the government retains control over the enterprise.

Private sector refers to enterprises that are not controlled by Commonwealth, State/Territory or local governments (i.e. any enterprise that is not part of the public sector).

The *Australian Public Service (APS)* is responsible to the Commonwealth Government, for a wide range of functions including defence, social security, immigration, and foreign affairs and trade. It provides advice and support to the Commonwealth Government and administers, and implements government decisions and programs.

State and Territory Governments perform the full range of government functions other than those the Constitution deems the domain of the Commonwealth. Functions mainly include public order, health, education, administration, transport and maintenance of infrastructure.

Local governments govern cities, towns, shires, municipalities and district councils. Their powers and responsibilities are generally similar and cover matters such as: the implementation and administration of local area zoning ordinances, the operation of local transport, sanitation and water services, and the provision of cultural and recreational facilities.

Measuring employment

Data presented in this review concerning public sector employment has been obtained from two ABS surveys: the Survey of Weekly Earnings of Employees, conducted annually as a supplement to the monthly Labour Force Survey; and the quarterly Survey of Employment and Earnings. Information from the Survey of Weekly Earnings of Employees was collected from persons, and relates to their employment in their *main* job. Information from the the quarterly Survey of Employment and Earnings, on the other hand, was collected from employers and collects information on *all* jobs. As a consequence of this, and other differences, the figures presented are not strictly comparable.

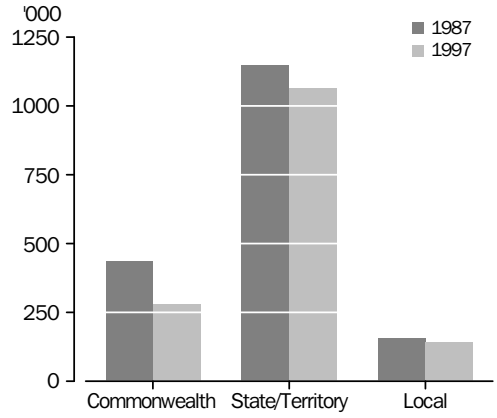
private sector. Large organisations that have been fully privatised over the last decade include the Commonwealth Bank and Qantas.

Level of government

In August 1997, 19% of public sector employees worked for the Commonwealth Government, 72% for State or Territory Governments, and 10% for local governments.

There were 283,000 people employed in Commonwealth organisations around Australia. Administrative information[1] for June 1997, shows that 133,600 people were employed in the Australian Public Service. This represented approximately 47% of all Commonwealth employees. The Australian Capital Territory had the highest number of Commonwealth employees as a proportion of all employees (36%). However of all Commonwealth Government employees, 82% worked outside the Australian Capital Territory.

Public sector employment by level of government, August 1987 and August 1997



Source: Wage and Salary Earners, Australia (Cat. no. 6248.0).

State or Territory Governments employed the largest number of public sector employees (1.1 million). The Northern Territory had the highest number of State government employees as a proportion of all employees (22%) and Tasmania had the second highest (19%). The lowest proportions were in the Australian Capital Territory and Victoria (both 13%).

Local governments employed the fewest number of public sector employees (142,000). The Northern Territory had the highest number as a proportion of all employees (4.8%). The lowest proportion was in South Australia (1.6%).

Public sector employment, August 1987 and August 1997

	Commonwealth		*State/Territory*		*Local*		*Total*	
	1997		*1997*		*1997*		*1987*	*1997*
State/Territory	'000	%	'000	%	'000	%	%	%
NSW	77.8	3.3	356.8	14.9	43.7	1.8	27.5	20.0
Vic.	64.6	3.7	230.9	13.2	31.9	1.8	27.1	18.7
Qld	37.3	3.1	211.7	17.8	37.5	3.2	30.1	24.1
SA	20.6	4.2	90.3	18.3	8.1	1.6	30.5	24.1
WA	21.0	3.1	110.4	16.4	13.1	1.9	28.8	21.4
Tas.	6.6	4.0	32.1	19.4	4.1	2.5	33.7	25.9
NT	3.6	4.9	16.1	21.9	3.5	4.8	37.4	31.6
ACT	51.1	36.5	17.7	12.6	–	–	56.1	49.2
Australia	**282.6**	**4.1**	**1 066.0**	**15.5**	**142.0**	**2.1**	**29.0**	**21.7**

Source: Wage and Salary Earners, Australia (Cat. no. 6248.0).

Between August 1987 and August 1997, the greatest decline in numbers of public sector employees occurred at the Commonwealth Government level, which experienced a decline of 154,000 employees (35%) (administrative data for the Australian Public Service[1] – from June to June in the respective years – indicate that employment in the service declined by 23,000). At the State and local level, the number of public sector employees declined by 7% and 9% respectively. This can be partly explained by government policies allowing private sector companies to compete with, or take over, established public sector functions.

Industry

In 1997, 73% of all public sector employees in Australia worked in three industries; education (29%), government administration and defence (23%), and health and community services (21%). Between 1987 and 1997, these three, and the personal and other services industries experienced growth. Against the backdrop of declining public sector employment between 1987 and 1997, there was an increase of 119,000 employees in these industries. The growth in the education area is associated with increases in the number of secondary school students continuing to Years 11 and 12 and the number of students undertaking tertiary studies (see *Australian Social Trends 1998,* Education – national summary table, p.74). All of the other industries in the public sector experienced a decline in total employment.

The three industries losing the largest numbers of employees were transport and storage (78,900); electricity, gas and water (75,300); and finance and insurance (68,900). During the same period, the greatest proportional increases in the private sector were in the communication services (285%); cultural and recreational services (100%); education (84%); and electricity, gas and water supply (66%) industries.

Characteristics of employees

Differences in the characteristics of public sector and private sector employees largely reflect their concentration in different occupations and industry groups. Differing characteristics include the proportion of female employees in each sector and the highest post-school qualification attained.

In 1997 female employees made up a greater proportion of the public sector work force

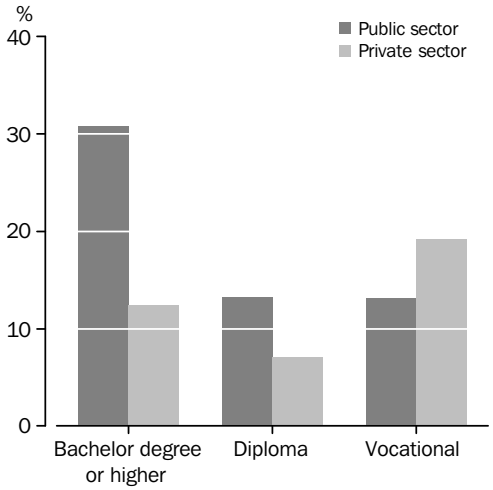
Public and private sector employees by industry, August 1987 and August 1997

	Public sector				*Private sector*			
	1997		*Change 1987–97*		*1997*		*Change 1987–97*	
Industry	'000	%	'000	%	'000	%	'000	%
Education	437.2	29.3	71.9	19.7	177.7	3.3	81.0	83.8
Government administration & defence	345.6	23.2	27.3	8.6	..	..	..	..
Health & community services	311.4	20.9	9.3	3.1	467.5	8.7	163.3	53.7
Communication services	106.9	7.2	–26.6	–19.9	23.5	0.4	17.4	285.2
Personal & other services	86.5	5.8	10.2	13.4	170.7	3.2	48.4	39.6
Transport & storage	66.3	4.4	–78.9	–54.3	225.5	4.2	75.4	50.2
Electricity, gas & water supply	50.7	3.4	–75.3	–59.8	9.8	0.2	3.9	66.1
Property & business services	26.7	1.8	–26.8	–50.1	719.5	13.4	274.3	61.6
Finance & insurance	9.2	0.6	–68.9	–88.2	252.3	4.7	18.7	8.0
Cultural & recreation services	24.0	1.6	–5.0	–17.2	162.5	3.0	81.1	99.6
Construction	11.3	0.8	–33.0	–74.5	319.1	5.9	73.8	30.1
Goods producing industries(a)	12.0	0.8	–51.9	–81.2	1 020.9	19.0	–90.8	–8.2
Wholesale and retail trade(b)	2.7	0.2	–4.7	–63.5	1 836.3	34.1	362.6	24.6
Total	**1 490.6**	**100.0**	**–252.2**	**–14.5**	**5 385.3**	**100.0**	**1 109.0**	**25.9**

(a) Includes agriculture, forestry, fishing, mining and manufacturing industries.
(b) Includes accommodation, cafes and restaurants.

Source: Wage and Salary Earners, Australia (Cat. no. 6248.0).

Highest post-school qualification of employees by sector, 1996



Source: Unpublished data, 1996 Census of Population and Housing.

than the private sector work force. Just over half (52%) of public sector employees were female, compared to 43% of private sector employees. In 1987, females made up 42% of public sector employees and 41% of private sector employees. While this trend may reflect higher levels of recruitment of women into the public sector in association with the dominance of teaching and medical services in the public sector, it also partly reflects the relative decline in the number of male employees due to the loss of many traditionally male occupations.

Public sector employees are more likely to have a post-school qualification, particularly a degree or diploma, than private sector employees. In 1996, 57% of all public sector employees had a post-school qualification compared to 39% of all private sector employees. Public sector employees were more than twice as likely to have a bachelor degree or higher and were also more likely to have attained a diploma. On the other hand, the most common post-school qualification attained by private sector employees were vocational qualifications (19%). The most common field of study by public sector employees was in education (20%), of which 69% were bachelor degrees or higher. This was followed by health (16%). The large proportion of public sector employees with an education or health qualification reflects the large number of teachers and nurses employed in public schools and hospitals respectively.

Endnotes

1 Public Service and Merit Protection Commission, 1998, *APS Statistical Bulletin 1996–1997*, AGPS, Canberra.

Income and expenditure

Income — national summary

INCOME DISTRIBUTION	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
GDP per capita (1989–90 prices)	$'000	20.0	20.1	20.9	21.4	21.8	21.3	21.2	21.6	22.3	23.0	23.6
Household disposable income per capita	$'000	9.7	10.4	11.3	12.5	13.7	14.1	14.6	15.0	15.5	16.4	17.3
Personal income tax as a proportion of taxable income	%	24.3	24.8	23.8	24.1	23.1	22.4	21.9	22.2	22.0	22.1	22.7
Share of equivalent income going to top quintile (of all income units)	%	n.a.	n.a.	n.a.	n.a.	37.7	n.a.	n.a.	n.a.	n.a.	37.8	37.6
Share of equivalent income going to bottom quintile (of all income units)	%	n.a.	n.a.	n.a.	n.a.	7.6	n.a.	n.a.	n.a.	n.a.	7.2	7.3
Gini coefficient (of all income units)	no.	0.41	n.a.	n.a.	n.a.	0.42	n.a.	n.a.	n.a.	n.a.	0.44	0.44
Median gross weekly income of couple with dependants income units	$	550	n.a.	n.a.	n.a.	755	n.a.	n.a.	n.a.	n.a.	842	849
Median gross weekly income of one parent income units	$	220	n.a.	n.a.	n.a.	279	n.a.	n.a.	n.a.	n.a.	349	352

SOURCES OF INCOME	Units	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Wages and salaries as main source of income (of all income units)	%	58.7	n.a.	n.a.	n.a.	58.3	n.a.	n.a.	n.a.	n.a.	56.8	55.5
Wages, salaries and supplements as a proportion of GDP(I)	%	50.8	50.4	49.0	48.3	49.3	50.2	50.1	49.6	49.1	49.1	49.1
Main income source from government payments (of all income units)	%	27.7	n.a.	n.a.	n.a.	26.7	n.a.	n.a.	n.a.	n.a.	28.8	29.0
Main income source from government payments (of couples with dependants income units)	%	8.4	n.a.	n.a.	n.a.	8.4	n.a.	n.a.	n.a.	n.a.	11.4	11.0
Main income source from government payments (of one parent income units)	%	64.4	n.a.	n.a.	n.a.	61.3	n.a.	n.a.	n.a.	n.a.	59.4	58.7
Mean total weekly earnings of all employees	$	368	384	411	441	475	494	510	526	533	551	574
Mean total weekly earnings of full-time adult employees	$	436	462	497	538	571	597	616	641	658	690	724
Mean weekly ordinary time earnings of full-time non-managerial adult employees	$	384	406	433	466	495	521	541	558	578	608	634
Female/male ratio of mean total full-time adult weekly earnings	no.	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

INCOME SUPPORT	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Aged on age pension	%	62.7	61.5	60.2	59.2	59.3	61.0	62.8	64.3	63.0	62.7	64.4
Age pensioners	'000	1 322	1 329	1 334	1 340	1 376	1 446	1 516	1 582	1 579	1 603	1 680
Male age pensioners	'000	408	405	403	404	418	448	481	514	545	570	598
Female age pensioners	'000	914	924	931	936	957	998	1 034	1 068	1 034	1 033	1 082
Unemployment allowees	'000	553.7	478.0	389.8	419.8	676.7	851.8	913.8	878.3	822.6	846.6	829.9
Disability support pensioners	'000	289.1	296.9	307.8	306.7	334.2	378.6	406.6	436.2	464.4	499.2	527.5
Sole parent pensioners	'000	248.9	238.7	239.5	248.9	265.7	287.2	298.4	313.4	324.9	342.3	358.9
Full weekly benefit received by a couple with two children	$	219	243	262	288	310	326	339	347	355	370	391
GDP(I) spent on income support	%	6.1	5.8	5.4	5.4	6.3	7.2	7.5	7.7	7.4	7.4	7.5

EXPENDITURE	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Consumer price index (Base year 1989–90 = 100.0)	no.	80.4	86.3	92.6	100.0	105.3	107.3	108.4	110.4	113.9	118.7	120.3
Private final consumption expenditure per capita (1989-90 prices)	$'000	11.8	12.1	12.5	12.8	12.7	12.9	13.2	13.4	13.9	14.3	14.7

Reference periods: Data for income distribution, sources of income (except mean weekly earnings data which are at May), and expenditure are for the year ending 30 June. Income support data (except full benefit received and GDP spent which are for the year ending 30 June) are at June.

Income — State summary

INCOME DISTRIBUTION	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Gross State product per capita (market price)	$'000	1995–96	27.5	28.1	23.7	24.1	30.1	21.9	27.4	34.2	26.9
Household disposable income per capita	$'000	1995–96	18.1	17.9	15.5	16.2	16.5	14.8	16.1	23.1	17.3
Share of equivalent income going to top quintile (of all income units)	%	1995–96	38.7	36.2	36.7	37.4	39.2	35.6	n.a.	33.8	37.6
Share of equivalent income going to bottom quintile (of all income units)	%	1995–96	7.2	7.5	7.5	7.7	6.5	8.4	n.a.	6.8	7.3
Gini coefficient (of all income units)	no.	1995–96	0.46	0.42	0.44	0.44	0.45	0.41	n.a.	0.41	0.44
Median gross weekly income of couple with dependants income units	$	1995–96	871	853	828	872	803	751	n.a.	1 092	849
Median gross weekly income of one parent income units	$	1995–96	310	420	342	374	376	*343	n.a.	*473	352

SOURCES OF INCOME	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Wages and salaries as main source of income (of all income units)	%	1995–96	56.5	55.7	53.2	49.6	57.4	55.4	n.a.	68.8	55.5
Main income source from government payments (of all income units)	%	1995–96	28.7	28.4	30.6	33.5	26.1	32.3	n.a.	15.7	29.0
Main income source from government payments (of couple with dependants income units)	%	1995–96	13.0	8.6	9.8	11.7	11.7	*15.8	n.a.	*8.9	11.0
Main income source from government payments (of one parent income units)	%	1995–96	65.2	49.7	61.4	54.1	62.7	*48.3	n.a.	*37.9	58.7
Mean total weekly earnings of all employees	$	1996	598	581	540	528	560	514	611	658	574
Mean total weekly earnings of full-time adult employees	$	1996	748	726	685	674	735	647	752	824	724
Mean weekly ordinary time earnings of full-time non-managerial adult employees	$	1996	646	633	613	602	653	587	663	711	634
Female/male ratio of mean total full-time adult weekly earnings	no.	1996	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8

INCOME SUPPORT	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Aged on age pension	%	1997	62.2	64.1	62.5	67.3	61.9	63.4	64.7	48.5	64.4
Age pensioners(a)	'000	1997	574.6	430.9	277.5	161.7	136.4	45.0	5.0	13.4	1 680.2
Male age pensioners	'000	1997	200.9	151.2	99.8	57.1	47.6	15.6	1.9	4.3	597.9
Female age pensioners	'000	1997	373.7	279.7	177.7	104.7	88.8	29.5	3.1	9.1	1 082.4
Unemployment allowees	'000	1997	261.9	201.0	173.1	74.5	68.0	28.4	12.4	10.7	829.9
Disability support pensioners(a)	'000	1997	181.0	122.6	94.3	48.9	44.4	18.4	4.1	4.8	527.5
Sole parent pensioners(a)	'000	1997	120.0	78.7	73.8	30.0	35.6	10.7	4.9	5.0	358.9

(a) Components do not add to total because total for Australia includes pensions paid to people living overseas.

Reference periods: Data for income distribution, sources of income (except mean weekly earnings data which are at May) are for the year ending 30 June. Income support data are at June.

Income — definitions and references

Adult employees — employees aged 21 or over, or those who are paid at the full adult rate.
Reference: *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

Age pensioners — people receiving full or partial age pension excluding associated wife's or carer's pension. Between 1 July 1995 and 2012, the qualifying age for age pension eligibility for women is gradually being raised from 60 to 65 years. At 30 June 1997 the qualifying age for women was 60.5 years.
Reference: Centrelink, *DSS Customers: A statistical overview*.

Aged — population meeting age criteria for the age pension at 1 July 1995 (men 65 and over and women 60 and over).
Reference: *Estimated Resident Population by Sex and Age: States and Territories of Australia* (Cat. no. 3201.0).

Consumer price index — a measure of change over time in the retail price of a constant basket of goods and services which is representative of consumption patterns of employee households in metropolitan areas.
Reference: *The Australian Consumer Price Index: Concepts, Sources and Methods* (Cat. no. 6461.0).

Disability support pensioners — persons receiving a pension due to a physical, intellectual or psychiatric impairment of 20% or more, resulting in a continuing inability to work or be retrained to work 30 hours or more per week within the next two years.
Reference: Centrelink, *DSS Customers: A statistical overview*.

Disposable income — gross income less personal income tax (including the Medicare levy).
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Employees — all wage and salary earners who received pay for any part of the reference period.
Reference: *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

Equivalent income — disposable income adjusted, using simplified Henderson equivalence scales, to allow comparison between different types of income units. The scales reflect assumptions about how different characteristics e.g. size and composition, relate to the amount of income different types of income units need to achieve an equivalent standard of living.
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Female/male ratio of mean total full-time adult earnings
Reference: *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

Full weekly benefit income received by a couple with two children — the maximum weekly social security benefit (including family allowances) available to an adult couple, with one child aged under 5 years and one child aged between 5 and 13 years. Excludes any rent assistance which may be available.
Reference: Department of Social Security, unpublished data.

Full-time employees — employees who usually work 35 hours or more a week, or the agreed hours of a full-time employee.
Reference: *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

GDP (gross domestic product) — an aggregate measure of the value of economic production in a year. The series used are the average (GDP(A)) based on 1989-90 prices and the income-based measure, (GDP(I)) calculated using current prices. All GDP figures refer to GDP(A) except where GDP(I) is specified.
Reference: *Australian National Accounts: National Income, Expenditure and Product* (Cat. no. 5204.0).

GDP(I) spent on income support — special appropriations under the Social Security Act for income support as a proportion of GDP(I).
Reference: Department of Social Security, *Annual Report*.

Gini coefficient — an index for measuring inequality of income distribution. The index, always between 0 and 1, is low for populations with relatively equal income distributions and high for populations with relatively unequal income distributions.
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Gross income — cash receipts, that are of a regular and recurring nature, before tax or any other deductions are made.
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Gross State product — a similar measure to GDP but based on State income estimates.
Reference: *Australian National Accounts: State Accounts* (Cat. no. 5220.0).

Household disposable income per capita — where household disposable income, as measured in the Australian National Accounts, is household income less income tax and other direct taxes, fees, fines etc. charged by the government, consumer debt interest and transfers overseas. The population used is the mean resident population for the financial year.
Reference: *Australian National Accounts: National Income, Expenditure and Product* (Cat. no. 5204.0); *Australian National Accounts: State Accounts* (Cat. no. 5220.0).

Income unit — one person, or group of related persons within a household, whose command over income is assumed to be shared. Income sharing is considered to take place between married (registered or de facto) couples, and between parents and dependent children.
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Main income source from government payments — government pensions or allowances form the largest component of usual income.
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Managerial employees — adult managerial, executive and professional employees who are in charge of a significant number of employees or have significant responsibilities in the conduct or operations of the organisation and who may not receive payment for overtime.
Reference: *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

Mean total weekly earnings — average total weekly earnings of employees including ordinary time earnings plus overtime earnings.
Reference: *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

Mean weekly ordinary time earnings of full-time non-managerial adults
Reference: *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

Income — definitions and references continued

Median weekly income — the level of weekly income at which half the income units have higher incomes and half have lower incomes.
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Ordinary time — employee's agreed hours of work including annual leave, paid sick leave and long service leave.
Reference: *Employee Earnings and Hours, Australia* (Cat. no. 6306.0).

Personal income tax as a proportion of taxable income — net income tax levied on individuals (including the Medicare levy minus rebates and other credits) expressed as a percentage of taxable income (i.e. gross income or profits minus allowable tax deductions).
Reference: *Government Finance Statistics, Australia: Concepts, Sources and Methods* (Cat. no. 5514.0); *Taxation Statistics,* Australian Taxation Office.

Private final consumption expenditure per capita — expenditure on goods and services by persons and private non-profit institutions serving households. Includes personal expenditure on motor vehicles and other durable goods and the imputed rent of owner-occupied dwellings. Excludes the purchase and maintenance of dwellings by persons and capital expenditure by unincorporated businesses and non-profit institutions. Private final consumption expenditure per capita data are expressed in Australian dollars at constant 1989–90 prices and are based on the mean resident population of each year.
Reference: *Australian National Accounts: National Income, Expenditure and Product* (Cat. no. 5204.0).

Share of gross/equivalent income going to top/bottom quintile — share of gross/equivalent income received by the 20% of income units with the highest/lowest incomes.
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Sole parent pensioners — recipients of the sole parent pension. In 1989, the supporting parent benefit and A class widow pensions were combined to form the sole parent pension. Figures prior to 1989 include these two pensions.
Reference: Department of Social Security, *Annual Report*.

Unemployment allowees — the number of recipients of unemployment benefit prior to 1991 and of Job Search allowance, Newstart allowance and Youth Training allowance since then.
Reference: Department of Social Security, *Annual Report*.

Wages and salaries as a main source of income — wages and salaries form the largest component of usual income.
Reference: *Income Distribution, Australia* (Cat. no. 6523.0).

Wages, salaries and supplements as a proportion of GDP(I) — includes wages, salaries and employer contributions to superannuation, lump sum workers compensation, termination and redundancy payments.
Reference: *Australian National Accounts: National Income, Expenditure and Product* (Cat. no. 5204.0).

Poverty: different assumptions, different profiles

INCOME DISTRIBUTION

Using the Henderson Poverty Line as a benchmark, there were over 3.4 million Australians living in poverty in 1995–96. However, other poverty lines can give quite different results.

The term 'poverty' means different things to different people. Some think of poverty as being without a home or food. Others may think that a family is poor if it cannot afford to send the children on school excursions. An elderly couple living in a wealthy suburb may feel poor because they find it difficult to pay high council rates for their home.

The literature on poverty reflects these various views. Briefly, experts recognise three different approaches to defining poverty:

- *absolute poverty*, where a family's income does not pay for basic necessities such as shelter and food;
- *relative poverty*, where a family's income is low in comparison to the income of other families; and
- *subjective poverty*, where a poor family is defined as one that believes its income is inadequate for its needs.

People in relative poverty

In developed countries such as Australia, poverty studies usually adopt the relative approach. All families are ranked according to levels of equivalent income, and a poverty line is drawn at some point on the distribution. If the family's income is below that line, then they are said to be in poverty.

People in poverty, 1995–96

	Net income less than	
	HPL(a) $496(c)	*50% of MEI(b) $353(c)*
	'000	'000
Income units	1 825	905
People	3 412	1 812
Children	1 026	581
	%	%
Income units	20.5	10.2
People	19.1	10.1
Children	21.5	12.2

(a) Henderson Poverty Line.
(b) Median equivalent income for all income units.
(c) Weekly net income for two adults and two children.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

Units of measurement

Income units are made up of one person or a group of related persons within a household, whose income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples and between parent(s) and dependent children.

Net income is gross income minus direct taxes.

Poverty Lines are threshold income values. If a family's income is below the value applicable for that family, then that family is deemed to be in poverty.

Dependent children are those aged less than 15 years, or 15–24 and both studying full-time and living with parent(s) and do not have a spouse or offspring of their own living with them.

However, the level at which that poverty line is drawn is subjective. As illustrated in the table opposite, poverty lines set at different levels result in different estimates of the number of people in poverty.

The first column presents estimates of people in poverty using the 'All Costs' Henderson Poverty Line (HPL), the line most commonly used in Australian studies. It was adopted by the Commission of Inquiry into Poverty in the early 1970s[1] and has been regularly updated since then[2]. In 1995–96, the HPL for two adults (both working) and with two teenage children was net income of $496 per week.

The second poverty line shown uses an approach commonly used in European countries and in international comparisons of poverty. The line is set at 50% of median equivalent income (MEI) for all income units. The resultant line for the same family unit of two adults and two children was a weekly net income of $353.

The results are clearly different. In 1995–96 there were approximately 8.9 million income units in private dwellings in Australia. Of these, 1.8 million income units (3.4 million people, 1 million of whom were dependent children) were below the HPL.

The alternative poverty measure of 50% of MEI produced a much lower estimate of those in poverty: 904,800 income units or 1.8 million people.

Income units below two poverty lines, 1995–96

	Below HPL	*Below 50% of MEI*
Income unit type	%	%
One-person	*61.1*	*55.7*
Under 25	19.9	31.8
25–59/64(a)	22.6	18.3
Elderly(b)	18.7	5.7
Couples only	*12.9*	*15.8*
Under 65	8.7	9.6
Elderly(c)	4.2	6.1
Couple with children	17.8	20.2
One-parent	8.1	8.3
All units	**100.0**	**100.0**
	'000	'000
All units	**1 825**	**905**

(a) Women aged 25–59 and men aged 25–64, the upper bounds reflecting ages below eligibility for government Age Pension.
(b) Women aged 60 years and over; men aged 65 years and over.
(c) Reference person aged 65 years and over.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

Equivalence scales

When measuring income poverty, it is necessary to adjust family (or income unit) incomes to take account of the different living costs to families of different sizes and composition. Obviously, a family with three children needs more income than a single person to achieve a similar standard of living. These adjustments are made by applying a set of equivalence scales to family income and deriving an equivalent income.

Many different sets of equivalence scales have been devised and there is no general agreement among analysts about the most appropriate set to use. The choice is subjective, and affects the types of families deemed to be in poverty. For example, those that give high costs to providing for children will result in more families with children being deemed to be in poverty.

Two sets of equivalence scales have been used in this review. The first, called the Henderson Simplified Scales (used by the Commission of Inquiry into Poverty) adjusts the net income of families according to: numbers of family members, the differing costs of family members depending on their age and engagement in employment, and, for the family as a whole, their housing costs. These Henderson Scales are applied to income for use with the Henderson Poverty Line (HPL). The second set of equivalence scales is simpler, and is used before applying the poverty line set at 50% of Median Equivalent Income (MEI). These scales, devised by the Organisation for Economic Cooperation and Development (OECD), accommodate differences only in the numbers of adults and children in families.

There were also some marked differences in the types of income units below the two poverty lines. In both cases, most of the 'poor' were one-person units. However, with the HPL a higher proportion of those in poverty were elderly units (19%). Using the line of 50% of MEI, very few of the poor were elderly units, and a high proportion (32%) were young one-person units.

Sensitivity of poverty measure

The numbers of people (or units) in poverty can be greatly affected by small changes in the level of the line, because of the tendency for incomes to be clustered.

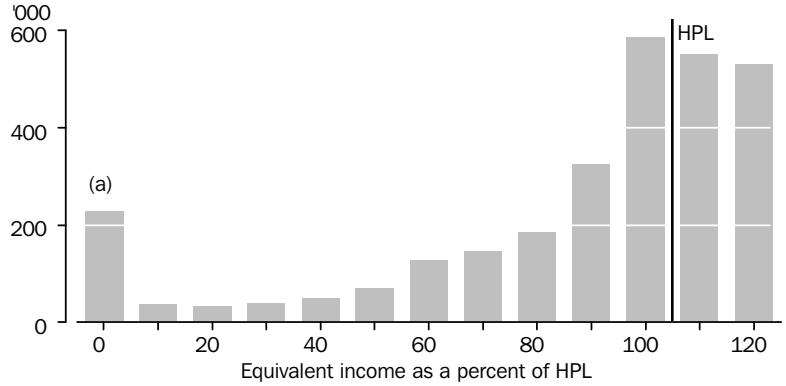
Income clustering is particularly common for elderly people because of the flat rate of pension paid by government. This means that all those on the full rate of age pension receive almost exactly the same amount, with only minor differences due to the added value of rental assistance.

If this pension rate is very close to the particular poverty line chosen for analysis, then it takes only a very small change in either the pension rate or the poverty line to markedly alter the numbers deemed to be in poverty.

For elderly single people in 1995–96, the HPL fell just above the maximum rate of their pension. The result was that, of the 341,000 elderly single units below the HPL, some 226,000 were clustered between 90% and 100% of the poverty line. Therefore, a very slight change in the pension rate or the value of the poverty line may have excluded this group from measured poverty. It would not, however, have reflected any real changes in the purchasing power or living conditions of this group.

For this reason, an additional measure of a range across the poverty line is often used. Poverty may be measured by including those groups that are 10% or 20% above the HPL. Again, this results in different numbers and profiles of the poor.

Income units with low income, 1995–96



(a) Income units with nil or negative income.

Source: Unpublished data, Survey of Income and Housing Costs, 1995-96.

People at risk

The risk of poverty for different groups of people is measured using poverty rates. This is the proportion of the group who fall below the poverty line.

Again, there were differences between the two approaches. The income units most likely to be below the HPL were elderly one-person units (37% poverty rate) and one-parent units (34%). However, using the 50% of MEI measure, young one-person units (21% poverty rate) and one-parent units (17%) were most likely to be below the poverty line.

Poverty rates for income units, 1995–96

	Below HPL	*Below 50% of MEI*	*All units*
Income unit type	%	%	'000
One-person			
Under 25	26.9	21.3	1 347
25–44	17.0	7.4	1 379
45–59/64(a)	29.5	10.5	605
Elderly(b)	37.3	5.6	915
Total one-person	*26.3*	*11.9*	*4 245*
Couples only			
Under 65	10.5	5.8	1 513
Elderly(c)	11.4	8.2	675
Total couples only	*10.8*	*6.5*	*2 188*
Couples with children	16.1	9.1	2 019
One-parent	34.0	17.2	436
All units	**20.5**	**10.2**	**8 888**

(a) Women aged 45–59 and men aged 45–64, reflecting age below eligibility for government Age Pension.
(b) Women aged 60 years and over; men aged 65 years and over.
(c) Reference person aged 65 years and over.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

The largest variation in poverty rates between the two measures was in the rates for aged one-person units. Approximately 37% of these were below the HPL compared to 6% below the alternative poverty line of 50% of MEI.

This divergence in poverty rates for the same group is due in part to the effects of clustering of aged peoples' incomes and the close relationship that exists between government pension rates and the HPL.

Statistical units

The discussion in this article has been based on 'income units' as the unit of analysis. This means that it was assumed that sharing of income within families and households takes place only within the restricted nuclear family of couples and parent(s) and dependent children.

The choice of the statistical unit for analysis has a major impact on poverty estimates. Generally, the estimates of poverty rates decrease as the size of the statistical unit increases. That is, there are higher proportions of income units in poverty than of families, and higher proportions of families than households.

The main difference between income units and families is that, for income units, children aged 15–24 who are living with parents but are not full-time students are considered to be financially independent and therefore constitute separate one-person income units.

Yet some of these young people have very low income. In 1995–96, around 104,000 young one-person units had no income. Many of these were still living with parents. This raises the question of whether these young people are actually financially independent of their parents as classified in the surveys.

Because the classification of youth as dependent or non-dependent is so subjective in poverty analysis, it is useful to look not only at their own income but also that of their parents.

Young income units living with parents

In 1995–96, 918,000, or two out of every three one-person income units aged 15–24, were living with parents. Of these, 51% were living rent free. Of these young income units, 249,000 had income below the HPL. This gives a poverty rate for this group of 27%. However, when the income of their parents is examined, it is clear that most of them live in

'Independent' youth living with parents, 1995–96

	Youth income		
	Below HPL	*At or above HPL*	*All Youth*
Parental income	'000	'000	'000
Below HPL	35.3	71.6	106.9
At or above HPL	214.1	596.8	810.9
All Parents	**249.4**	**668.4**	**917.8**

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

larger family units that are not below the poverty line. Of those 249,000 youth who were in poverty when their own income was measured, only 35,000 had parents who were also deemed to be in poverty according to the HPL. This represents only 4% of all 'independent' young income units who are living with parents. This is a very different picture from their poverty rate of 27% when their income alone was taken into account.

Of course, this much lower figure of 4% assumes the other extreme, that income is shared evenly between parents and children. The real situation may fall somewhere in between these two conditions. However, it does serve to illustrate that different measures will produce quite different poverty profiles.

Resources other than income

While estimates of poverty based on cash income vary according to the measures used, even more variation is likely when the definition of economic resources is extended. For example, living standards of families are also affected by in-kind income such as fringe benefits and pensioner concessions. Services such as free child care by relatives will also increase the overall resources available to families who would otherwise have to pay for them.

The government also provides substantial indirect benefits through expenditure on education, health, housing and welfare.

Receipt of irregular, lump sum money and benefits from families' holdings of assets may also be important.[3]

Wealth

A family's stock of wealth is particularly important for its economic wellbeing, and may affect it in a number of ways. Some forms of wealth provide a return in the form of regular income. This interest, rent or dividends has been included in cash income for poverty analysis.

However, for most Australian families, their major wealth holdings are tied up in their homes. While home ownership may not provide for a cash return in the form of income, it offers other economic benefits to its owners such as cheaper housing. It may also offer greater economic security in that such an asset may be borrowed against or realised through sale.

In recognition of the varying costs of housing, Henderson provided an alternative poverty line for income after housing costs had been deducted. By applying this 'After Housing Costs' HPL to the 1995–96 data, the poverty rate is reduced from 20% of income units to 18%.

The reduction in measured poverty when housing costs have been taken into account was much greater for the elderly as they have very high rates of home ownership. In the case of aged one-person units, the proportions below the 'All Costs' HPL and the 'After Housing Costs' HPL were 37% and 9% respectively. This reflects the fact that about 69% of the elderly single units below the 'All Costs' HPL in 1995–96 owned their homes outright.

Other poverty measures

In the above analysis, poverty is measured indirectly – that is, via the cash income resources available to families to purchase goods and services. However, in other parts of the world, Scandinavian countries in particular, more direct measures are used to examine the actual living standards achieved by families.

In such studies, families are questioned on their ownership of particular goods, how well they manage on their income and whether there are things they have to do without because of lack of income. In Australia there have been a number of living standards projects that have caused a resurgence of interest in these types of measures.[4,5,6]

In their recent study of a sample of people receiving social security pensions and benefits, Travers and Robertson reported that there was a weak correlation between those who were 'poor' on the income measure and those who were 'poor' on the more direct living standards measure.[5]

It is fairly safe to assume that the use of this type of measurement technique would change the estimates and profiles of those groups in Australia who are most in need.

Endnotes

1 Commission of Inquiry into Poverty, 1975, First Main Report, *Poverty in Australia*, AGPS, Canberra.

2 Institute of Applied Economic and Social Research (IAESR), June 1996, *Poverty Lines*: *Australia*, IAESR, Melbourne.

3 Australian Bureau of Statistics, 1995, *A Provisional Framework for Household Income, Consumption, Saving and Wealth,* Cat. no. 6549.0, ABS, Canberra.

4 Travers, P., Richardson, S. 1993, *Living Decently; Material Well-being in Australia*, Oxford University Press, SA.

5 Travers, P., Robertson, F. 1996, *Relative Deprivation Among DSS Clients: Results of a Pilot Survey,* National Institute of Labour Studies, Monograph Series No 2, NILS, SA.

6 de Vaus, D. 1996, The Australian Living Standards Study in Australian Institute of Family Studies, *Family Matters,* No 43, Autumn.

Income distribution and life cycle

INCOME DISTRIBUTION

'Middle-aged' income units have the highest incomes – partly because of the high proportion of income units in this group which have two earners, and partly because of the peak in individual earnings at 45–54 years for men and 35–44 years for women.

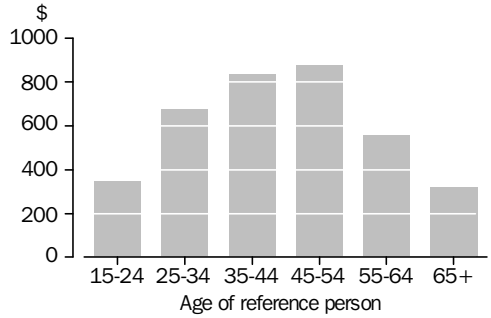
Income levels vary considerably over a person's life cycle. In 1995–96 'middle-aged' income units had the highest incomes, averaging $877 per week for those where the reference person was aged 45–54 and $836 per week for those where the reference person was aged 35–44. The youngest (reference person aged 15–24) and oldest (reference person aged 65 and over) income units had the lowest average incomes – $346 and $319 per week respectively.

Earning capacity of income units

The rise and fall in income over the life cycle is associated with two main factors. First, the labour force participation and the earning capacity of individuals increase with age, peaking at middle age, and declining rapidly after 60 years. In 1995–96 earned income peaked at 45–54 years for men and 35–44 years for women. Second, the number of earners in an income unit varies over the life cycle. Couple income units, with or without children, predominate in the middle age ranges. Couples have much greater earning potential than one-person income units which are concentrated in the youngest and oldest age groups. In 1995–96, 40% of middle-aged income units had two earners compared with 23% of all income units.

In 1995–96, 62% of all income units derived most of their income from wages and salaries or from self-employment. These units had the highest incomes, averaging $816 and $916 per week respectively. Those dependent on government pensions and allowances as their main source of income (29%) had the lowest, averaging $238 per week.

Mean weekly income of income units, 1995–96



Source: Income Distribution, Australia, 1995–96 (Cat. no. 6523.0).

Income

Income – regular and recurring cash receipts including moneys received from wages or salary; government pensions and allowances; profit or loss from own business or partnership; receipts from ownership of assets such as rent, interest, dividends; and other regular receipts such as superannuation, workers' compensation, child support, scholarships.

Gross income – regular cash receipts before tax or other deductions are made.

Principal source of income – source from which the most income is received. If there is no source of income, only losses, the principal source is undefined.

Earned income – comprises income from wages, salaries, own business or partnership.

Earners – persons (excluding dependent children) who receive income from wages or salary, who are engaged in their own business or partnership, or are silent partners in a business or partnership.

Income unit

Income unit – one person or a group of related persons within a household, whose income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples and between parents and dependent children.

Dependent children – all persons aged under 15, and persons aged 15–24 who are: full-time students; live with a parent, guardian or relative; and do not have a spouse or child of their own living with them.

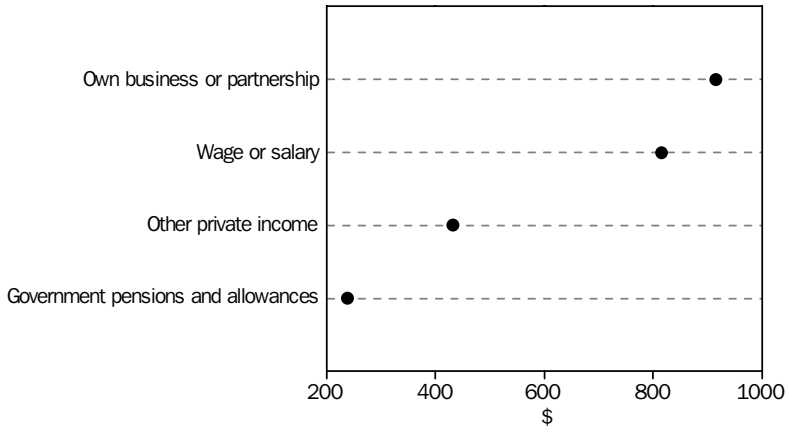
Reference person – the male partner in a couple income unit, the parent in a one-parent income unit and the person in a one-person income unit.

Young singles

The early years of adulthood, 15–24 in particular, are typified by low income. This is associated with high levels of participation in education, low levels of participation in full-time work, relatively low rates of pay for both full-time and part-time work, and relatively high rates of dependence on family and government pensions and allowances. (See *Australian Social Trends 1997,* Youth income, pp. 121–124).

In 1995–96, one-person income units aged under 35 (25% of all income units) had average incomes of $387 per week, around

Mean weekly income of income units by principal source, 1995–96



Source: Income Distribution, Australia, 1995–96 (Cat. no. 6523.0).

two thirds of the average for all income units ($609 per week). There were 14% who received less than $120 per week, 69% received less than $500 per week and fewer than 3% received $1,000 or more per week. While the majority received most of their income from earnings, a further 24% had no earners, 4% received most of their income from other private sources, such as scholarships, while 17% received most of their income in the form of government pensions and allowances, mainly student allowances (paid through the Austudy and Abstudy schemes) and unemployment allowances provided by the Department of Social Security.

Young couples without children

On average, the partners in young couple income units (reference person aged under 35) are older than one-person income units under 35, many of whom are still in full-time education. The partners are more likely to be employed, to have been working for longer and to be earning more than young

Gross weekly income of selected life cycle groups, 1995-96

Gross weekly income of income unit ($) (a)	*One-person under 35*	*Couple only, reference person under 35*	*Couple with dependent children*	*One-parent income unit*	*Couple only, reference person 55–64*	*Couple only, reference person 65 and over*	*One-person 65 and over*	*All income units*
	%	%	%	%	%	%	%	%
Less than –								
2000		96.3	94.1		97.4			97.6
1500		88.2	85.1		94.1	98.1		94.1
1200	98.4	69.8	73.1	98.8	87.7	96.0		88.6
1000	97.2	43.5	61.3	94.8	81.8	94.5		82.4
800	93.7	24.9	45.6	90.4	71.6	92.1		74.3
700	90.1	18.4	38.7	88.0	64.1	89.1	98.6	69.7
600	82.2	14.5	28.1	81.1	57.3	85.3	97.6	62.6
500	68.6	10.3	19.3	72.4	48.8	79.3	95.8	53.6
400	53.1	5.5	11.9	57.5	41.1	67.6	93.5	43.7
300	39.6	*3.3	5.9	38.5	27.9	39.2	86.5	33.0
200	29.8	* *	3.4	8.9	6.9	6.7	61.3	20.3
160	22.6	* *	2.6	4.4	5.7	4.9	10.0	10.7
120	13.7	* *	2.0	*2.3	4.9	*1.8	4.5	6.2
	'000	'000	'000	'000	'000	'000	'000	'000
Total	**2 264.6**	**355.6**	**2 019.4**	**435.8**	**544.3**	**675.3**	**811.4**	**8 888.3**
	$	$	$	$	$	$	$	$
Mean income	387	1 092	976	433	658	429	226	609
Median income	375	1 056	849	352	510	321	184	457

(a) Includes income units with nil or negative income.

Source: Income Distribution, Australia, 1995–96 (Cat. no. 6523.0).

singles. In most cases both partners remain employed until the birth of their first child. In 1995–96, 83% of young couples without children were both working.

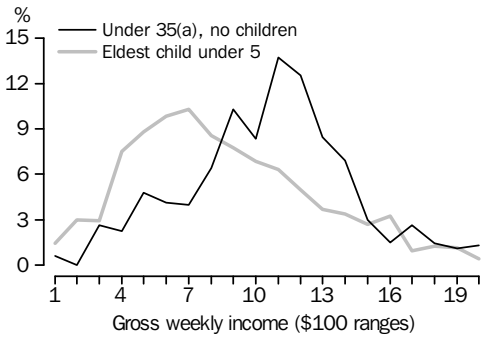
This increased earning capacity is reflected in higher incomes. In 1995–96 young couples had average incomes of $1,092 per week, almost three times the average of young singles. Only 10% of young couples without children received less than $500 per week and very few were dependent on government pensions and allowances for most of their income.

Couples with dependent children

Labour force participation of women with children diverges markedly from that of men. A large proportion of women give up full-time work to care for young children and many of these return to the labour force on a part-time basis when children are older (see *Australian Social Trends 1998,* Trends in women's employment, pp. 111–114).

In 1995–96, 44% of couple income units with young children (eldest under 5) had two earners compared to 83% of young couples without children. Incomes were consequently lower, averaging $925 per week. Incomes of couples with dependent children increase with age of children (and parents) as individual earnings peak and more women return to paid work. In 1995–96 the average weekly income of couples with older dependent children (eldest 15–24) was $1,080; 64% of these income units had two earners. Some 11% of all couples with dependent children were dependent on government pensions and allowances (e.g. unemployment, parenting and family allowances) for most of their income.

Income distribution of selected couple income units, 1995–96



(a) Age of reference person.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

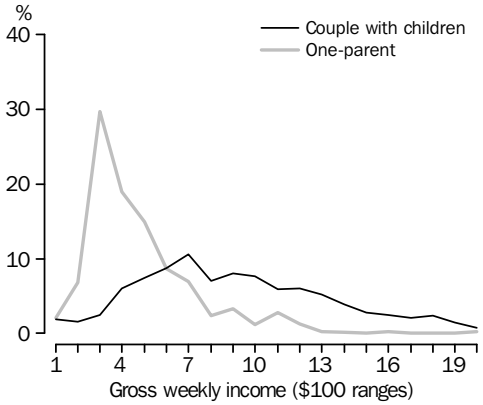
Number of earners and principal source of income of selected life cycle groups, 1995–96

		Number of earners			*Principal source of income(a)*			
	Mean weekly income	*None*	*One*	*Two*	*Wage or salary*	*Own business or partnership*	*Other private income*	*Government pensions and allowances*
Income unit type	$	%	%	%	%	%	%	%
One-person, under 35	387	23.9	76.1	..	72.2	1.6	4.3	17.1
Couple only, reference person under 35	1 092	*1.5	15.4	83.1	91.5	5.5	*1.0	*1.4
Couple with dependent children								
Eldest child under 5	925	10.2	45.6	44.2	77.2	10.8	*1.0	10.7
Eldest child 5–14	937	9.2	35.8	55.0	73.7	13.0	*1.2	11.1
Eldest child 15–24	1 080	10.7	25.0	64.2	72.9	12.6	*2.5	11.1
Total	*976*	*9.9*	*34.8*	*55.3*	*74.2*	*12.4*	*1.5*	*11.0*
One-parent income unit	433	53.4	46.6	..	35.1	*2.6	*3.0	58.7
Couple only, reference person 55–64	658	34.6	27.1	38.3	41.1	15.2	15.1	26.8
Couple only, reference person 65 and over	429	86.2	7.4	6.4	4.3	3.0	22.0	70.2
One-person, 65 and over	226	96.5	3.5	..	*1.1	*0.8	17.4	80.0
All income units	**609**	**34.3**	**42.5**	**23.2**	**55.5**	**6.5**	**7.0**	**29.0**

(a) Expressed as a percentage of all income units including those with no source of income.

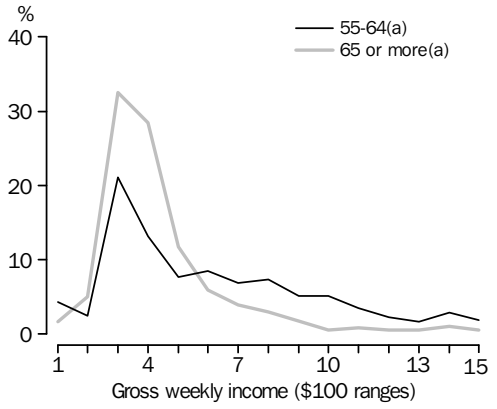
Source: Income Distribution, Australia, 1995–96 (Cat. no. 6523.0).

Income distribution of couple and one-parent income units, 1995–96



Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

Income distribution of older couple income units, 1995–96



(a) Age of reference person.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

One-parent income units

For a significant minority, a major life cycle transition is from couple with dependent children to lone parent (usually mother) with dependent children. The employment options for the one potential earner can be severely limited by the demands of caring for children alone so that, on average, income levels of one-parent income units are less than half that of couples with dependent children.

In 1995–96 the average weekly income of one-parent income units was $433. Most (72%) received less than $500 per week while only 5% received $1,000 or more. Over half (59%) of one-parent income units were dependent on government pensions and allowances (mainly the sole parent pension and family allowance) for all or most of their income. While almost half (47%) of lone parents had paid work, only 38% derived most of their income from earnings.

Early-retirement age (55–64 years)

Income levels decline significantly in the 55–64 years age group as many people, either by choice or necessity, switch from full-time to part-time work, or retire from the labour force altogether. In 1995–96 couples without dependent children (and reference person aged 55–64) received an average of $658 per week – 18% received more than $1,000 per week while 49% received less than $500 per week. About two thirds of these income units had one or more earners and 56% derived most of their income from earnings. A further 15% derived most of their income from other private sources such as superannuation, property and other investments. Over one quarter, 27% were dependent on government pensions and allowances (e.g. the disability support pension and unemployment allowance) for most of their income.

Older income units (65 years and over)

For older couples (reference person aged 65 years and over) labour force participation is much lower than those with a reference person aged 55–64. In 1995–96 only 14% of these units had one or more earners and 7% derived most of their income from earnings. The proportion deriving most of their income from superannuation, property and investments was higher (22%) as was the proportion (70%) dependent on government pensions – primarily the age pension. Consequently, income levels were much lower, averaging $429 per week. Only 5% received $1000 or more per week while 79% received less than $500.

Reflecting the difference in life expectancies between men and women throughout this century, the majority (74%) of older one-person income units (aged 65 years and over) are women. Labour force participation declines rapidly after 65 years of age and older women are less likely than their male cohorts to be employed, or to have ever had long-term paid employment. These factors contribute to older one-person income units having the highest rates of dependence on government pensions (80% in 1995–96), the lowest levels of employment (4%) and the lowest average incomes ($226 per week).

Spending patterns and life cycle

EXPENDITURE

In 1993–94, young couples without children paid more off their home mortgage principal ($63 per week) than any other life cycle group.

Household expenditure patterns are influenced largely by household composition and the needs, preferences and financial means of household members. These characteristics are closely linked to life cycle. While most household expenditure is on goods and services for day to day use, many households also purchase assets. For most households, the family home is the largest asset they will ever own. Equity in the family home and superannuation are the two main assets that Australians build up during their working lives.

In 1993–94, Australian households spent an average of $602 per week on goods and services such as food, clothing, transport, current housing costs, recreation and medical care. They also spent an average of $66 per week on selected assets: $18 on superannuation; $21 on home mortgage principal repayments; and $27 on home improvements.

In addition to their current income, households may finance their expenditure from a number of sources such as savings, lump-sum superannuation or insurance payouts, proceeds from disposal of property, cash gifts from other households, credit cards and loans. However, the level of household income is a major determinant of expenditure, and differences between life cycle groups in overall expenditure levels and patterns of expenditure are largely a reflection of differences in income for those groups (see *Australian Social Trends 1998,* Income distribution and life cycle, pp. 130–133).

Expenditure on goods and services and selected assets(a), 1993–94

	Average weekly expenditure	
	Goods and services	*Selected assets(a)*
Selected household types	$	$
One-person, under 35	395	33
Couple only, reference person under 35	722	115
Couple with dependent children only	*742*	*108*
Eldest child under 5	672	102
Eldest child 5–14	728	109
Eldest child 15–20	837	110
Couple with dependent and non-dependent children only	976	116
Couple with non-dependent children only	873	78
One-parent household	517	28
Couple-only, reference person 55–64	553	54
Couple-only, reference person 65 and over	407	11
One-person, 65 and over	210	4
All households	**602**	**66**

(a) Superannuation, home mortgage principal repayments and home improvements.

Source: Household Expenditure Survey, Australia, 1993–94: Household Characteristics (Cat. no. 6531.0) and unpublished data, Household Expenditure Survey, 1993–94.

Household expenditure

The 1993–94 Household Expenditure Survey (HES) provides estimates for average household expenditure on a vast range of commodities and services for private use. It excludes expenditure for business and other investment purposes. This review distinguishes two broad groups of household expenditure: expenditure on goods and services; and expenditure on selected assets.

Goods and services – refers to expenditure on goods and services which are consumed, either immediately/short-term (e.g. food, medications, entertainment, petrol, bus fares) or over a longer period (e.g. motor vehicles, household appliances). Includes *current housing costs* associated with the selected dwelling such as rent, mortgage interest payments, rates, house and contents insurance, repairs and maintenance, and interest on loans for home improvements.

Selected assets – includes expenditure on superannuation/annuities, mortgage principal payments on selected dwelling, and *home improvements* including additions, extensions, alterations, renovations, insulation and outside building or improvements (eg in-ground swimming pools, landscaping). Excludes expenditure on investments such as stocks, shares and rental property (which were not collected in the HES).

Selected dwelling – dwelling in which the household is living at the time of the survey.

Young singles

In 1993–94 young (under 35) one-person households spent an average of $395 per week on goods and services. About 25% of this went on current housing costs, a higher proportion than for any other life cycle group. They also spent a higher proportion than most other households on recreation (15%) but less than others on food (14%) and medical, health and personal care (4%).

Household expenditure patterns of selected life cycle groups, 1993–94

	Proportion of household budget spent on selected goods and services(a)				
	Food	*Transport*	*Current housing costs*	*Recreation*	*Medical, health & personal care*
Selected household types	%	%	%	%	%
One-person, under 35	13.5	13.9	25.3	14.9	4.4
Couple only, reference person under 35	14.8	15.1	19.6	14.7	5.1
Couple with dependent children only	*19.8*	*14.5*	*14.2*	*12.2*	6.3
Eldest child under 5	17.7	16.1	18.3	9.9	6.4
Eldest child 5–14	20.5	14.2	14.0	12.9	6.0
Eldest child 15–20	20.0	14.0	11.6	12.8	6.7
Couple with dependent and non-dependent children only	19.8	18.9	9.6	12.9	6.5
Couple with non-dependent children only	19.0	19.9	7.7	14.4	7.2
One-parent household	18.4	12.8	16.7	12.3	5.4
Couple-only, reference person 55–64	18.7	16.5	8.9	15.2	7.5
Couple-only, reference person 65 and over	21.0	13.8	10.6	13.0	9.1
One-person, 65 and over	21.1	11.0	15.8	11.4	8.3
All households	**18.4**	**15.5**	**14.2**	**13.2**	**6.4**

(a) Average weekly expenditure on each expenditure group expressed as a percentage of average weekly expenditure on all goods and services.

Source: Household Expenditure Survey, Australia, 1993–94: Household Characteristics (Cat. no. 6531.0).

Young singles spent an average of $11 per week on superannuation and $19 per week on home mortgage principal repayments.

Young couples without children

Young couple-only households (reference person aged under 35) spent an average of $722 per week on goods and services. They were more likely to be buying their own home than young singles and spent more on current housing costs, $141 per week, compared to $100 per week. However, the proportion of their total goods and services budget spent on current housing costs (20%) was lower than for young singles, but still relatively high compared to most other life cycle groups.

Compared to most other life cycle groups, young couples, like young singles, spent relatively small proportions of their budget on food (15%) and medical, health and personal care (5%), but a relatively high proportion on recreation (15%).

Young couples spent an average of $21 per week on superannuation, about the same amount per person as young singles. They also spent an average of $63 per week on home mortgage principal repayments, more than three times as much as young singles. This is partly because young couples were more likely to be purchasing a home (47% compared to 24%) and partly because those young couples who were purchasing a home made larger mortgage principal payments than young singles. Many of these young couples may have been aiming to get a head start on the purchase of their first home before starting a family.

Couples with children

Couples with young dependent children (eldest child under 5) spent an average of $672 per week on goods and services, $50 less than young couples without children. Incomes were also considerably lower because of the relatively low rate of full-time paid employment among women with young children (see *Australian Social Trends 1998*, Trends in women's employment, pp. 111–114). Average expenditure on goods and services increased with income and was highest ($976 per week) for older family households with both dependent and non-dependent children.

As equity in the family home increases, expenditure on mortgage interest declines and current housing costs consume less and less of the household budget. While the proportion was still relatively high (18%) for couples with young dependent children

Expenditure on selected assets, 1993–94

	Average weekly expenditure		
	Super-annuation	*Home mortgage principal*	*Home improve-ments*
Selected household types	$	$	$
One-person, under 35	10.60	19.30	3.00
Couple only, reference person under 35	21.20	62.60	31.30
Couple with dependent children only	*25.10*	*33.00*	*49.70*
Eldest child under 5	20.10	39.20	42.90
Eldest child 5–14	23.60	30.40	55.20
Eldest child 15–20	32.70	32.20	45.00
Couple with dependent and non-dependent children only	35.20	41.70	39.30
Couple with non-dependent children only	30.80	19.70	27.10
One-parent household	7.00	9.80	11.30
Couple-only, reference person 55–64	23.30	3.90	26.50
Couple-only, reference person 65 and over	0.80	0.90	9.00
One-person, 65 and over	—	0.40	3.10
All households	**18.40**	**20.80**	**26.80**

Source: Unpublished data, Household Expenditure Survey, 1993–94.

(eldest under 5), this declined rapidly over the life cycle – down to 8% for couples with non-dependent children only.

Couples with dependent children only, spent from 14% to 16% of their budget on transport, close to the average for all households. Those with non-dependent children spent a higher proportion on transport (20%) than other life cycle groups. This was because these households, with children of driving age, owned more vehicles, on average, than other life cycle groups. Couples with non-dependent children spent an average of $56 per week on motor vehicle purchases and $110 per week on motor vehicle running costs, each about double the average for all households.

As families have children they tend to spend a larger proportion of their budget on food. Overall, couples with children spent about 20% of their household budget on food, a much higher proportion than young couples without children. However they spent less per person on food, averaging from around $34 per week for couples with younger dependent children (eldest under 15) to $51 per week for older families with non-dependent children only. This compared to $53 per person per week for young couple-only households.

For the majority of couples with children, the proportion of the household budget spent on medical, health and personal care was about the same as for all households, while the proportion spent on recreation was generally lower, particularly for couples with young dependent children (eldest under 5).

Couples with children spent less than young couples without children on home mortgage principal repayments but, as family size increased and children grew older, they spent more on home improvements such as additions, extensions, renovations, insulation, in-ground swimming pools and landscaping.

Couples with older children (eldest over 14) spent more than younger families and young couples on superannuation. This could be partly because the partners in older families had higher earnings, on average, and partly because some of the older children were also employed and contributing to a superannuation fund.

One-parent households

One-parent households spent an average of $517 per week on goods and services. While they generally spent less than couples with dependent children, in keeping with their lower incomes and smaller households, they spent about the same amount per person on food ($32 per week) as couples with younger dependent children (eldest under 15). The proportions of their budgets spent on food (18%) and current housing costs (17%) were similar to couples with young dependent children (eldest under 5). The proportions spent on transport (13%) and recreation (12%) were closer to those of couples whose eldest dependent child was 5 or older.

However, one-parent households spent less of their budget on medical, health and personal care (5%) than couples with dependent children. They spent an average of $6 per person per week on medical care and health expenses, less than for any other life cycle group. This was largely because one-parent households were much less likely than most other life cycle groups to have private health insurance (see *Australian Social Trends 1994*, Private health insurance: who has it?, pp. 73–76). In 1993–94, over half (55%) of one-parent households received most of their income from government pensions and allowances and would have been entitled to a range of health care concessions. This would have contributed to lower costs for medicines and doctor consultations and may have reduced the need for accident and health insurance. However, affordability would also have been an

Expenditure on food, 1993–94

	Average weekly expenditure	
	Per household	*Per person*
Selected household types	$	$
One-person, under 35	53.40	53.40
Couple only, reference person under 35	106.60	53.30
Couple with dependent children only	*146.70*	*35.20*
Eldest child under 5	119.20	34.60
Eldest child 5–14	149.20	32.90
Eldest child 15–20	167.40	40.30
Couple with dependent & non-dependent children only	192.80	42.20
Couple with non-dependent children only	165.70	50.70
One-parent household	95.30	32.00
Couple-only, reference person 55–64	103.30	51.70
Couple-only, reference person 65 and over	85.70	42.80
One-person, 65 and over	44.40	44.40
All households	**111.00**	**42.20**

Source: Household Expenditure Survey, Australia, 1993–94: Household Characteristics (Cat. no. 6531.0).

important consideration for many of these low-income households without health insurance.

In line with the low rates of full-time employment among lone mothers, one-parent households had relatively low expenditure on superannuation (an average of $7 per week). One-parent households were less likely than most couples with children to be buying a home and, consequently, their expenditure on home mortgage principal repayments was much lower (an average of $10 per week). They also spent much less than couples with children on home improvements (an average of $11 per week).

Early-retirement age (55–64 years)

Both income and expenditure levels decline significantly in the 55–64 years age group. In 1993–94 couples without children (and reference person aged 55–64) spent an average of $553 per week on goods and services, about three quarters as much as young couples without children. They spent $52 per person per week on food, about the same as young couples, though this represented a much higher proportion of their total expenditure on goods and services (19% compared to 15%).

Like young couples, they spent a relatively high proportion of their budget on recreation (15%). Their current housing costs ($49 per week) were much lower than for young couples ($141 per week) and accounted for only 9% of total expenditure on goods and services. This was due to high rates of outright home ownership (81%) and lower average rent payments for those still renting their accommodation.

As people grow older they are more likely to experience health problems and incur higher medical and health costs. Early-retirement age couples spent an average of $32 per week on medical care and health expenses compared to $24 per week for young couples. They were more likely than young couples to have private health insurance, and spent more per person ($9 per week) on accident and health insurance than any other life cycle group. Altogether, expenditure on health, medical and personal care accounted for 8% of the goods and services budget of early-retirement age couples.

Despite the relatively low rates of full-time employment in this group, early-retirement age couples spent more on superannuation ($23 per week) than young couples without children. This may be because those still working had chosen to increase their superannuation contributions in the years leading up to retirement.

Since the vast majority of early-retirement age couples owned their homes outright, they had very low average expenditure on home mortgage principal repayments ($4 per week). However, their average expenditure on home improvements ($27 per week) was close to the national average though only about half as much as for couples with children.

Older households (65 years and over)

In 1993–94, average household incomes and consumption expenditure levels of older couple-only and one-person households (reference person 65 and over) were about half that of their younger counterparts (reference person under 35). They spent a higher proportion of their budget on food (21%) than early-retirement age couples, but less per person (about $44 per week).

Their current housing costs ($43 for couples and $33 for singles) were lower than for any other life cycle groups. This was due to high rates of outright home ownership (83% for couples and 70% for singles) and, among renters, relatively high proportions in low-cost public housing (56% for couples and 53% for singles). Even so, because of their lower incomes, older couples spent a higher

Average weekly expenditure on medical care and health expenses, 1993-94

	Total medical care and health expenses(a)		*Accident and health insurance*		*Medicines and pharmaceuticals*	
	Per household	*Per person*	*Per household*	*Per person*	*Per household*	*Per person*
Selected household types	$	$	$	$	$	$
One-person, under 35	10.60	10.60	4.10	4.10	2.10	2.10
Couple only, reference person under 35	24.10	12.00	14.50	7.20	4.10	2.10
Couple with dependent children only	*33.70*	*8.10*	*16.70*	*4.00*	*7.50*	*1.80*
Eldest child under 5	33.20	9.60	15.40	4.50	8.80	2.60
Eldest child 5–14	31.80	7.00	16.00	3.50	6.70	1.50
Eldest child 15–20	38.00	9.10	19.30	4.60	7.70	1.90
Couple with dependent and non-dependent children only	42.90	9.40	23.80	5.20	7.50	1.60
Couple with non-dependent children only	43.40	13.30	23.50	7.20	9.40	2.90
One-parent household	17.60	5.90	6.20	2.10	4.60	1.60
Couple-only, reference person 55–64	31.70	15.90	17.80	8.90	7.40	3.70
Couple-only, reference person 65 and over	28.00	14.00	13.70	6.80	7.10	3.60
One-person, 65 and over	12.80	12.80	5.30	5.30	4.20	4.20
All households	**27.10**	**10.30**	**13.50**	**5.10**	**6.20**	**2.40**

(a) Includes accident and health insurance, medicines and pharmaceutical products, practitioners' fees and hospital charges.

Source: Household Expenditure Survey, Australia, 1993–94: Household Characteristics (Cat. no. 6531.0) and unpublished data, Household Expenditure Survey, 1993–94.

proportion of their household budget on current housing costs (11%) than early-retirement age couples (9%). Older singles used 16% of their budget on current housing costs, more than the average for all households.

Like early-retirement age couples, older couples and singles spent a relatively high proportion of their budget on medical, health and personal care (9% and 8% respectively). Expenditure on medical care and health expenses was relatively high despite the high proportions of older households dependent on government pensions and allowances, and entitled to health care concessions. Like early-retirement age couples, older households spent around $4 per person per week on medicines and pharmaceutical products, almost double the average for all households. They spent less per person on accident and health insurance, however, in keeping with lower rates of coverage.

The vast majority of people over 65 have retired from the labour force. Many of those who were contributing to a superannuation fund during their working lives would be drawing on their superannuation in the form of a regular pension. Some may have used lump-sum payouts on retirement to discharge their home mortgage, if they had not already done so. While average expenditure on superannuation and the family home was negligible for these households, it is possible that, despite their lower incomes, some may have purchased other assets (e.g. shares and other property).

How much tax do we pay?

TAXATION

Personal income taxes accounted for 41% of total taxation revenue in 1996–97, down from 46% in 1986–87. In the same period the proportion of taxation revenue raised through company taxes, payroll tax and fringe benefits tax increased from 13% to 20%.

The main roles of government include providing non-market goods and services (such as roads, hospitals, defence, public health and education services); regulating economic activity; maintaining law and order; and providing income security to those in need such as the retired, unemployed and families. These activities are primarily financed through taxation. The total level of taxation, the mix of taxation on income and on goods and services, and the equitable distribution of the tax 'burden' on individuals, families and businesses are issues of discussion and debate in Australian society today.

Increasing levels of taxation

Total taxation revenue as a proportion of Gross Domestic Product (GDP) has risen from 23% in 1966–67 to 32% in 1996–97. Over half of this increase was from personal income taxes which rose from 8% of GDP in 1966–67 to 13% of GDP in 1996–97. After peaking at 14% in 1986–87, revenue from personal income taxes as a proportion of GDP declined to mid-1970s levels (around 12%) by 1992–93 but has risen slightly since then.

Revenue from company taxes, as a proportion of GDP, was slightly higher in 1996–97 (4%) than it was in 1966–67 (3%). The level of revenue from company taxes has fluctuated between 3–4% of GDP throughout the period, apart from a dip during the eighties where it reached a low of 2% of GDP in 1983–84.

Taxation revenue

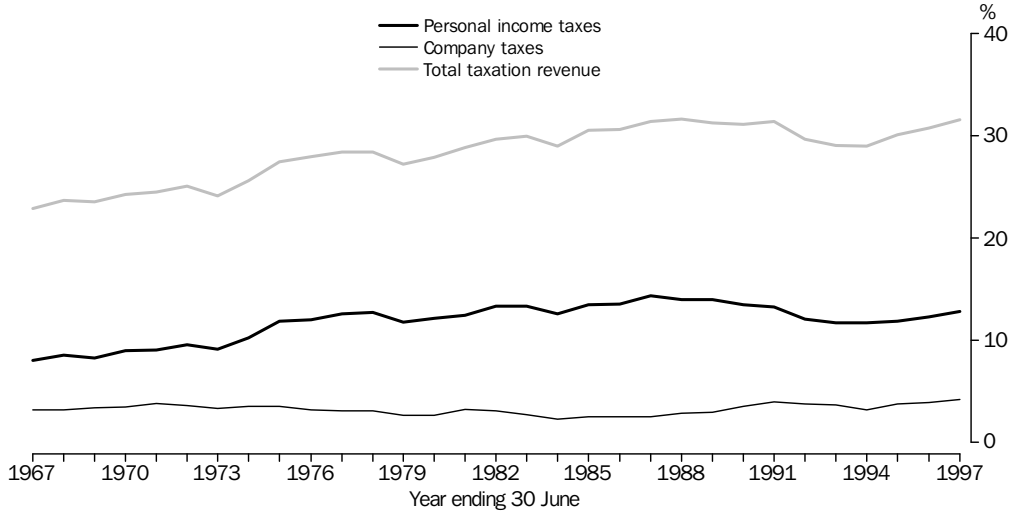
Taxation revenue – comprises taxes, compulsory fees and fines collected by all levels of government in Australia.

Taxes – a tax is a compulsory levy imposed by the government, mainly to raise revenue. There is usually no clear and direct link between payment of taxes and the provision of particular goods and services by government. Taxes are levied on incomes, property, production, sale and use of goods and services, and the performance of activities. Included are personal income taxes, company taxes, payroll and fringe benefits taxes, sales tax, customs and excise duties, land taxes, municipal rates, motor vehicle registration fees.

Contributions to total taxation

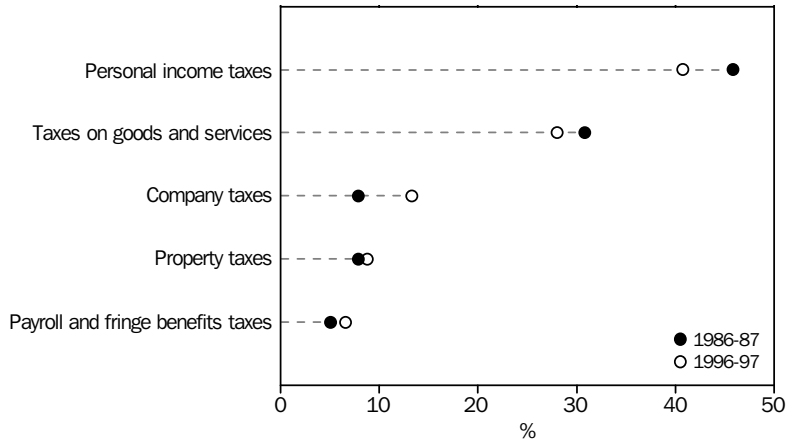
In 1996–97, the combined taxation revenue of the Commonwealth Government, State and local governments in Australia was $163 billion. By far the largest component was personal income taxes which raised $66 billion or 41% of total taxation revenue – up from 35% in 1966–67 but a lower proportion than in 1986–87 when personal income taxes contributed 46% of total taxation revenue.

Taxation revenue as a percentage of GDP



Source: Taxation Revenue, Australia, 1996–97 (Cat. no. 5506.0).

Main components of taxation revenue



Source: Taxation Revenue, Australia, 1996–97 (Cat. no. 5506.0).

The proportion of total taxation revenue raised by taxes on goods and services has also declined during the decade, from 31% in 1986–87 to 28% ($46 billion) in 1996–97. Of this amount, the two largest components were excises and levies ($14 billion) and sales tax ($13 billion).

Company taxes, payroll tax and fringe benefits tax together contributed $32 billion, about half as much as personal income taxes, and represented 20% of total taxation revenue in 1996–97. This is an increase since 1986–87 when these taxes contributed 13% of total taxation revenue, about a third as much as personal income taxes.

Property taxes accounted for 9% of total taxation revenue in 1996–97. Fees and fines raised 2% and income taxes levied on non-residents accounted for a further 1% of taxation revenue.

Personal income taxes

In 1995–96, 8.2 million Australians (57% of the population aged 15 years and over) paid an average of $6,900 net tax (after deduction of rebates and credits and including the Medicare levy). A further 1.7 million people who submitted income tax returns incurred no net tax.

Levels of personal income tax are closely linked to level of taxable income (after deductions allowable under taxation legislation). In 1995–96 average net tax ranged from $460 in the lowest decile of taxable income to $24,960 in the highest decile.

Taxes on personal income

Personal income taxes – taxes levied on the taxable income (or profits) of individuals.

Taxable income – the amount remaining after making all allowable deductions from gross income. Such deductions include all normal business expenses, certain special deductions for expenditures of a capital nature and certain non-business deductions. Taxable income is the amount to which the tax rates are applied.

Gross tax – is calculated by applying the general rates of tax to the taxable income of individuals.

Net tax – gross tax plus Medicare levy less rebates (such as for dependent spouse, sole parent, medical expenses etc.) and any other credits such as those in respect of franked dividends received.

Taxpayer – the term is used in this review to refer to those individuals whose net tax is greater than zero.

Moving up the taxable income scale, the impact of the tax-free threshold decreases, and the impact of higher marginal tax rates increases, so that the share of net tax incurred rises at a faster rate than the share of taxable income. Consequently, in 1995–96, the share of net tax borne by the three highest deciles was greater than their share of taxable income. This difference was particularly marked for the ninth and tenth deciles which, together, had 41% of total taxable income and paid 53% of total net tax.

On the other hand, the share of net tax borne by the lower seven deciles of the taxable income distribution was less than their share

Average taxable income and net tax, 1995–96

	Average taxable income	*Average net tax*
Taxable income deciles	$	$
Lowest	8 520	460
Second	12 670	1 140
Third	16 460	2 020
Fourth	20 280	2 900
Fifth	23 860	4 160
Sixth	27 640	5 510
Seventh	32 030	7 030
Eighth	37 370	8 850
Ninth	44 930	11 930
Highest	79 670	24 960
Total	**30 340**	**6 900**

Source: Australian Taxation Office, *Taxation Statistics, 1995–96*.

Share of total of taxable income and net tax, 1995–96

Taxable income deciles	Share of total taxable income %	Share of total net tax %
Lowest	2.8	0.7
Second	4.2	1.6
Third	5.4	2.9
Fourth	6.7	4.2
Fifth	7.9	6.0
Sixth	9.1	8.0
Seventh	10.6	10.2
Eighth	12.3	12.8
Ninth	14.8	17.3
Highest	26.3	36.2
Total	**100.0**	**100.0**

Source: Australian Taxation Office, *Taxation Statistics, 1995–96*.

of taxable income. This was particularly so for the lowest four deciles which, together, had 19% of total taxable income but paid only 9% of total net tax.

The overall net tax rate (net tax as a proportion of taxable income) declined slightly from 24% in 1985–86 to 23% in 1995–96. This was mainly because of an increase in the level of rebates and credits which more than doubled as a proportion of taxable income in the period (to almost 3% in 1995–96). Changes in marginal tax rates and the tax-free threshold also had an impact on net tax rates, affecting high and low income recipients in different ways.

Net tax rate(a)

Taxable income deciles	*1985–86* %	*1995–96* %	*Change* % points
Lowest	5.0	5.4	0.4
Second	10.5	9.0	-1.5
Third	14.0	12.2	-1.8
Fourth	17.0	14.3	-2.7
Fifth	18.9	17.4	-1.5
Sixth	20.1	19.9	-0.2
Seventh	21.9	21.9	0.0
Eighth	25.2	23.7	-1.5
Ninth	28.2	26.5	-1.7
Highest	36.5	31.3	-5.2
Total	**24.3**	**22.7**	**-1.6**

(a) Net tax expressed as a percentage of taxable income.

Source: Australian Taxation Office, *Taxation Statistics.*

Marginal tax rates were lower in 1995–96, particularly the top marginal rate which dropped to 47c in the dollar, from 60c in the dollar in 1985–86. Lower marginal tax rates had the effect of reducing the rate of tax payable for the majority of taxpayers, but particularly favoured those with the highest incomes.

The tax-free threshold was also lower in 1995–96, 21% of the median taxable income compared to 28% in 1985–86. This offset the effect of lower marginal tax rates, to some extent, for all taxpayers but particularly for those with the lowest incomes.

Another factor which tended to offset some of the gains associated with lower marginal tax rates and higher levels of rebates and credits was the increase in the Medicare levy, from 1% of taxable income in 1985–86 to 1.5% of taxable income in 1995–96. However this did not affect those taxpayers (e.g. pensioners, beneficiaries and low income earners) who were eligible for special relief provisions.

The overall result of these changes was that the average net tax rates were lower in 1995–96 than in 1985–86 for almost all levels of taxable income. However, there was considerable variation in the magnitude of these decreases. The biggest decrease was in the highest decile (5 percentage points). The fourth decile also had a relatively large decrease (3 percentage points) in its net tax rate. There was little or no change in the sixth and seventh deciles. Only those taxpayers in the lowest decile of taxable income paid a higher rate of net tax in 1995–96 than in 1985–86.

Taxation and income redistribution

The combined effect of government taxes and benefits is to redistribute resources and reduce income inequality. For example, by imposing a higher tax burden on high income earners, differential rates of tax on personal income reduce inequality in the distribution of private incomes. In addition, individuals and households with lower incomes tend to receive a greater share of government benefits. These include direct cash benefits such as social security pensions and allowances, and non-cash benefits such as government services in the areas of health, welfare, housing and education. (See *Australian Social Trends 1996,* Household income redistribution, pp. 117–120).

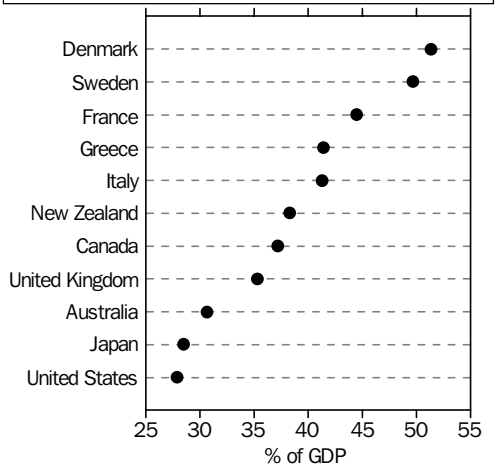
International comparison

Tax structures and levels of taxation vary considerably throughout the world. In relation to other OECD countries Australia has a relatively low overall level of taxation. In 1995, Australia ranked 24th among the 29 OECD countries, with taxation revenue equal to 31% of GDP.

In terms of the relative contribution of personal income tax to total taxation revenue, Australia (41%) ranked third behind Denmark (54%) and New Zealand (44%). Australia, unlike the majority of OECD countries, does not have specific social security contributions as part of its tax structure. Consequently, when employee contributions to social security were added to personal income tax, Australia ranked only ninth for contribution of total personal taxes to total taxation revenue.

In terms of the contribution of corporate income tax to total taxation revenue, Australia (15%) ranked third behind Luxembourg (18%) and Japan (15%). However, when payroll taxes and employer contributions to social security were added to corporate income tax, Australia ranked seventeenth for contribution of total corporate taxes to total taxation revenue.

Taxation revenue of selected OECD countries, 1995



Source: OECD, *Revenue Statistics, 1965–1996*.

The importance of goods and services taxes varied considerably among OECD countries, contributing less than 20% of total taxation revenue in some countries such as Japan and the United States and over 40% in others such as Korea, Greece, and Portugal. Australia ranked seventeenth, with goods and services taxes contributing 29% of total taxation revenue.

Composition of taxation revenue for selected OECD countries, 1995(a)

	Personal income tax	*Total personal taxes(b)*	*Corporate income tax*	*Total corporate taxes(c)*	*Goods and services taxes*	*Other taxes(d)*	*Total taxation revenue*	
	%	%	%	%	%	%	%	% GDP
Denmark	53.7	56.2	4.1	5.2	32.4	6.2	100.0	51.3
Sweden	35.3	38.8	6.1	33.2	24.3	3.7	100.0	49.7
France	13.9	27.0	3.7	32.9	27.3	12.8	100.0	44.5
Greece	11.8	27.6	6.2	21.3	40.5	10.6	100.0	41.4
Italy	26.2	32.9	8.7	29.9	27.3	9.9	100.0	41.3
New Zealand	44.2	44.2	12.0	12.9	33.3	9.6	100.0	38.2
Canada	37.3	42.7	8.1	19.2	25.5	12.6	100.0	37.2
United Kingdom	27.4	34.8	9.5	19.1	34.7	11.4	100.0	35.3
Australia	**40.6**	**40.6**	**14.7**	**21.4**	**29.2**	**8.8**	**100.0**	**30.7**
Japan	21.4	35.8	15.2	33.5	15.1	15.6	100.0	28.5
United States	36.3	47.0	9.4	22.5	17.9	12.6	100.0	27.9
Total OECD	**27.0**	**35.0**	**8.0**	**22.9**	**32.4**	**9.7**	**100.0**	**37.4**

(a) Data are for year ending 31 December 1995, except for: Australia and New Zealand (financial year ending 30 June 1996); Canada and Japan (financial year ending 31 March 1996); and United States (year ending 30 September 1995).
(b) Comprises personal income tax and employee contributions to social security.
(c) Comprises corporate income tax, employer contributions to social security and payroll taxes.
(d) Mainly property taxes.

Source: OECD, *Revenue Statistics, 1965–1996.*

Housing

Housing — national summary

HOUSING STOCK	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Number of occupied private dwellings	'000	n.a.	n.a.	n.a.	n.a.	6 173	6 319	6 483	6 635	6 769	6 898	n.y.a.
Size of new public sector houses	m^2	111	114	114	110	121	122	130	141	141	150	154
Size of new private sector houses	m^2	182	186	190	189	188	187	189	192	197	205	212
Average number of persons per dwelling	no.	n.a.	2.8	n.a.	2.8	2.8	2.7	n.a.	2.6	2.6	2.7	n.y.a.
Average number of bedrooms per dwelling	no.	n.a.	2.9	n.a.	2.9	2.9	n.a.	n.a.	2.9	2.9	3.0	n.y.a.
Number of public sector dwellings completed	'000	13.6	10.7	11.0	12.5	11.5	9.7	11.1	9.9	7.8	6.8	6.0
Number of private sector dwellings completed	'000	106.2	107.7	139.4	147.5	122.9	123.0	145.2	157.3	162.4	129.1	113.0
Dwelling structure(a)												
Houses	%	n.a.	80.8	n.a.	80.7	n.a.	78.2	n.a.	79.4	79.3	78.6	n.y.a.
Semi-detached/townhouses	%	n.a.	n.a.	n.a.	7.1	n.a.	7.0	n.a.	7.9	7.9	8.1	n.y.a.
Flats and apartments	%	n.a.	9.0	n.a.	11.5	n.a.	12.5	n.a.	12.5	11.9	12.4	n.y.a.
Tenure type(b)												
Owned without a mortgage	%	n.a.	43.0	n.a.	42.4	n.a.	41.6	n.a.	41.8	41.3	41.7	n.y.a.
Owned with a mortgage	%	n.a.	29.4	n.a.	29.2	n.a.	27.6	n.a.	28.3	29.8	28.2	n.y.a.
Public rental	%	n.a.	5.5	n.a.	5.8	n.a.	5.7	n.a.	6.2	4.9	5.9	n.y.a.
Private rental	%	n.a.	17.3	n.a.	17.1	n.a.	22.9	n.a.	19.0	17.8	20.0	n.y.a.

HOUSING COSTS	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Housing interest rate	%	15.5	14.2	15.3	16.9	15.1	11.9	9.9	8.9	10.0	10.3	8.3
Affordability index	no.	135.1	135.1	110.1	100.9	111.7	133.9	152.1	162.8	140.9	141.7	169.0
Average weekly earnings index	no.	82.2	87.2	93.5	100.0	106.6	111.5	113.5	116.9	121.7	127.2	132.1
Mean weekly public rent	$	n.a.	47.0	n.a.	58.0	n.a.	66.0	n.a.	62.0	59.0	62.0	n.y.a.
Mean weekly private rent	$	n.a.	106.0	n.a.	133.0	n.a.	127.0	n.a.	141.0	138.0	148.0	n.y.a.
Public rental cost index	no.	74.0	85.1	94.5	100.0	105.0	110.0	112.5	115.3	118.5	119.3	122.5
Private rental cost index	no.	75.7	83.7	92.7	100.0	104.7	106.3	106.7	107.1	108.1	112.4	115.8
Project home price index	no.	71.9	77.1	91.4	100.0	102.1	102.1	103.0	105.8	108.1	109.5	109.2
Established home price index	no.	62.6	69.5	92.2	100.0	100.8	104.6	106.0	109.1	112.6	112.7	115.1
Materials used in house building price index	no.	77.9	83.8	92.9	100.0	104.6	104.9	106.9	112.0	115.4	115.7	116.1
Finance commitments												
Number for construction or purchase of new dwellings	'000	64	85	95	77	80	94	111	124	103	85	89
Value for construction or purchase of new dwellings	$m	2 838	4 278	5 263	4 621	5 141	6 464	8 200	10 522	9 500	8 264	9 303
Number for purchase of established dwellings	'000	215	287	265	203	214	285	342	420	348	367	393
Value for purchase of established dwellings	$m	9 992	15 832	17 525	14 339	15 634	22 074	28 578	37 310	32 806	35 414	40 676
Value for alterations and additions	$m	499	707	998	905	983	1 359	1 642	2 899	3 477	3 509	3 039

HOUSING ASSISTANCE	Units	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Public sector rental dwelling stock	'000	316	328	338	352	362	370	377	384	389	393	n.y.a.
Applicants on housing waiting lists	'000	169	198	201	195	202	216	232	235	235	236	n.y.a.
Applicants accommodated	'000	50	48	49	53	52	49	54	55	53	51	n.y.a.
Persons receiving private rental assistance	'000	678	713	651	674	646	868	941	976	931	1 042	1 049

(a) Components do not total 100% due to other dwellings (caravans or cabins in a caravan park, houseboats and houses or flats attached to shops) not being included.

(b) Components do not total 100% due to other renters (paying rent to the manager of a caravan park, an employer, a housing cooperative, or a church or community group), as well as other types of tenure (rent free and others), not being included.

Reference periods: Data are for the year ending 30 June except: average number of persons/rooms; dwelling structure; tenure type; and mean weekly rent, which vary according to the timing of the surveys within each year.

Housing — State summary

HOUSING STOCK	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Number of occupied private dwellings	'000	*1996*	2 295.1	1 716.3	1 277.7	586.5	667.5	187.2	55.1	112.6	6 898.0
Size of new public sector houses	m^2	*1996–97*	184.0	159.0	137.0	172.0	162.0	162.0	152.0	136.0	154.0
Size of new private sector houses	m^2	*1996–97*	214.0	214.0	212.0	196.0	221.0	181.0	206.0	188.0	212.0
Number of dwellings completed	'000	*1996–97*	40.0	23.3	30.3	5.2	14.3	2.2	1.6	2.0	119.0
Dwelling structure(a)											
Houses	%	*1996*	75.8	80.9	81.1	77.2	79.1	83.3	68.1	77.8	78.6
Semi-detached/townhouses	%	*1996*	8.1	5.9	6.1	13.2	12.2	6.3	17.1	12.2	8.1
Flats and apartments	%	*1996*	15.3	12.6	11.3	9.5	8.3	8.0	13.3	10.0	12.4
Tenure type(b)											
Owned without a mortgage	%	*1996*	42.9	43.8	41.4	42.2	36.1	41.5	20.3	26.7	41.7
Owned with a mortgage	%	*1996*	25.2	29.3	27.2	29.5	34.4	29.0	24.3	38.0	28.2
Public rental	%	*1996*	6.5	3.4	5.2	9.6	4.6	8.0	28.6	11.4	5.9
Private rental	%	*1996*	21.5	19.5	22.2	14.0	18.6	14.8	16.0	20.3	20.0

HOUSING COSTS	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Affordability index(a)	no.	1996–97	121.3	178.9	173.4	211.5	183.3	225.2	n.a.	171.9	169.0
Mean weekly public rent	$	1996	61	65	56	60	56	60	98	77	62
Mean weekly private rent	$	1996	172	135	140	125	122	117	169	170	148
Project home price index(c)	no.	1996–97	110.4	107.7	112.7	108.3	101.3	123.3	136.0	123.6	109.2
Established home price index(c)	no.	1996–97	118.9	101.4	137.2	108.2	109.2	128.5	196.9	126.4	115.1
Materials used in house building price index(c)	no.	1996–97	116.3	115.3	115.3	120.6	115.3	120.1	n.a.	n.a.	116.1
Finance commitments											
Number for construction or purchase of new dwellings	'000	1996–97	26.9	20.8	19.1	5.4	12.8	1.5	0.8	1.5	88.9
Value for construction or purchase of new dwellings	$m	1996–97	3 351	2 038	1 941	442	1 178	99	91	162	9 303
Number for purchase of established dwellings	'000	1996–97	132.6	92.6	64.8	31.2	50.5	9.5	3.3	8.0	392.5
Value for purchase of established dwellings	$m	1996–97	16 628	8 615	6 241	2 514	4 870	651	339	818	40 676
Value for alterations and additions	$m	1996–97	1 221	693	508	188	268	77	29	55	3 039

HOUSING ASSISTANCE	Units	Years	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Public sector rental dwelling stock	'000	1995–96	134.8	69.2	53.3	60.4	36.6	14.6	11.0	12.5	392.6
Applicants on housing waiting lists	'000	1995–96	93.2	53.7	29.0	36.6	11.8	2.6	5.0	4.3	236.2
Applicants accommodated	'000	1995–96	11.8	8.9	10.0	7.7	6.3	2.7	1.3	2.3	51.0
Persons receiving private rental assistance	'000	1996–97	367.6	236.4	245.1	72.3	87.9	23.9	6.3	9.4	1 049

(a) Components do not total 100% due to other dwellings (caravans or cabins in a caravan park, houseboats and houses or flats attached to shops) not being included.

(b) Components do not total 100% due to other renters (paying rent to the manager of a caravan park, an employer, a housing cooperative, or a church or community group), as well as other types of tenure (rent free and others), not being included.

(c) State/Territory data refer to capital cities only.

Reference periods: Data are for the year ending 30 June except: dwelling structure; tenure type; and mean weekly rent, which vary according to the timing of the surveys within each year.

Housing — definitions and references

Affordability index — the ratio of average household income to the average income needed to meet the repayments for an average established dwelling purchased by a first home buyer. A value of 100 indicates that a household with average income would meet the average income requirements to service the average mortgage. An increase in the index represents an improvement in affordability.
Reference: Commonwealth Bank of Australia and the Housing Industry Association, *Housing Report*.

Alterations and additions — all approved structural and non-structural changes to a dwelling of a value of not less than $10,000 which are integral to the functional and structural design of the dwelling, e.g. garages, carports, pergolas, reroofing, recladding etc., but excluding swimming pools, ongoing repairs, landscaping, and maintenance and home improvements not involving building work.
Reference: *Housing Finance for Owner Occupation, Australia* (Cat. no. 5609.0).

Applicants accommodated — the number of public rental applicants accommodated in a year.
Reference: Department of Social Security, *Housing Assistance Act 1989 Annual Report*.

Applicants on housing waiting lists — the number of applicants (households) waiting for public rental accommodation on 30 June.
Reference: Department of Social Security, *Housing Assistance Act 1989 Annual Report*.

Average number of bedrooms per dwelling — the average number of bedrooms in occupied private dwellings. For purposes of calculation, a dwelling with no bedrooms was considered to have one bedroom.
Reference: Housing Survey, 1988, Income and Housing Surveys 1990; Surveys of Income and Housing Costs, 1994 and 1995 and Censuses of Population and Housing, 1991 and 1996.

Average number of persons per dwelling — the average number of usual residents in occupied private dwellings.
Reference: Housing Survey, 1988, Income and Housing Surveys 1990; Family Survey 1992; Surveys of Income and Housing Costs, 1994 and 1995 and Censuses of Population and Housing, 1991 and 1996.

Average weekly earnings index — the total weekly ordinary time (before tax) earnings of full-time adult employees divided by the total number of full-time adult employees and expressed as an index with base year 1989–90=100.
Reference: *Average Weekly Earnings, States and Australia* (Cat. no. 6302.0).

Established house price index — the price of detached residential dwellings on their own block of land, regardless of age (i.e. including new houses sold as a house/land package as well as older houses) expressed as an index with base year 1989–90=100.
Reference: *House Price Indexes: Eight Capital Cities* (Cat. no. 6416.0).

Finance commitments — firm offers to provide finance for owner-occupation or alterations and additions which have been, or are normally expected to be, accepted. Commitments to provide housing finance to employees and commitments accepted and cancelled in the same month are included. Owner-occupied dwellings being purchased can be either established (completed for more than 12 months or previously occupied) or new (completed for less than 12 months with the borrower being the first occupant).
Reference: *Housing Finance for Owner Occupation, Australia* (Cat. no. 5609.0).

Flats and apartments — occupied private dwellings contained in blocks of flats, units or apartments, which do not have their own private grounds and usually share a common entrance foyer or stairwell. Includes flats attached to houses.
Reference: Income and Housing Surveys; 1992 Family Survey; and Survey of Income and Housing Costs.

Household — a person living alone or a group of related or unrelated people who usually reside and eat together.
Reference: *Australian Housing Survey: Selected Findings* (Cat. no. 4181.0).

Houses — occupied private dwellings which are self-contained and separated from other structures by a space of at least half a metre to allow access on all sides. Includes houses with an attached flat.
Reference: Income and Housing Surveys; 1992 Family Survey; and Survey of Income and Housing Costs.

Housing interest rate — the financial year annual average of the interest rate applicable on the last working day of each month to standard variable rate loans for owner-occupation extended by large bank housing lenders. It is the predominant or representative rate of major banks, although some banks may quote higher or lower rates.
Reference: Reserve Bank of Australia, *Monthly Bulletin*.

Materials used in house building price index — prices of selected materials used in the construction of dwellings expressed as an index with base year 1989–90=100. Data for national total is a weighted average of six state capital cities.
Reference: *Price Index of Materials Used in House Building* (Cat. no. 6408.0).

Mean weekly public/private rent — the average weekly rent paid by renters of public/private dwellings.
Reference: Income and Housing Surveys; 1992 Family Survey; and Survey of Income and Housing Costs.

Occupied private dwellings — the premises occupied by a household. For population estimation purposes, the total number of occupied private dwellings is treated as being equal to the total number of households of the usually resident population.
Reference: *Household Estimates, Australia* (Cat. no. 3229.0).

Housing — definitions and references continued

Owned with a mortgage — a dwelling where the reference person's outstanding mortgage or loan amount secured against the dwelling is greater than zero. Includes persons who have an outstanding mortgage amount but who are not making any payments. Prior to 1995 known as 'Being purchased', and excluded dwellings with mortgages for alteration/addition or other purposes.
Reference: Reference: Income and Housing Surveys; 1992 Family Survey; and Survey of Income and Housing Costs.

Owned without a mortgage — a dwelling where the reference person has no outstanding mortgage or loan amount secured against the dwelling. Includes persons who have repaid a mortgage or loan but have not formally discharged the associated mortgage. Prior to 1995 known as 'Owned', and included dwellings whose only mortgage was for alteration/addition or other purposes.
Reference: Income and Housing Surveys; 1992 Family Survey; and Survey of Income and Housing Costs.

Persons receiving private rental assistance — persons on low incomes who pay rent or similar payments for private accommodation and receive a rental assistance payment from the government. Rent assistance may be payable to pensioners without children, families receiving above the minimum family payment and people already receiving a government allowance or benefit.
Reference: Centrelink, *DSS Customers: A statistical overview*.

Private/public sector dwellings completed — when building activity has progressed to the stage where the building can fulfil its intended function. The ABS regards buildings as completed when notified as such by the respondents (builders) to the survey.
Reference: *Building Activity, Australia* (Cat. no. 8752.0).

Private rental — households paying rent to a landlord who is a real estate agent, a parent or other relative not in the same household or another person not in the same household, to reside in the dwelling.
Reference: Income and Housing Surveys; 1992 Family Survey; and Survey of Income and Housing Costs.

Private rental cost index — the average rent of privately owned dwellings (rented through real estate agents in each capital city) expressed as an index with base year 1989–90=100.
Reference: *Consumer Price Index* (Cat. no. 6401.0).

Project home price index — the price of dwellings available for construction on a client's block of land expressed as an index with base year 1989–90=100.
Reference: *House Price Indexes: Eight Capital Cities* (Cat. no. 6416.0).

Public rental — households paying rent to a State or Territory housing authority or trust to reside in the dwelling.
Reference: Reference: Income and Housing Surveys; 1992 Family Survey; and Survey of Income and Housing Costs.

Public rental cost index — the average rent of government authority dwellings in metropolitan areas expressed as an index with base year 1989–90=100.
Reference: *Consumer Price Index* (Cat. no. 6401.0).

Public sector dwelling stock — those rental dwellings held by State and Territory housing authorities.
Reference: Department of Social Security, *Housing Assistance Act 1989 Annual Report*.

Semi-detached/townhouses — occupied private dwellings with their own private grounds and no dwelling above or below. A key feature of these dwellings is that they are attached in some structural way to one or more dwellings, or separated from a neighbouring dwelling by less than half a metre.
Reference: Income and Housing Surveys; 1992 Family Survey; and Survey of Income and Housing Costs.

Size of new private/public sector houses — average floor area of houses intended for private/public ownership at building approval.
Reference: *Building Approvals Microfiche Service, Australia* (Cat. no. 8734.0).

Housing of recent immigrants

HOUSING ARRANGEMENTS

87% of recent immigrants shared their first accommodation in Australia with friends or relatives – 46% of these had moved within 3 to 6 months.

Securing suitable and affordable housing is an important part of the settlement process for immigrants. The nature of the accommodation and living arrangements of recent immigrants is largely dependent on their current resources and prospects for the immediate future.

The circumstances of immigrants on arrival in Australia vary widely, particularly between visa categories. Humanitarian visaed immigrants tend to lack assets, social networks, English language proficiency and prearranged employment or housing. Family visaed immigrants have family already resident in Australia and are likely to have accommodation organised prior to arrival. Skill visaed immigrants usually arrive with more assets, assured employment and more marketable skills.

First accommodation in Australia

On arrival, most immigrants share accommodation with family or friends already living in Australia. In many cases, this could be because they have not yet been able to form decisions about where they will eventually settle. Others may not yet be able to afford their own accommodation. For the majority of family visaed immigrants, however, forming a household with reunited close family members is likely to have been their permanent intention.

Longitudinal Survey of Immigrants to Australia

This review uses data from the first wave of the Longitudinal Survey of Immigrants to Australia, conducted by the Department of Immigration and Multicultural Affairs during 1994 and 1995. Interviews were conducted, within 3 to 6 months of arrival, with 5,192 immigrants who were principal applicants for permanent resident visas. The survey sample represented a total population of 75,000 principal applicants who migrated to Australia in the Migration and Humanitarian Programs during the period September 1993 to August 1995. The sample was drawn from those 96% of principal applicants who had settled in a State or Territory capital city or major urban centre. New Zealand citizens were excluded from the survey since they do not need a visa to migrate to Australia.[1]

Principal applicant – the person in the migrating unit upon whom the approval to migrate was based.

Migrating unit – all people who migrated with the principal applicant on the same visa application.

Of all migrating units arriving during the two-year period from September 1993 to August 1995, 70% shared their initial accommodation with relatives and 17% shared with friends. The vast majority (86%) of immigrants in the family group, and two thirds of those in the humanitarian group,

First accommodation in Australia of immigrants who arrived between September 1993 and August 1995

	Migration visa group				
	Family	*Business/ employer nomination*	*Independent*	*Humanitarian*	*All migrating units*
Type of accommodation	%	%	%	%	%
Shared	*93.8*	*41.7*	*82.9*	*82.5*	*88.6*
With relatives	85.6	15.5	27.8	65.6	70.4
With friends	7.8	17.3	52.3	13.7	16.5
With others	0.5	8.9	2.9	3.2	1.6
Not shared	6.2	58.3	17.1	17.5	11.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	'000	'000	'000	'000	'000
Total	**49.0**	**2.6**	**12.8**	**10.6**	**75.0**

Source: Department of Immigration and Multicultural Affairs, unpublished data, Longitudinal Survey of Immigrants to Australia.

Migration visa categories

Because they have to meet different eligibility requirements, principal applicants migrating to Australia in the different visa categories are likely to differ in their characteristics and settlement outcomes. The following main visa groups are distinguished in this review:

Family – principal applicant is sponsored by a relative who is an Australian citizen or permanent resident.

- *Preferential family* – primary objective is family reunion of close, and generally dependent, relatives of the sponsor such as a spouse or children.
- *Concessional family* – allows for sponsorship of other, non-dependent relatives and is partly skills based.

Skill – principal applicant has particular skills/talents which are in demand in Australia.

- *Employer nomination scheme* – sponsored by employers in Australia who have been unable to find or train skilled workers in Australia for the position.
- *Business skills* – people with established business skills and a genuine commitment to owning and managing a business in Australia.
- *Independent* – unsponsored applicants whose education, skills and ready employability will contribute to the Australian economy.

Humanitarian – primarily refugees, as identified by UN High Commissioner for Refugees, and other people overseas who are suffering discrimination (or are in other vulnerable situations) and who have family or community ties in Australia but do not meet the criteria of other categories.

shared with relatives while over half of those in the independent group stayed with friends. Immigrants in the business and employer nominated categories were much less likely to share accommodation, possibly because they were more able to afford accommodation of their own.[1]

Moving house

For many immigrants, initial accommodation may be unsuitable or intended only as a temporary measure while they look for more permanent housing. Many experience a period of transition during which they change their place of residence one or more times before settling down. While just over half (54%) of recent migrating units were still in their initial accommodation 3 to 6 months after their arrival, 40% had moved once and 6% had moved two or more times. Those who shared with friends were the most likely to have moved (72%) while those who shared with relatives were the least likely to have moved out of their initial accommodation (40%).

Reason for moving to current dwelling at time of interview(a)

	%
Wanted own home/independence	32.7
Moved to better location/closer to amenities	19.9
Wanted more space	14.2
Wanted more privacy	11.4
Moved in with, or closer to, family/friends	9.3
Wanted more permanent housing	8.8
Purchased own home	6.5
Nicer house/liked house better	4.2
Cheaper/more affordable	3.6
Other	12.7
Total moved(b)	**100.0**

(a) Between September 1993 and August 1995.
(b) Some principal applicants gave more than one reason for moving. Therefore, components do not add to total.

Source: Department of Immigration and Multicultural Affairs, unpublished data, Longitudinal Survey of Immigrants to Australia.

Reasons given for moving to current residence indicate that many did so because they did not want to share accommodation with others any longer[1] – 33% wanted their own home/independence, 14% wanted more space and 11% wanted more privacy. On the other hand, 9% moved in with, or closer to, family or friends. Other reasons given for moving indicate that, having had some time to assess their needs and consider the housing options available, many had simply made the transition to more permanent and suitable housing – 20% had moved to a better location/closer to amenities, 9% wanted more permanent housing and 6% had purchased their own home.

Housing tenure

Over half (54%) of all recent migrating units were renting their accommodation at the time of interview (3 to 6 months after arriving in Australia). The vast majority were renting from private landlords. Fewer than 4% of all recent migrating units were renting public housing in Australia compared to 8% before migrating. Those in the humanitarian group were the most likely to be renting public housing in Australia (7%).

Recent immigrants were much more likely to be renting and much less likely to own their accommodation in Australia than they had

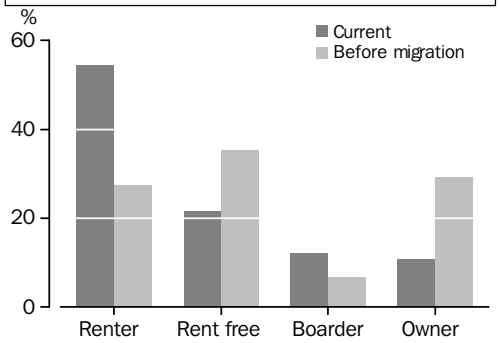
been before migrating. This was particularly true for those in the humanitarian group, many of whom may have experienced social and economic disruption in their home countries prior to migration, and therefore arrived in Australia with very few assets.

Of all recent migrating units, 11% were either paying off a mortgage or owned their homes outright 3 to 6 months after arriving in Australia. Those in the business/employer nomination group were the most likely to own their homes in Australia (29%) and to have owned their previous homes before migrating (62%). While 35% of those in the humanitarian group had owned their homes in their former home countries, very few were in a position to buy in Australia.

A third of all recent migrating units were either boarding or living rent free with others (mainly relatives) 3 to 6 months after arriving in Australia. Immigrants in the family and humanitarian categories were the most likely to be living with relatives (34% and 25% respectively).

The proportion of recent immigrants living with others rent free was higher before migration (35%) than after arrival in Australia (22%). This could be because there were fewer family members and friends in Australia to offer support.[1] On the other hand, for many immigrants, living rent free with relatives or friends before migration may have been a relatively short transition period between selling or giving up the lease on their former home and moving to Australia. Many of these migrating units could have been in a position to rent or buy their own home within 3 to 6 months of their arrival.

Housing tenure before migration and at time of interview(a)



(a) Between September 1993 and August 1995.

Source: Department of Immigration and Multicultural Affairs, unpublished data, Longitudinal Survey of Immigrants to Australia.

Government financial assistance

At the time of interview 30% of all recent migrating units (including over three quarters of those in the humanitarian group) were

Housing tenure at time of interview(a) and before migration

	Migration visa group							
	Family		*Business/employer nomination*		*Independent*		*Humanitarian*	
	Current	*Before*	*Current*	*Before*	*Current*	*Before*	*Current*	*Before*
	%	%	%	%	%	%	%	%
Owner	*13.5*	*27.1*	*29.3*	*61.7*	*4.9*	*26.8*	* *	*34.6*
Without mortgage	6.5	19.5	16.1	40.6	1.3	12.4	* *	32.2
With mortgage	7.0	7.6	13.3	21.1	3.6	14.4	* *	2.4
Renter(b)	*46.4*	*27.0*	*58.3*	*25.2*	*74.4*	*33.1*	66.6	*24.0*
Public	3.8	7.8	* *	* *	* *	6.5	6.7	11.0
Private	42.3	18.2	55.2	19.3	72.9	23.3	59.8	11.1
Boarder	*11.7*	*6.7*	* *	* *	*10.7*	*10.8*	*19.5*	*2.8*
Family	9.2	6.0	* *	* *	3.5	8.6	13.7	2.2
Other	2.5	0.7	* *	* *	7.2	2.2	5.9	* *
Rent free	*27.4*	*38.5*	*10.3*	*9.4*	*8.7*	*29.0*	*12.5*	*34.9*
Family	24.5	35.3	* *	5.6	4.4	26.2	11.1	32.4
Other(c)	3.0	3.2	* *	* *	4.3	2.8	* *	2.5
Total(d)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Between September 1993 and August 1995.
(b) Includes renting from employer.
(c) Includes rent free from employer.
(d) Includes other occupancy arrangements.

Source: Department of Immigration and Multicultural Affairs, unpublished data, Longitudinal Survey of Immigrants to Australia.

receiving financial assistance from the government for housing purposes. This included help with mortgage payments and with rental payments in both public and private rented accommodation.[1]

Type of dwelling

About half (49%) of all recent migrating units were living in separate houses at the time of interview – 37% were living in flats, units or apartments, and 13% were living in semi-detached housing (e.g. duplex, town house, row/terrace house).

Recent immigrants were less likely to be living in semi-detached housing in Australia than before migration, and more likely to be living in separate houses, flats, units or apartments. This is probably because semi-detached housing is a less commonly available housing option in Australia than in some of the migrant source countries, particularly the United Kingdom and Ireland.

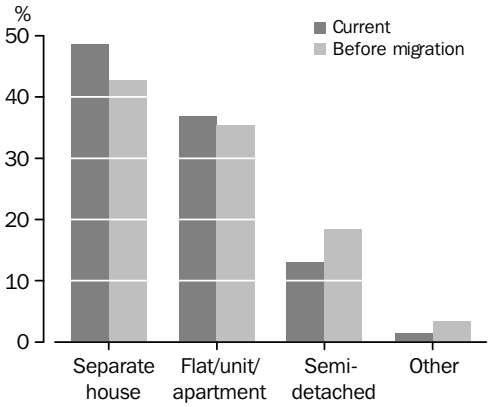
Housing characteristics of recent immigrants and all Australians

Compared to the total Australian population, recent immigrants were more likely to be renting privately or living rent free; less likely to be renting government housing; and much less likely to be purchasing their own home or to own it outright.

However, many aspects of housing such as tenure, housing costs and type of dwelling are related to other factors such as the life cycle stage of the occupants and geographic location of the dwelling. For example, younger households are more likely than older households to be living in flats, units or apartments (and to be paying rent) and less likely to be living in a separate house which they are either paying off or own outright. High and medium density housing options are more common in capital cities and other major urban areas than in other parts of Australia. Housing costs vary considerably between State/Territory capital cities and between major urban and other areas within States and Territories.

Therefore some of the differences in the housing characteristics between recent immigrants and the total Australian population may be partly explained by the younger age distribution of recent immigrants and their higher representation in capital cities and other major urban areas.

Type of dwelling before migration and at time of interview(a)



(a) Between September 1993 and August 1995.

Source: Department of Immigration and Multicultural Affairs, unpublished data, Longitudinal Survey of Immigrants to Australia.

Type of dwelling of recent immigrants(a) and all Australians(b)

	Total population		*Living in Sydney: reference person(c) aged 25–34 years*	
	Recent immigrants	*All Australians*	*Recent immigrants*	*All Australians*
	%	%	%	%
Separate house	48.6	80.2	32.2	60.3
Flat, unit or apartment(d)	36.8	11.5	54.8	25.8
Semi-detached/row or terrace house/town house	13.0	7.5	11.0	13.7
Other	1.5	0.8	2.0	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**

(a) At time of interview – between September 1993 and August 1995.
(b) At time of interview during 1995–96.
(c) Refers to principal applicant in recent migrating units, and reference person in income units for all Australians.
(d) Includes flat attached to house.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96; Department of Immigration and Multicultural Affairs, unpublished data, Longitudinal Survey of Immigrants to Australia.

Weekly rent/mortgage payments at time of interview(a)

	Living in Sydney: reference person(b) aged 25–34 years	
	Recent immigrants	All Australians
Weekly payments	%	%
Less than $50	* *	*2.3
$50–99	12.7	23.0
$100–149	33.0	19.8
$150–199	32.5	17.3
$200 or more	20.4	37.7
Total	**100.0**	**100.0**

(a) Between September 1993 and August 1995.
(b) Refers to principal applicant in recent migrating units, and reference person in income units for all Australians.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96; Department of Immigration and Multicultural Affairs, unpublished data, Longitudinal Survey of Immigrants to Australia.

However when comparison is limited to equivalent subpopulations, in this case young recent migrating units/income units living in Sydney (reference person aged 25–34), there are still large differences in tenure and dwelling type between recent immigrants and all Australians.

Within this group, recent immigrants were twice as likely as all Australians to be living in a flat, unit or apartment, and only half as likely to be living in a separate house. Only 5% of recent migrating units were either paying off a mortgage or owned their homes outright compared to 29% of all Australian income units. Recent migrating units were more likely to be renting privately (62%) than all Australian income units (40%) but less likely to be renting government housing (2% compared to 4%).

Income units

An income unit may comprise one person or a group of related persons, within a household, whose income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples and between parents and dependent children.

In this review the *income unit*, rather than the household, has been used to compare the housing characteristics of all Australians to those of recent immigrants because it more closely approximates the composition and living arrangements of the *migrating unit*.

Among young (reference person aged 25–34) Sydney renters and purchasers, the majority of recent migrating units (66%) paid between $100 and $199 per week in rent or mortgage payments. They were much less likely than all Australians to be paying less than $100 per week, partly because a smaller proportion of recent immigrants had low-cost government rental accommodation. Among private renters, too, only half as many recent immigrants as all Australians paid less than $100 per week. Recent immigrants were also less likely than all Australians to be paying more than $200 per week for housing, mainly because they were less likely to be paying off a mortgage.

Endnotes

1 Department of Immigration and Multicultural Affairs, 1997, *The Migrant Experience: Wave One, Longitudinal Survey of Immigrants to Australia,* DIMA, Canberra.

Housing tenure of recent immigrants(a) and all Australians(b)

	Total population		Living in Sydney: reference person(c) aged 25–34 years	
	Recent immigrants	All Australians	Recent immigrants	All Australians
	%	%	%	%
Owner without mortgage	5.0	32.4	2.1	5.1
Owner with mortgage	5.7	21.9	2.9	23.5
Renter, private	50.4	19.9	62.1	40.0
Renter, public	3.5	4.7	1.7	4.4
Boarder, with relatives	8.5	7.8	9.7	14.2
Rent free	21.5	10.5	14.7	10.7
Other(d)	5.4	2.8	6.9	2.0
Total	**100.0**	**100.0**	**100.0**	**100.0**

(a) Between September 1993 and August 1995.
(b) At time of interview during 1995-96.
(c) Refers to principal applicant in recent migrating units, and reference person in income units for all Australians.
(d) Includes those boarding with non-relatives and those paying rent to the owner/manager of a caravan park, an employer, housing cooperative, community or church group or any other landlord not included elsewhere.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96; Department of Immigration and Multicultural Affairs, unpublished data, Longitudinal Survey of Immigrants to Australia.

Wealth in the family home

HOUSING STOCK

In 1995–96 households who owned their home outright had an average equity of $172,000 and for those with a mortgage the average equity was $102,000.

Home ownership is often described as part of the 'great Australian dream', and has been encouraged and promoted by governments over much of Australia's history. Government regulations in the financial sector have affected both the supply and cost of housing finance. Direct measures such as cash grants and subsidies, and the favourable treatment of the family home in social security and taxation provisions have also encouraged home ownership. In 1995–96, over 70% of households lived in their own home.

Home ownership usually contributes to the well being of owners by providing secure and, in the longer term, more affordable housing. For many Australians the equity accumulated in their home represents the major part of their household wealth. As well as financial security for retirement and unemployment, this equity also provides benefits such as collateral for loans for purposes such as cars and holidays, and for other investments.

In 1995–96 the average value of equity of home owners was $144,000. Households who owned their home outright, that is without a mortgage, had an average equity of $172,000 while the average for households with a mortgage was $102,000.

Households who own their home outright have the added benefit of enjoying relatively low housing costs, although to achieve this they forego income that could potentially accrue from investing in other ways. Outright owners, who represented 60% of all owner-occupiers in 1995–96, had housing costs of $21 a week on average. On the other hand, households with a mortgage were faced with relatively high weekly housing costs ($203) compared with private renters ($148) and renters from public housing authorities ($62). However, the repayment of a mortgage represents a form of saving as home owners increase the equity in their home and add to their wealth.

Housing wealth

Value of dwelling is the estimated value of the dwelling and land, as reported by the household respondent in the ABS Survey of Income and Housing Costs. It should be noted that estimates provided by household members may not necessarily agree with the market price or those obtained from certified valuers.

Equity in home is the stated value of the dwelling less the stated value of outstanding mortgages and loans secured against the dwelling. The value of outstanding loans may have been underestimated by some households, such as where the original loan was extended for non-housing purposes. As a result this may have overstated the value of the equity.

Housing costs include the repayment of loan interest and principal repayments, rates payments and, for renters, rent payments.

Home owner-occupiers as a percentage of all households, 1995–96

	Owner-occupiers				
	With mortgage	*Without mortgage*	*Renters*	*Total*	*Total*
Age group	%	%	%	%	'000
Under 25	13.2	5.1	81.8	100.0	381.4
25–34	41.1	11.1	47.8	100.0	1 373.6
35–44	49.0	23.9	27.1	100.0	1 484.8
45–54	33.1	48.5	18.4	100.0	1 303.5
55–64	12.9	72.2	14.8	100.0	881.0
65 and over	3.3	81.9	14.8	100.0	1 297.7
Total	**28.7**	**42.5**	**28.8**	**100.0**	**6 721.9**

Source: Housing Occupancy and Costs, Australia, 1995–96 (Cat. no. 4130.0).

Home ownership

The proportion of households who are purchasing or who own their home increases progressively with age. In 1995–96 the proportion of households who were owner-occupiers increased from 18% of those aged under 25 years, to 52% of those aged 25–34 years and 82% of those aged 45–54 years.

The proportion of home owners who have achieved outright ownership, by accumulating total equity in the family home, also increases with age. Most young home owners are paying off loans secured against their home, with only 22% of households aged under 35 years owning their home outright. This compares with those aged over 65, where 96% of owner-occupiers were outright owners.

Equity in the home

Housing wealth for owner-occupiers is defined as their equity in the family home (including land). It is accumulated through the deposit placed at the time of purchase, through paying off the mortgage principle,

Dwelling value and equity in the home for owner-occupiers, 1995–96

Age group(a)	*Mean dwelling value* $'000	*Mean loan outstanding* $'000	*Mean equity* $'000	*Owner-occupier households* '000
Under 35	147.6	62.3	85.3	787.3
35–44	179.0	46.7	132.3	1 082.1
45–54	188.8	22.7	166.1	1 063.5
55–64	179.2	6.7	172.5	750.2
65and over	156.2	1.1	155.1	1 106.2
Total	**170.8**	**27.1**	**143.7**	**4 789.3**

(a) Age of the household reference person.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

and through capital gains and losses as the market value of the dwelling rises and falls over time. The equity is measured as the value of the dwelling, as estimated by the householders themselves, less the reported value of any outstanding loans secured against the dwelling.

For some buyers, high interest payments, combined with falling dwelling values in some periods and some locations, as well as any additional borrowings they have made, may even result in negative equity some years after purchase.

Along with levels of outright home ownership, the amount of equity held in the family home follows a life-cycle pattern. People accumulate a larger financial stake in their homes as they grow older. On average, young home owners have a smaller equity in their home than older home owners. This is because they may not have made enough mortgage repayments since purchasing their home to significantly reduce their loan principle.

Mean dwelling value and equity in the home for owner-occupiers by income quintiles, 1995–96

Gross income quintiles(a)	*Mean dwelling value* $'000	*Mean loan outstanding* $'000	*Mean equity* $'000	*Owner-occupier households* '000
Lowest – below $282	143.0	7.5	135.5	835.6
Second – $282–495	146.7	12.7	134.0	878.1
Third – $496–798	158.5	27.9	130.6	913.5
Fourth – $799–1,198	164.0	37.0	127.0	1 027.6
Highest – $1,199 and over	225.9	43.2	182.7	1 134.5
Total	**170.8**	**27.1**	**143.7**	**4 789.3**

(a) For all households, whether home owners or not.

Source: Unpublished data, Survey of Income and Housing Costs, 1995–96.

However, even for young home owners, the equity in their homes is high. In 1995–96, home owners aged under 35 had an average equity of $85,000 in their homes – 58% of the mean value of dwellings owned by this age group, and over half of the mean equity of all owner-occupiers.

Housing wealth for home owners increased with age, up to 55–64 when the mean equity holding in 1995–96 was $173,000. For households in the older age groups, the value of equity was lower ($155,000). Elderly people were, on average, in smaller and lower-value dwellings.

Larger households generally lived in more expensive homes and also had a higher level of equity in their home, reflecting a need for larger living areas. For example, the average value of equity owned by couples living with their dependent and non-dependent children was $173,000, a value 20% higher than the average for all home owners. In contrast, one-parent households had a considerably lower level of equity ($122,000).

Housing wealth and income of owners

Wealth in home ownership is relatively evenly spread across income groups. In marked contrast to this, the ownership of other property and financial assets, such as savings deposits, shares, bonds and interests in superannuation and life insurance funds, tend to be concentrated in the higher income groups.[1] Part of the reason is that some population groups with low levels of income also have high rates of home ownership and relatively high amounts of wealth tied up in their homes ('asset rich, income poor'). This is particularly the case with older households.

In 1995–96, home owners in the lowest two quintiles (for all households) held on average a relatively high equity in their homes (around $135,000). This reflects the fact that over half (55%) of the households in the two lowest income groups were aged over 55 years, and that these households had very low levels of loans outstanding.

The level of equity was slightly lower for home owners in the next two quintiles, because of the larger number of younger owners in these income groups, and because they were more likely to have loans secured against the home. Home owners in the highest quintile had the highest level of equity, a result of their considerably higher dwelling values. Households in the highest quintile were generally larger, and most (86%) had two or more income earners.

Dwelling values for owner-occupied homes

In 1995–96, the mean value of all owner-occupied dwellings in Australia was $171,000. However, values of dwellings are affected by a large number of factors, including size; condition; the quality and number of features such as garages, swimming pools, gardens, extra bathrooms, heating and cooling systems; and their proximity to schools, shopping centres and work.

The location of the dwelling is a major factor, with dwellings in capital cities having the highest home values within each State. In 1995–96, the mean value of owner-occupied dwellings in all capital cities was $192,000 compared to $136,000 for homes outside the capital cities. These differences in home values result in very different housing wealth holdings for families across Australia.

The value of homes also varies markedly across different capital cities. In 1995–96, the mean value of owner-occupied dwellings in Sydney was $256,400, while the mean value in Hobart was half of this ($128,400).

Dwelling values also vary according to the type of dwelling structures. Nearly all (90%) owner-occupier households live in separate houses, with 5% in townhouses and other semi-detached houses, and 5% in flats, units and apartments. Separate houses are, on average, worth more than other types of dwellings. In 1995–96, the mean value of all owner-occupied separate houses in Australian capital cities was $195,000 compared to $175,600 for townhouses and semi-detached dwellings, and $164,600 for flats, units and apartments. However, the average value in Sydney of townhouses and semi-detached dwellings ($238,000) and flats, units and apartments ($214,000) was considerably higher than the value of separate houses in any of the other capital cities.

How much of Australia's household wealth is in the family home?

In 1995–96, the value of all owner-occupied dwellings (including land) in Australia was estimated at $820 billion. Owner-occupiers held $690 billion in equity in their homes, or 84% of the value of the total owner-occupier dwelling stock.

Households have holdings of wealth in many other forms. Estimates from the ABS Australian National Accounts (which are not completely comparable to the estimates based on household responses) show that the value of dwellings and residential land represents 50% of the total value of assets owned by the household sector. Almost 85% of this was for dwellings occupied by owner-occupiers, the remainder being dwellings owned by households for rental investment, holiday homes and vacant dwellings. Equity in superannuation funds accounted for 17% of household assets, cash and saving deposits 12%, and shares and other securities 8%.

Endnotes

1 Dilnot, A. 1990, 'The Distribution and Composition of Personal Sector Wealth in Australia', *Australian Economic Review*, 1st quarter 1990, pp. 33–40, Institute of Applied Economic and Social Research, Melbourne.

Mean dwelling value of owner-occupied homes in capital cities, 1995–96

	Separate house	*Semi-detached(a)*	*Flat, unit, apartment*	*Total*	*Mean loan outstanding*	*Mean equity*
Capital city	$'000	$'000	$'000	$'000	$'000	$'000
Sydney	263.3	238.0	214.2	256.4	34.2	222.2
Melbourne	163.3	153.5	110.5	160.2	27.3	132.9
Brisbane	170.0	143.2*	161.1*	168.1	31.7	136.4
Adelaide	140.9	144.9	89.4	138.2	26.0	112.2
Perth	196.5	129.6	150.3	188.0	31.2	156.8
Hobart	130.2	91.9*	101.5*	128.4	20.0	108.4
Canberra	186.5	173.2	133.5*	183.4	43.4	140.0
All capital cities(b)	**195.0**	**175.6**	**164.6**	**191.7**	**27.1**	**164.6**

(a) Includes row or terrace house and townhouse.
(b) Includes Darwin.

Source: Housing Occupancy and Costs, Australia, 1995–96 (Cat. no. 4130.0) and unpublished data, Survey of Income and Housing Costs, 1995–96.

Smaller households, larger dwellings

In 1996 more than half (55%) of the dwellings in Australia contained only one or two people.

Australian families are becoming smaller, yet new houses are getting larger. This apparent contradiction in trends reflects a change in housing standards and aspirations combined with changes in people's living arrangements. Over the past few decades Australian society has undergone many social changes that have altered the way people live. People are marrying later and couples are having fewer children. The increase in divorces since changes in the divorce laws in 1975 has led to more one-parent families. Proportionally more people are living alone, either by choice or as a result of divorce, separation or widowhood. Overall, these factors have resulted in the number of households growing at a faster rate than the number of people. Between 1971 and 1996 the population of Australia increased by 40%, from 12.8 million to 17.9 million. Over that period the number of households increased by 74%, from 3.7 million to 6.4 million.

Smaller households

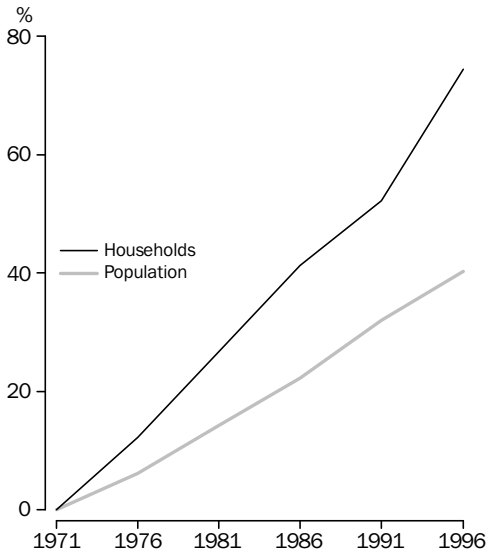
Although the number of households has increased, the average number of residents in a household has been declining. In 1971 it was 3.3 people. Since then there has been a fairly steady decline with the 1996 Census recording an average of 2.7 people per household. Most of this difference can be attributed to the growth in the number of small households (one or two residents) and the decline in the number of large households (six or more residents). Between 1971 and 1996 the number of dwellings containing one person increased by 172% (representing a proportional change in one-person households from 14% of households in 1971 to 22% in 1996). Over the same period the number of dwellings containing six or more people declined by 45% (representing a proportional change in this size of household from 11% of households in 1971 to 4% in 1996).

Definitions

A *household* is a group of people who usually live and eat together. A household may be a family, a group household, a lone person household, or a household containing visitors only (e.g. a holiday home). For census purposes, the total number of households is equal to the total number of occupied private dwellings as a census form is completed for each household from which dwelling information is obtained.

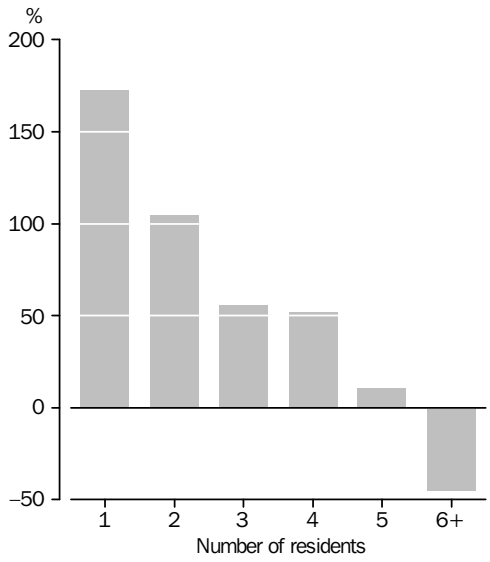
Because caravans in caravan parks were counted as non-private dwellings prior to the 1986 Census they have been excluded from the household counts in this review.

Growth of households and the population from 1971 to 1996



Source: Censuses of Population and Housing.

Change in the number of dwellings by resident size from 1971 to 1996



Source: Census of Population and Housing, 1971 & 1996.

The size of households

	1971	1976	1981	1986	1991	1996
	%	%	%	%	%	%
Number of residents						
One	13.6	15.7	18.0	19.5	19.7	22.1
Two	26.5	28.1	29.2	30.0	31.1	32.5
Three	18.0	17.3	16.9	17.1	17.2	16.8
Four	18.7	19.4	19.1	18.6	18.5	17.0
Five	12.2	11.2	10.5	9.6	9.1	8.1
Six or more	11.1	8.3	6.4	5.2	4.3	3.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	persons	persons	persons	persons	persons	persons
Average size of household	3.3	3.1	3.0	2.9	2.8	2.7

Source: Censuses of Population and Housing.

Although nearly half of one-person householders in 1996 were older people, they also comprised young people and middle aged people who had remained single or became single by divorce or separation. Since 1981, there has been a slight shift in age distribution away from older and younger ages (the over 60s and under 30s) towards young middle ages (30 to 44). The proportion of one-person householders aged 60 years or over decreased from 50% in 1981 to 45% in 1996. The proportion of those aged 45 to 59 years remained similar at 19% in 1981 and 20% in 1996. The proportion of one-person householders who were aged under 30 years was 14% in 1996, down from 16% in 1981. The proportion aged between 30 and 44 years was 21% in 1996, an increase from 15% in 1981.

The growth in the number of one-parent families was facilitated by the introduction of the *Family Law Act 1975*. However, this Act only provided the mechanism for easier divorce. The social acceptability and practicality of divorce is also a product of changing social mores and the increased opportunity for women to support themselves through work or, since 1973, from the supporting mother's benefit (which was extended to male single parents in 1977 and is now incorporated into parenting payments).

The reduction in the number of large households is mainly due to parents having fewer children. This is a product of both opportunity and personal choice. Women are having children at an older age than earlier generations, which reduces the maximum number of children they can possibly have. In 1964, 32% of married women who gave birth did so for their first child and 6% did so for their sixth or greater order child. In 1974, the figures were 39% for their first child and 2% for their sixth or greater order child. By 1996 these proportions were 41% for their first child and under 1.0% for their sixth or greater order child (see *Australian Social Trends 1996*, Trends in fertility, pp. 36–40).

Larger dwellings

The Australian Census does not collect comprehensive information on the size of dwellings, but it does record the number of bedrooms in a dwelling. This provides a broad indicator of dwelling size but does not take into account the size of the bedrooms. This indicator also misses other rooms that have become common in newer dwellings, such as rumpus rooms, ensuite bathrooms, studies etc.

Australian Census data show that between 1971 and 1996 the average number of bedrooms per occupied private dwelling had increased from 2.7 to 3.0. This increase is due to the growth in the number of dwellings with more than three bedrooms and a decline in the number with zero or one bedroom. The number of dwellings with zero or one bedroom declined by 5% over the period (representing a proportional change from 10% of occupied private dwellings in 1971 to 5% in 1996). The number of dwellings with 4 and 5 bedrooms grew by 190% and 158% respectively (representing a proportional change from 11% and 2% respectively of occupied private dwellings in 1971 to 19% and 3% respectively in 1996).

The proportion of dwellings with 3 bedrooms, the most common arrangement, has remained relatively steady at around 50%.

Size of occupied private dwellings

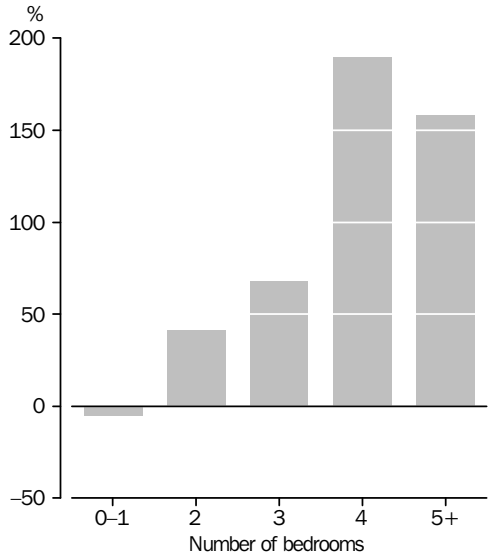
	1971	*1976*	*1981*	*1986*	*1991*	*1996*
	%	%	%	%	%	%
Number of bedrooms						
None or one	9.7	7.3	7.2	5.9	5.6	5.4
Two	26.7	24.5	27.3	26.7	23.6	22.3
Three	50.3	51.7	51.5	52.1	51.1	49.9
Four	11.0	13.6	12.0	13.3	16.7	18.9
Five or more	2.3	3.0	2.1	2.1	3.0	3.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	bedrooms	bedrooms	bedrooms	bedrooms	bedrooms	bedrooms
Average number of bedrooms	2.7	2.8	2.8	2.8	2.9	3.0

Source: Censuses of Population and Housing.

The trend to larger houses is also demonstrated by data collated from new housing approval applications. In 1983 the average size of private sector dwellings was 167 square metres. By 1997 this had risen to 212 square metres (see *Australian Social Trends 1998*, Housing – national summary tables, pp.144–145).

This pattern of growth is also reflected in the average size of public housing building approvals which increased from 104 square metres in 1983 to 154 square metres in 1997.

Change in the number of dwellings by size from 1971 to 1996



Source: Censuses of Population and Housing, 1971 & 1996.

People and the environment

Page

ATTITUDES AND ACTIONS

USE OF RESOURCES

WASTE MANAGEMENT

People and the environment

ATTITUDES AND ACTIONS

The high rates of energy consumption in the more affluent industrially developed countries of the world, including Australia, are responsible for the highest rates of greenhouse gas.

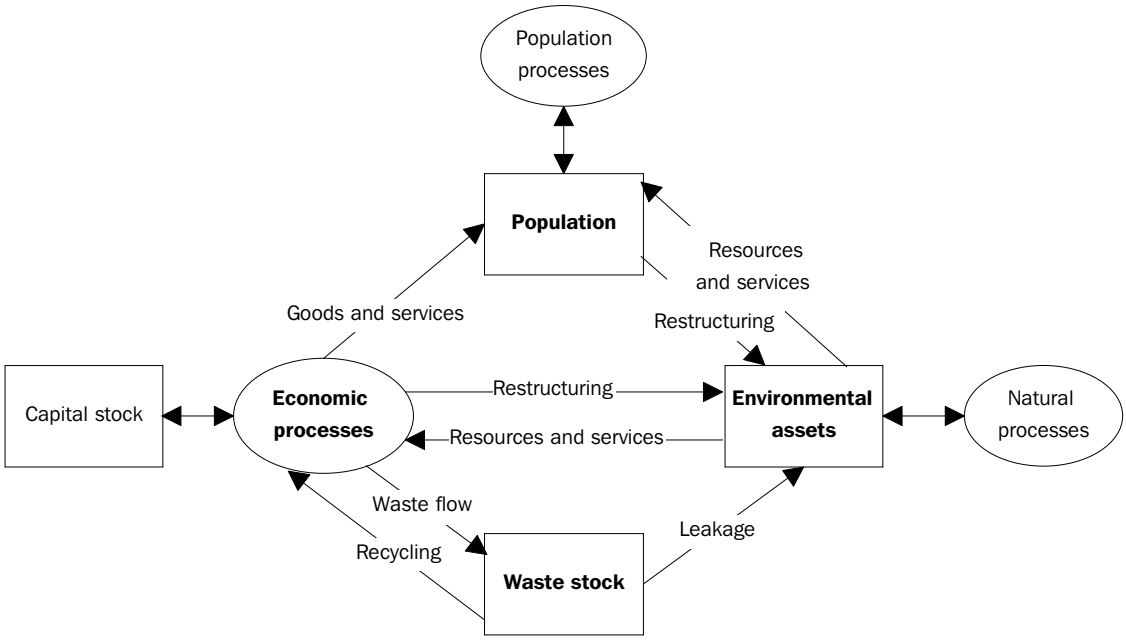
It is now widely recognised in Australia and throughout the world that the environment, economy and social well being are inextricably linked – that all spheres of human activity impact on the natural environment and are affected or limited by the environment. For example, human settlements and economic activities may deplete natural resources, pollute air and water, and modify or destroy natural ecosystems. In turn, the extent and quality of remaining natural assets (e.g. forests, oil reserves and arable land) limit current and future economic development and consumption levels. Also, pollution and degradation of the natural environment affect human health and quality of life.

People interact with the natural environment in various ways. At the most basic level, we all draw directly on air and water for our survival. While some hunting and gathering societies of the world still depend largely on indigenous plant and animal sources for food, medicine, clothing and shelter, most Australians rely primarily on modified land use practices, such as agriculture and mining, and on highly developed technologies to convert natural resources into the vast array of goods and services characteristic of our relatively affluent lifestyle. People also have a scientific interest in ecological systems and the natural environment, as well as spiritual and cultural connections to nature – ranging from formal religious connections to the land (among many of the world's indigenous populations) to enjoyment of recreational amenities and appreciation of natural beauty.

The population environment process model, developed by Statistics Canada, provides 'a conceptual representation of how modern society interacts with the natural environment'.[1] It shows the flow of resources and services/amenities from the environment to the population, both directly and through the economy. It also shows that the population and economy have direct restructuring effects on natural assets and natural processes – and indirect effects on the environment through the flow of wastes.

The impacts of human activity on the environment can be far reaching, and sometimes the environmental and social costs of economic development are not shared in the same proportion as the benefits. For example, the high living standards of people

The population environment process model



Source: Statistics Canada, *Human Activity and the Environment, 1994*.

in the world's more affluent countries are based on disproportionate consumption of global resources, and may contribute to environmental degradation and unsustainable exploitation of natural resources both within and beyond their borders. In particular, they may contribute to environmental damage and increasing poverty in some of the world's poorer resource-dependent nations.[2]

Environmental problems such as air and water pollution, while generally more concentrated at the source, can nevertheless spread considerable distances, crossing State and national borders, extending into international waters and even into the earth's stratosphere. For example, the enhanced greenhouse effect (global warming) has the potential to affect climate, sea levels, and agriculture on a global scale.[3] The high rates of energy consumption in the more affluent industrially developed countries of the world, including Australia, are responsible for the highest rates of greenhouse gas emissions.[3]

Rapid economic growth, rising living standards and continued strong population growth in the world's developing countries are expected to greatly increase the pressure on world resources and the natural environment over the next few decades. At the present time, however, the wealthier countries within the Organisation for Economic Cooperation and Development (OECD) block still dominate the rest of the world in energy use and associated environmental impacts.

Sustainable development

The principles of ecologically sustainable development underpin much of the thinking and policy relating to environmental protection and economic development in the world today. Sustainable development may be defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.[4] In 1992, the United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, agreed on a comprehensive action plan for global sustainable development (Agenda 21).[5]

Agenda 21 is notable for its emphasis on the need to integrate economic, social and environmental issues. It is also notable for its strong endorsement of the participation of non-government organisations, local community groups, and ordinary individuals in decision making and implementation of sustainable development strategies, particularly those which can affect their communities.[5]

Australia's Landcare movement is a good example of such an approach, taken in relation to landscape restoration and sustainable land use. While the majority of all Landcare groups receive government assistance (e.g. funding, materials and information), the planning and implementation of projects is carried out by volunteers in local Landcare groups. Since its inception in 1990, Landcare has received very strong community support. By March 1994 more than 2,000 registered groups were

International comparison

While energy use is only one aspect of consumption, it is the best single indicator of a nation's overall intensity of extraction, production, consumption and pollution.[6]

In 1995, OECD countries, which accounted for 19% of the world's population, were responsible for more than half of the world's energy use. Average per capita energy use by OECD countries was six times the average for the rest of the world. Among OECD countries, Australia ranked third behind Canada and the USA in per capita energy consumption. Those countries with the highest rates of energy use also had the highest rates of greenhouse gas emissions.[3]

Energy consumption, 1995

	Total energy consumption		*Population*
Selected OECD countries	TOE(a)/ capita	%	%
Canada	6.0	3.1	0.5
USA	5.3	24.2	4.6
Australia	**3.6**	**1.1**	**0.3**
New Zealand	3.4	0.2	0.1
Germany	3.0	4.2	1.4
Japan	2.8	6.0	2.2
France	2.7	2.7	1.0
United Kingdom	2.7	2.7	1.0
Italy	2.2	2.2	1.0
Other OECD	1.8	12.3	6.8
Total OECD	**3.1**	**58.6**	**19.1**
Rest of world	0.5	41.4	80.9
World	**1.0**	**100.0**	**100.0**

(a) Tonnes in oil equivalent.

Source: OECD, *Environmental Data, Compendium 1997.*

active in environments as diverse as urban bushland and arid rangeland in central Australia. [2]

In addition to farmers and community groups, Landcare includes school groups which are active in monitoring programs designed to collect information about various aspects of their local environments including water quality in streams, soil salinity and earthworm populations.[2]

The Clean Up Sydney Campaign, which became Clean Up Australia, is another example of a grassroots movement which has captured the public imagination and attracts strong community support throughout Australia.[2] In 1995, on Clean Up Australia Day, half a million volunteers removed about 10,000 tonnes of rubbish from waterways, parklands and roadsides throughout Australia.[7]

Consumption, lifestyle and the environment

While much of the environmental protection and sustainable development policy in Australia (and other industrialised countries) has an industry focus, there is also a growing recognition of the need to modify consumer demand.[6] It is individual consumers who decide what type of products they want to buy and how much they are willing to pay; what they are prepared to do without; and to what extent they are willing to change their current lifestyles in order to achieve sustainable consumption levels.

There are various environmental programs (both government and non-government) aimed at influencing the attitudes and consumption patterns of individuals and households in Australia. These include promotion of environmental education in schools and higher education curriculums; community education/awareness programs; pricing incentives to encourage energy and water conservation in the home; promotion of the 'reduce, re-use, recycle' philosophy regarding household waste; and a range of measures aimed at reducing use of private cars, particularly in major cities.

Recent surveys indicate that the majority of Australians are concerned about environmental problems, and rank the importance of environmental protection as equal to or greater than economic growth. (See *Australian Social Trends 1998,* People's concerns about environmental problems, pp. 167–170). However, cost savings appear to be a much more powerful motivation than environmental protection among households which take action (e.g. insulating their houses or installing solar hot water systems) to conserve energy, while initial costs are an important factor preventing people from taking action. (See *Australian Social Trends 1998,* Household energy use, pp. 171–174).

It would appear that people are prepared to modify their consumption patterns and behaviour in favour of the environment when this is economical and does not have a serious impact on their lifestyles. For example, while the proportion of Australian households involved in recycling their waste has increased remarkably in recent years, mainly due to increased availability of

International comparison

With its heavy dependence on oil, the transport sector is a major contributor to greenhouse gas emissions and to the depletion of a non-renewable natural resource. Transport fuel consumption also plays a major role in local and regional air pollution which affects human health and the environment.[3]

The use of passenger cars, the least efficient form of road transport, is increasing throughout the world, and is particularly high in the more industrially developed countries. In 1995, the average rate of passenger cars in use in OECD countries was 27 times the rate for the rest of the world. Australia ranked third among OECD countries (with 499 passenger cars in use per 1,000 population) behind the USA and Italy.

Passenger cars in use per 1,000 population

Selected countries	*1985* rate	*1995* rate
United States of America	553	564
Italy	397	524
Australia	**433**	**499**
Germany	na	495
Canada	429	465
New Zealand	458	458
France	381	432
United Kingdom	334	415
Japan	231	356
Other OECD	180	196
Total OECD	**318**	**381**
Rest of world	15	14
World	**77**	**84**

Source: OECD, *Environmental Data, Compendium 1997.*

kerbside recycling facilities (see *Australian Social Trends 1998,* Household waste management, pp. 180–182), there is no evidence to indicate that they are consuming less or generating less waste.

Australians also appear reluctant to reduce their use of private motor vehicles in favour of public transport. To some extent this is associated with the predominance of low density housing in Australia, and the consequent urban sprawl, which can make provision of attractive public transport options uneconomical.

In 1996, 87% of Australian households had at least one registered motor vehicle while 46% had two or more. The vast majority of people drove to work or study alone. For those who engaged in car pooling, and those who used public transport, convenience and cost savings were the main motivations. (See *Australian Social Trends 1998,* Transport choices and the environment pp. 175–179).

Endnotes

1 Statistics Canada, 1994, *Human Activity and the Environment.*

2 Aplin, G. Mitchell, P. Cleugh, H. Pitman, A. Rich, D. 1995, *Global Environmental Crises – an Australian Perspective,* Oxford University Press, Melbourne.

3 Organisation for Economic Co-operation and Development (OECD), 1997, *Environmental Data, Compendium 1997,* OECD, Paris.

4 World Commission on Environment and Development, 1990, *Our Common Future*, Oxford University Press, Melbourne.

5 Keating, M. 1993, *The Earth Summit's Agenda for Change – A plain language version of Agenda 21 and the other Rio Agreements,* Centre for Our Common Future, Geneva.

6 Department of the Environment, Sport and Territories, 1996, *Environmental Economics Seminar Series – Consumption and the Environment*, Commonwealth of Australia, Canberra.

7 Clean Up Australia, 1995, *Annual Report incorporating the Rubbish Report,* Cleaning Up Australia, Pyrmont.

People's concerns about environmental problems

ATTITUDES AND ACTIONS

In 1996 younger Australians, and those with higher education qualifications, were the most likely to be concerned about environmental problems and to rank the importance of environmental protection as equal to or greater than economic growth.

People's concerns about environmental problems, and their views about the importance of environmental protection may influence their attitudes and behaviour towards environmental protection policy and programs. For example, people who are concerned about protecting the environment may be more willing to recycle household garbage, to conserve energy and water or to reduce use of private motor vehicles in favour of public transport. They might also be more likely to accept the economic trade-offs many believe are inherent in pursuing national and international policies aimed at protecting the environment and achieving ecologically sustainable development.

A 1996 survey of environmental issues found that 68% of Australians aged 18 years and over were concerned about at least one environmental problem, a decline from 75% in 1992. It could be that people are taking comfort from the perception that these problems are being addressed. On the other hand, matters such as unemployment, crime and health may have displaced environmental issues in people's minds.

Environmental problems arousing most concern

In 1996, as in 1992, more Australians were concerned about air pollution, ocean and freshwater pollution, destruction of trees, ecosystems, garbage disposal, the ozone layer and extinction of species than any other

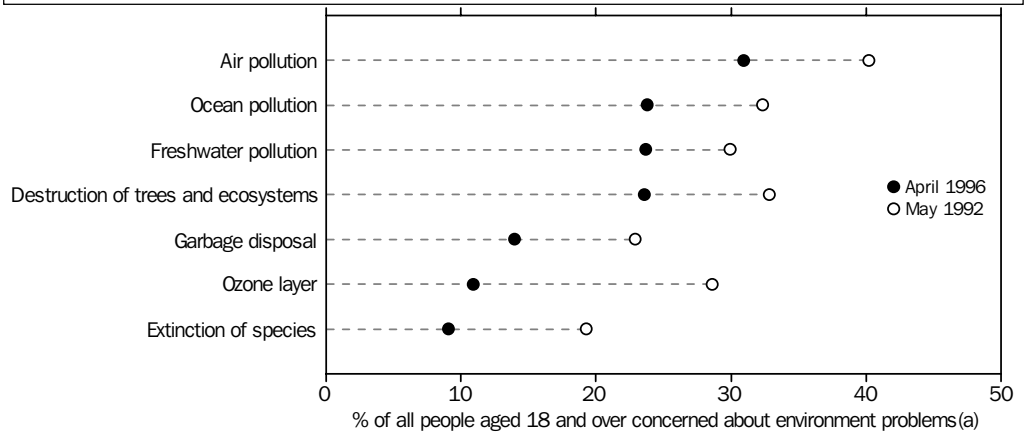
Environmental surveys

This review uses data from surveys of environmental issues conducted by the ABS during May 1992, June 1994 and April 1996. Information was collected from people aged 18 and over about a range of issues including:

- the social issue of most importance to them (1996 only);
- the relative importance of environmental protection and economic growth;
- whether or not they were concerned about any environmental problems, and which environmental problems were of most concern;
- whether they believed the quality of Australia's environment had declined, improved or stayed much the same over the last ten years(1996 only);
- whether or not they received any information about the environment in the last twelve months, and source of information received(1992 only); and
- whether or not this information influenced their behaviour or attitudes(1992 only).

Responses to surveys of community opinion are likely to be influenced by circumstances and community perceptions prevailing at the time of the survey. Respondents may have interpreted the terms used in the questions, such as *concern, important, environment* and *problems,* differently. No definition or examples of environmental problems were given before the questions were asked. Some people may not have understood what some of the environmental problems are. The surveys did not attempt to measure degree/intensity of concern. Nor did they attempt to measure knowledge or understanding of environmental issues, which may be important determinants of concern.

Selected environmental concerns



(a) Most people expressed concern for more than one issue.

Source: Environmental Issues: People's Views and Practices, Australia 1996 (Cat. no. 4602.0).

environmental problems. However, the proportion of the population concerned about each problem has declined since 1992.

From 1992 to 1996, the proportion of people concerned about the depletion of the ozone layer decreased from 29% to 11%, more than for any other environmental problem. There were also relatively large declines in the proportion of people concerned about toxic waste, the greenhouse effect and extinction of species. Following a decline between 1992 and 1994, there was a resurgence in concern about nuclear issues, such as nuclear testing/weapons and use of radioactive materials, between 1994 and 1996. This may have been in response to nuclear testing in the Pacific Ocean several months prior to the 1996 survey. However, the proportion of people concerned about these issues was still lower in 1996 than in 1992.

Proportion of people aged 18 and over with environmental concerns, 1996

	State capital cities	*Other urban/rural centres(a)*
	%	%
Air pollution	35.1	23.8
Ocean pollution	25.5	20.9
Freshwater pollution	23.9	23.2
Destruction of trees and ecosystems	23.1	23.7
Garbage disposal	14.3	13.4
Ozone layer	11.1	10.4
Toxic waste	8.5	8.9
Other pollution	9.2	8.1
Extinction of species	8.7	9.5
Nuclear testing/weapons	7.1	8.5
Greenhouse effect	7.1	4.9
Urban development/ overpopulation	5.9	5.7
Land degradation	6.2	10.0
Conservation of resources	6.3	6.4
Mining/use of radioactive materials	5.0	4.9
Use of pesticides	3.5	5.4
Sand mining	1.3	1.4
Other	5.2	5.7
Total concerned(b)	**69.2**	**66.8**
No concerns	30.8	33.2

(a) Excludes Australian Capital Territory and Northern Territory.
(b) Most people expressed concern for more than one issue. Therefore components do not add to total.

Source: Environmental Issues: People's Views and Practices, Australia, 1996 (Cat. no. 4602.0).

The focus of people's concerns about the environment varied according to where they lived, and appeared to be related to the types of problems most evident in their locality. For example, people in capital cities – particularly Sydney and Melbourne – were much more likely to be concerned about air pollution (35%) than those living elsewhere (24%). Capital city dwellers were also more likely than others to be concerned about ocean pollution and less likely to be concerned about land degradation.

While air pollution was the most common environmental concern in most States and Territories, more South Australians (31%) were concerned about freshwater pollution than any other environmental problem. This may reflect the relatively poor quality of Adelaide's water supply, high levels of salinity in the lower Murray River, and the low rainfall received in most of the State. Destruction of trees and ecosystems was the most common concern in the Northern Territory (30%) and Tasmania (24%) and the second most common concern, after air pollution, in Queensland (25%). This may be due to the relatively high profile, locally, of conflicts between economic interests and environmental protection in World Heritage areas such as the Kakadu and Uluru-Kata Tjuta national parks in the Northern Territory; the Tasmanian wilderness; and the Great Barrier Reef, Fraser Island and wet tropics of Queensland.

Characteristics of people concerned about the environment

People with higher education qualifications were more likely to be concerned about environmental problems than those with vocational qualifications or no post-school qualifications. In 1996, 91% of people with postgraduate qualifications, and 85% of those with a degree said they were concerned about environmental problems. Full-time students aged 18–24 years, the majority of whom are in higher education, were also highly likely to be concerned about environmental problems (83%).

Reflecting patterns of educational qualifications to some extent, people under 55 years of age (particularly women aged 18–24), people in professional and para-professional occupations, and those with

Educational attainment and concern about environmental problems, 1996

Highest qualification	%
Higher degree	89.2
Postgraduate diploma	91.9
Bachelor degree	84.6
Undergraduate diploma	82.6
Associate diploma	77.8
Skilled vocational qualifications	70.1
Basic vocational qualifications	75.2
No qualifications	60.9
Total concerned	**68.4**

Source: Environmental Issues: People's Views and Practices, Australia, 1996 (Cat. no. 4602.0).

higher incomes were more likely than others to be concerned about environmental problems.

In general, employed people were more likely to be concerned about environmental problems than the unemployed although differences overall were relatively small (73% of employed compared with 71% of unemployed). This may also be a reflection of higher educational qualifications among the employed. On the other hand, it may indicate that those without the economic pressures associated with unemployment were better able to 'afford' to be concerned.

Perceived change in the quality of the environment

In 1996, 44% of people aged 18 years and over thought the quality of Australia's environment had declined over the previous ten years. Those groups most likely to be concerned about environmental problems were generally the most likely to have perceived a decline in the quality of the environment. For example, 48% of 18–24 year-olds believed that the quality of Australia's environment had declined, compared to around 40% of people over 55.

On the other hand, 23% of people aged 18 years and over thought the quality of Australia's environment had improved over the previous ten years.

Environmental problems versus other social issues

The majority of Australians considered other social issues to be more important to them than environmental problems. Presented with a range of issues in 1996, only 9% of

Most important social issue, 1996

Social issue	%
Crime	26.0
Health	22.7
Education	14.5
Unemployment	14.0
Environmental problems	**8.9**
Interest rates	4.4
Poverty	3.7
Immigration	2.5
Trade balance	1.3
Defence	0.6
Other	1.4
Total	**100.0**

Source: Environmental Issues: People's Views and Practices, Australia, 1996 (Cat. no. 4602.0).

Australians aged 18 years and over indicated that environmental problems was the issue of most importance to them. People aged 18–24 were more than twice as likely as people aged 55 and over to judge the environment as the most important social issue (13% compared to 6%).

In all age groups, however, higher proportions of people specified crime, health, education or unemployment as the social issue of most importance to them.

Environmental protection versus economic growth

In 1996, 19% of people aged 18 years and over, rated environmental protection as more important than economic growth, and 71%

Importance of environmental protection ranked equal to, or greater than, economic growth, 1996

Highest qualification	%
Higher degree	98.0
Postgraduate diploma	96.3
Bachelor degree	92.1
Undergraduate diploma	93.2
Associate diploma	91.8
Skilled vocational qualifications	90.4
Basic vocational qualifications	91.3
No qualifications	87.3
Total	**89.3**

Source: Environmental Issues: People's Views and Practices, Australia, 1996 (Cat. no. 4602.0).

rated both issues as equally important. There has been little change, since 1992, in people's views about the relative importance of environmental protection and economic growth, despite the decline in the proportion concerned about environmental problems.

Those groups most likely to be concerned about environmental problems were also the most likely to rate the importance of environmental protection as equal to, or greater than, economic growth. In 1996, 97% of people with postgraduate qualifications gave equal or greater priority to environmental protection compared to 91% with vocational qualifications and 87% of people with no post-school qualifications. A higher proportion of 25–34 year olds (93%) gave equal or greater priority to environmental protection than any other age group.

Environmental information

People's concerns about environmental problems are likely to be affected by the quality, quantity and coverage of environmental information they receive. Most Australians aged 18 years and over (90%) reported having received environmental information in the 12 months prior to May 1992. The most common source of environmental information was television, newspapers and radio (86%), followed by government and local council (42%). These were the two most common sources of information in every age group.

Source of environmental information, 1992

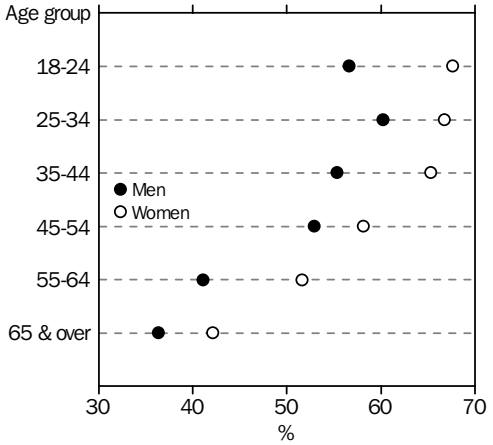
Source	%
TV, newspapers or radio	85.8
Government or local council	41.7
Environmental interest group	18.8
A school	17.7
A library	7.1
From anywhere else	5.4
Total(a)	**89.9**
None received	10.1

(a) Most people received information from more than one source. Therefore, components do not add to total.

Source: Environmental Issues: People's Views and Practices, Australia, 1992 (Cat. no. 4602.0).

Women were more likely than men to say that the information had influenced their behaviour or attitudes – 66% compared to 58%. Younger people, particularly those aged under 35, were more likely to have been influenced by environmental information than older people. Generally, those groups most likely to be concerned about environmental problems were also the most likely to have received environmental information in the previous 12 months, and to have been influenced by it.

People influenced by environmental information, 1992



Source: Unpublished data, Survey of Environmental Issues: People's Views and Practices, 1992.

Household energy use

USE OF RESOURCES

Between 1974–75 and 1995–96, household energy consumption increased by 46% and is projected to increase a further 14% by 2009–10. Per capita household energy consumption also increased between 1974–75 and 1995–96 but is projected to stabilise at current levels by 2009–10.

The total amount of energy consumed by Australian households has increased over the past two decades and is forecast to continue increasing. Per capita household energy consumption has also increased over this period. The amount and type of energy used in the home has considerable implications for the environment as some forms, particularly fossil fuels, deplete natural resources and generate greenhouse gas emissions and pollution. Growing awareness of these problems has led to moves towards less harmful energy sources, such as natural gas and solar energy, and energy conservation practices in order to reduce the environmental impacts of household energy use.

Energy consumption

Total household energy consumption in Australia has increased by 46%, from 246 petajoules (PJ) in 1974–75 to 360 PJ in 1995–96. Household energy use per capita has also increased, from 18 gigajoules (GJ) per person in 1974–75 to 20 GJ per person in 1995–96.

Residential energy consumption

	1974–75	*1995–96*	*2009–10(a)*
Energy source	%	%	%
Electricity	32.3	42.5	42.9
Natural gas	11.4	29.1	34.8
Wood	29.0	22.8	17.1
Heating oil	13.2	1.0	0.5
Solar energy	0.1	0.9	1.1
Other(b)	13.9	3.7	3.6
Total	**(c)100.0**	**100.0**	**100.0**
	PJ	PJ	PJ
Total	246.3	360.4	411.8
	GJ/capita	GJ/capita	GJ/capita
Total	17.7	19.7	19.7

(a) Projected.
(b) Mainly coal and petroleum products.
(c) Percentages do not add to the total due to rounding.

Source: Australian Bureau of Agricultural and Resource Economics, *Australian Energy Consumption and Production,* 1997.

Energy sources and their impact on the environment

Mains electricity is a derived source of energy, generated from primary energy sources such as non-renewable fossil fuels, e.g. coal and natural gas. These fuels produce greenhouse gas emissions and other pollutants when converted into electricity, although coal is, by far, the main contributor. Therefore, it is not the use of electricity in the home but its generation that has, when compared to other energy sources, the largest impact on the environment.[1]

Natural gas is a non-renewable, naturally occurring fossil fuel. It is seen as a 'clean' energy source compared to wood, heating oil and electricity generation as it produces fewer greenhouse gas emissions. Gas is used for cooking, heating and hot water in the home.

Wood is a naturally occurring, renewable fuel and is most commonly used for heating in the home. The burning of wood produces large amounts of greenhouse gas emissions and other pollutants.

Heating oil is a non-renewable, naturally occurring fuel which generates pollutants when burned. It is used for space heating in the home.

Solar energy is a renewable and non-polluting form of energy. It has a very low impact on the environment. It is mainly used for hot water in the home, but is also used as a passive energy source for space heating and drying clothes.

Energy units

In this review, energy units are measured in joules (J).

Gigajoule (GJ): one thousand million joules of energy.

Petajoule (PJ): one thousand million million joules of energy.

Increased household energy use is predominantly the result of population growth, and an associated increase in the number of dwellings needing energy for power and heating. It is also related to the increasing size of dwellings and the decreasing number of people per dwelling (see *Australian Social Trends 1997*, Environment and the home, pp. 152–157, for more details on household energy consumption and energy conservation methods used in the home).

Household energy consumption is projected to increase to 412 PJ in 2009–10, a 14% increase on 1995–96 levels. Per capita energy consumption in the home is projected to increase slightly, peak at 21 GJ per person early in the new century and return to 1995–96 levels (20 GJ per person) by 2009–10.[1]

Energy source and use

Energy consumption in the home involves the use of various energy sources for power and heating. The most common energy sources used in the home are mains electricity, natural gas, wood, heating oil and solar energy.

Electricity is the main source of energy used in the home. In 1974–75, electricity accounted for 32% of household energy consumption, and by 1995–96, this share had increased to 43%. The increased use of electricity can be attributed to its widespread availability, convenience and low cost. Electricity is forecast to remain the main source of energy used in households over the next decade.

Wood accounted for 23% of household energy consumption in 1995–96, down from 29% in 1974–75. Although it has decreased as a proportion of total household energy consumption, the actual amount of wood used in the home has increased over this period. In 1974–75, 71 PJ of wood was consumed by households and in 1995–96, this had increased to 82 PJ.[1] This increase could be due to wood historically being a relatively cheap and abundant fuel, especially in areas where other energy sources are less readily available. As most wood used in the home is for heating, this increase could also be due to slow combustion wood heaters being relatively inexpensive and popular appliances.

The use of wood, however, has a number of adverse impacts on the environment, with air pollution being a major concern. Growing awareness of these impacts, and the increasing competitiveness of other energy sources, is reflected in the projected decline in household use of wood over the next decade to 70 PJ, or 17% of total household energy consumption, in 2009–10.[1] Like wood, heating oil has declined as a proportion of total household energy consumption and is projected to continue declining.

While wood and heating oil are decreasing in importance, the use of less harmful energy sources like natural gas and solar energy is increasing.

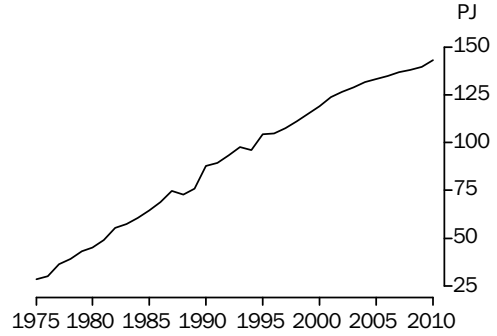
Natural gas

Household use of natural gas as a primary source of energy has increased substantially over the last two decades. Households used 105 PJ of natural gas in 1995–96, which was 29% of total household energy consumption. This is up from 28 PJ, or 11% of total household energy consumption, in 1974–75. Natural gas is mainly used for heating and hot water in the home. In 1994, 28% of all households used gas for heating and 31% used it for hot water.[2]

The increase in natural gas use can be attributed to its environmental advantages, declining cost and growing availability to households. However, while the availability of natural gas is growing, it is still quite limited. Of those households which do not use natural gas, 64% did not have access to it in 1994. Access to natural gas also varies between the States. In 1994, over 90% of households in both the Northern Territory and Tasmania did not have access.[2]

Household use of natural gas is projected to increase to 143 PJ, or 35% of total household energy consumption, in 2009–10. However, there is potential for the use of natural gas to increase even further as more gas pipelines are built and it becomes more widely available to households.[1]

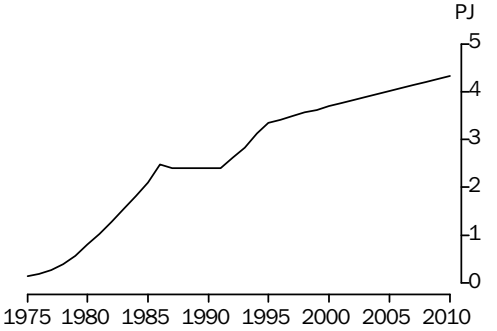
Residential use of natural gas(a)



(a) Data refers to the financial year ending 30 June. Data for all years following 1996 is projected.

Source: Australian Bureau of Agricultural and Resource Economics, *Australian Energy Consumption and Production, 1997*.

Residential use of solar energy(a)



(a) Data refers to the financial year ending 30 June. Data for all years following 1996 is projected.

Source: Australian Bureau of Agricultural and Resource Economics, *Australian Energy Consumption and Production,* 1997.

Solar energy

Like natural gas, solar energy is increasing in importance as an energy source for households. Household use of solar energy in 1995–96 was 3.4 PJ, more than 30 times the amount used in 1974–75 (0.1 PJ). While this increase seems very large, solar energy accounted for only 1% of total household energy consumed in 1995–96. However, this figure is likely to be underestimated as the passive uses of solar energy for space heating and clothes drying are not measured. These uses are too difficult to quantify but are estimated as being high.[3] For example, 56% of all households used solar exposure as a form of space heating in 1994.[2]

The recorded 3.4 PJ of solar energy used in households in 1995–96 was mainly for hot water systems. The relatively low usage of solar energy as a household energy source is reflected in the small number of households with these systems – only 5% of households in 1994, although this figure varied substantially between the States and Territories. The Northern Territory (58%) and Western Australia (21%) had the highest proportions of households with solar hot water systems.[2]

The main barrier preventing solar energy from being a more common household energy source is the cost. The installation costs of solar energy for households are high as expensive equipment is required to collect the energy. It takes time, usually years, to recoup these costs but it has been proven that solar energy is a very cheap energy source in the long run. It is predicted that household solar energy use will grow as the costs of solar energy equipment reduce over time. These costs are expected to fall by as much as 80% in the next 20 to 30 years.[4]

Household use of solar energy is projected to increase to 4.3 PJ in 2009–10. While this will still represent only 1% of total household energy consumption, there is great potential for household, and total, solar energy use to increase further as its costs fall and environmental advantages become more significant.

Energy conservation

As well as using less harmful energy sources like natural gas and solar energy, many households use strategies to save energy, thereby reducing their impact on the environment. Household energy conservation methods include: insulation to prevent heat and cooling loss; window treatments like curtains, outside awnings or tinted windows; solar exposure for space heating and drying clothes; using cold water for washing clothes; reducing clothes dryer usage; and consideration of energy ratings when purchasing appliances. Households also conserve energy by using appliances and hot water more efficiently, and by installing energy-efficient light fittings.

Concern about the adverse impact energy use has on the environment may motivate many households to conserve energy but this is

Insulation, 1994

	%
Main reason for insulating	
Achieve comfort	76.4
Save on energy costs	16.3
Reduce energy use	4.9
Other	2.4
Total	**100.0**
Main reason for not insulating	
Cost of installation	33.2
Not interested	18.8
Not needed (climate)	17.3
Haven't got around to it	13.4
Dwelling construction	7.3
Other	9.9
Total(a)	**100.0**

(a) Percentages do not add due to rounding.

Source: *Environmental Issues: People's Views and Practices, Australia, 1994* (Cat. no. 4602.0).

rarely the main reason. Taking household insulation as an example, it can be seen that considerations such as comfort and savings on energy costs outweigh environmental concerns.

Achieving interior comfort was the main reason for having insulation installed (76%) in 1994. Saving on energy costs was the next most common reason (16%) and couples with dependent children were most likely to report it.[2] This could be because these families have higher living costs than most and want to reduce them. Only 5% of all households installed insulation to reduce energy use.

Regardless of the motive to insulate and conserve energy, whether it be due to environmental concern or spurred by cost incentives, reduced energy use is of benefit to the environment.

Of those dwellings that were not insulated, 33% of all households said the cost of installation was the main discouraging factor. Climate is another reason for not insulating. This was the main reason given by 17% of all households. Around 30% of households in both the Northern Territory and Queensland said they did not have insulation because it was not needed in those climates.[2] Other reasons for not insulating were: not interested (19%); haven't got around to it (13%); and dwelling construction not suitable (7%).

Endnotes

1 Australian Bureau of Agricultural and Resource Economics, 1997, *Australian Energy Consumption and Production*, ABARE, Canberra.

2 Australian Bureau of Statistics, 1995, *Environmental Issues: People's Views and Practices, June 1994,* Cat. no. 4602.0, ABS, Canberra.

3 Australian Bureau of Statistics, 1996, *Energy Accounts for Australia 1993–94*, Cat. no. 4604.0, ABS, Canberra.

4 Australian Bureau of Statistics, 1997, *1997 Year Book Australia*, Cat. no. 1301.0, ABS, Canberra.

Transport choices and the environment

USE OF RESOURCES

The number of motor vehicles registered per 1,000 population increased by 8% between 1985 and 1996, from 567 to 614. Those people who chose alternative modes of transport generally did so for reasons other than concern for the environment.

Transport systems play a major role in the economic life of industrialised countries and in the daily lives of their citizens. In Australia, motor vehicle transportation dominates the movement of people, and is a significant carrier of freight. The number of motor vehicles registered is increasing, and urban design tends to encourage their use with the construction of freeways and dispersed housing. However, the convenience of motor vehicles is offset by their negative effects on the environment. These effects include contributions to air pollution, greenhouse gas emissions, and the depletion of fossil fuels.[1]

The transport choices made by people can help to reduce the impact of motor vehicles on the environment. For example, using public transport, car pooling, walking and cycling are alternatives that reduce the impact. Motorists can also help by using unleaded petrol, driving newer cars, having their vehicles regularly serviced and choosing the most fuel-efficient models.

Registered motor vehicles

The October 1996 Motor Vehicle Census revealed that there were 10.9 million registered motor vehicles in Australia, up from 8.6 million in 1985. During this time the number of registered motor vehicles per 1,000 people rose by 8.3%, from 567 to 614.

The average age of the Australian vehicle fleet increased from 8.0 years in 1985 to 10.6 years in October 1996. This ageing of the Australian motor vehicle fleet has negative implications for emissions and fuel use, because older cars emit more pollutants than recent models.

In October 1996, the average age of registered passenger vehicles was 10.4 years. The oldest vehicles were non-freight carrying trucks (average age 15.7 years), followed by rigid trucks (14.2 years) (see *Australian Social Trends 1996*, Registered cars, pp. 159–162).

Transport statistics

This review uses data from an ABS Survey of Environmental Issues conducted in association with the March and April 1996 Labour Force Surveys. Information was collected about motor vehicle (cars, trucks and vans) ownership and maintenance, and use of transport during the week before the interview.

It also uses data from the periodic Census of Registered Motor Vehicles conducted in October each year, and the 1995 Survey of Motor Vehicle Use conducted by the ABS relating to the 12 months ended 30 September 1995.

Household ownership of motor vehicles

In April 1996, 87% of Australian households had at least one registered motor vehicle, while 46% reported that they had two or more registered motor vehicles. New South Wales had the highest proportion of households without motor vehicles (17%), while Western Australia recorded the lowest

Households owning registered vehicles, April 1996

Number of vehicles per household	*One person* %	*Couple only* %	*Family households with older children*(a) %	*Couple with dependent child(ren)*(b) %	*One parent with dependent child(ren)*(b) %	*Total households* %
None	35.9	5.8	3.8	2.4	22.9	12.8
One	57.0	46.6	22.6	30.9	68.8	41.0
Two	5.8	41.0	36.2	55.2	7.8	34.0
Three or more	1.3	6.6	37.4	11.6	**	12.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Couple or single parent, with at least one resident child over 15, and no other usual resident.
(b) Refers to all children aged 0–14.

Source: *Environmental Issues: People's Views and Practices, Australia* (Cat. no. 4602.0).

proportion (9%). The relatively high number of households without a motor vehicle in New South Wales reflects Sydney's relatively low levels of car ownership. One in six Sydney households, and up to half of households in some inner Sydney municipalities, are without a car.[2]

One-person households, which tend on average to be older people, were most likely than other household types to have no registered vehicles (36%), followed by one-parent families with dependent children (23%). Couples with dependent children under 14 were most likely to own a motor vehicle (98%). Households with at least one child aged 15 or over were most likely to own three or more vehicles (37%).

Generally, households with higher incomes owned more vehicles. Less than 1% of households where the weekly income was more than $1,500 reported they had no vehicle compared to 41% for households where the weekly income was less than $159. Not surprisingly, households where income was greater than $1,500 per week were more likely to own three or more vehicles (31%). These households were also more likely to contain three or more adult members.

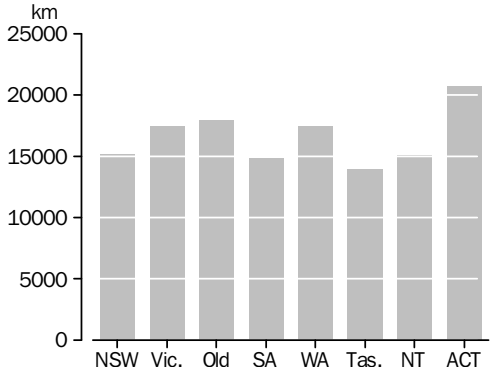
Distance travelled

Of those households who had had their major vehicle for at least 12 months and who knew how far it had travelled, the median distance travelled in the 12 months to April 1996 was 16,600 kilometres. Households in the Australian Capital Territory travelled further (a median of 20,800 km) than those in the other States or the Northern Territory, while the median distance travelled was smallest in Tasmania (13,900 km).

Statistics from the 1995 Survey of Motor Vehicle Use showed that passenger vehicles accounted for 74% (123,700 million kilometres) of total distance travelled in Australia, and freight-carrying vehicles 24% (39,600 million kilometres), in the 12 months ending September 1995.[3]

Since 1976, the total distance travelled by passenger vehicles and freight-carrying vehicles has increased by 58% and 95% respectively.

Median distance travelled by major vehicle in last 12 months(a)(b), April 1996



(a) Major vehicle of households with motor vehicles.
(b) Excludes vehicles bought in the last 12 months and households where the distance travelled was not known.

Source: Environmental Issues, People's Views and Practices, Australia (Cat. no. 4602.0).

Fuels used

The total pollution produced by motor vehicles is not just dependent on the number of vehicles registered or the distance they have travelled. The age of the vehicle and the type of fuel used also play an important role.

In an attempt to reduce airborne lead emissions, all new cars sold in Australia from February 1986 have been required to operate on unleaded fuel.[4] Its use has increased

Fuel type used(a), April 1996

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Fuel type	%	%	%	%	%	%	%	%	%
Leaded	34.6	35.8	37.2	40.0	37.0	52.2	30.9	33.4	36.6
Unleaded	59.3	50.2	54.8	49.5	54.6	41.7	57.6	61.9	54.4
Diesel	4.2	3.5	6.1	2.5	6.2	5.2	**	**	4.5
LPG/LNG	1.5	9.8	1.7	7.7	1.8	**	**	**	4.2
Other	**	**	**	**	**	**	**	**	0.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Refers to major vehicle of households with motor vehicle.

Source: Environmental Issues, People's Views and Practices, Australia (Cat. no. 4602.0).

rapidly since then. In April 1996, most households (54%) used unleaded fuel in their major vehicle, followed by leaded fuel (37%). Diesel was used by 4.5%, and liquid petroleum and natural gas (LPG and LNG) by 4.2% of vehicles. Residents of the Australian Capital Territory and New South Wales were most likely to have vehicles running on unleaded petrol (62% and 59%), with those in Tasmania having the highest proportion of lead-fuelled vehicles (52%). Victoria recorded the highest proportion of vehicles fuelled with LPG/LNG (10%).

Motor vehicle maintenance

Motor vehicle owners who have their vehicle serviced as advised by its owner's manual are likely to reduce their vehicle's fuel consumption and exhaust emissions, and hence reduce its impact on the environment.

In 1996, over half (53%) of households serviced their major vehicle as frequently as advised by the owner's manual provided with their vehicle, and nearly 75% serviced their major vehicle at least once every six months. About 6% of households reported servicing their vehicle only when a problem arose.

Households in the higher income brackets were more likely to service their vehicles as advised by the owner's manual – around 71% of households where the weekly income was greater than $1,500, compared to 50% of those with weekly incomes of less than $159.

Travelling for shopping and work/study

The different forms of transport used to travel to work or study, or to go shopping, have very different impacts on the environment. Some forms of transport are more efficient in terms of energy usage and emissions. For example, public transport is more efficient in terms of energy needed per person than if each travelled alone as the driver of a car, while walking and cycling are not dependent on fossil fuels at all (see *Australian Social Trends 1996*, Car use, pp. 163–166, and Public transport use, pp. 167–169).

In 1996, most people who travelled to work or study did so as the driver of a motor vehicle (78%). Only 16% used a train or bus, while 3% cycled and 6% walked. People in New South Wales were the most likely (22%) to use public transport (primarily trains and buses) as a means of travelling to work or study, while people in the Northern Territory and Tasmania were the least likely. A larger proportion of Australian Capital Territory residents (13%) used the bus system as a means of getting to work or study than in other States and Territories. There is no metropolitan train system in the Australian Capital Territory.

The most frequent reasons people gave for not taking public transport to work or study were that there were no services available (36%), the travel time was too long (26%), or their vehicle needed to be available to them during work or study hours (15%).

In 1996, of those households who indicated a member of the household shopped, the main form of transport used to go shopping was a car, truck or van (86%). Around 8% of households walked to the shops. Only about 4% of households used a bus or train. The high use of motor vehicles for shopping reflects the difficulty in carrying purchases home using other transport methods. Use of cars, trucks and vans was highest in Western Australia (91%), and lowest in

Persons who travel to work/study(a), April 1996

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
Method	%	%	%	%	%	%	%	%	%
Car/truck/van as driver	73.4	80.4	79.2	78.5	80.4	79.9	80.8	76.4	77.6
Train	12.9	9.4	4.8	3.5	6.1	**	**	**	8.5
Car/truck/van as passenger	6.2	5.5	8.2	9.6	9.7	9.0	**	10.1	7.2
Bus	9.0	4.4	5.5	9.3	7.0	7.8	**	13.0	7.1
Walk	6.4	6.2	6.4	5.6	5.3	**	**	5.9	6.3
Bicycle	2.1	2.9	3.6	3.8	2.3	**	**	**	2.8
Other	1.6	4.1	1.2	**	**	**	**	**	2.0
Motorbike or motor scooter	1.0	0.9	2.0	2.0	1.2	**	**	**	1.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Totals do not equal the sum of items in each column because more than one transport mode may be specified.

Source: Environmental Issues, People's Views and Practices, Australia (Cat. no. 4602.0).

Persons not taking public transport to work/study(a), April 1996

Reason	NSW %	Vic. %	Qld %	SA %	WA %	Tas. %	NT %	ACT %	Aust. %
No service available	35.4	31.7	48.7	34.6	33.5	42.2	37.3	10.1	36.3
Takes too long	25.7	35.5	14.8	26.9	22.3	14.6	22.4	46.6	26.2
Vehicle needed during work hours	16.9	14.6	13.0	15.9	15.0	12.5	**	22.9	15.3
Infrequency of service	12.9	13.7	13.0	12.5	16.5	19.9	14.9	22.5	13.8
Comfort/privacy	9.5	12.2	6.6	12.5	7.6	9.6	20.6	21.8	10.1
Vehicle needed before/after work/study	5.7	8.7	6.8	11.4	9.1	11.1	**	25.7	8.1
Carry tools/equipment	9.6	7.4	6.7	7.3	5.8	6.7	**	8.7	7.8
Use company/employer's car	6.0	6.7	4.8	5.3	5.9	**	**	**	5.9
Reliability of service	5.0	7.5	3.7	5.8	2.7	**	**	15.9	5.4
Concerned about own personal safety	3.8	5.0	3.7	4.2	2.4	**	**	**	3.9
Too expensive	3.1	5.2	3.2	3.8	1.7	**	**	14.8	3.7
Other	5.2	5.2	4.3	10.9	8.5	**	**	8.2	5.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Totals do not equal the sum of items in each column because more than one reason may be specified.

Source: Environmental Issues, People's Views and Practices, Australia (Cat. no. 4602.0).

New South Wales (83%). New South Wales also reported the greatest use of buses (4.6%) as a means of transport for shopping trips.

For those households who did not use some form of public transport to go shopping, the principal reason given was that they felt unable to carry the shopping they had purchased (44%). This was followed by no public transport service being available (37%), and people stating that the public transport service available to them took too long (14%).

Main form of transport for households who shop, March 1996

Form of transport	%	'000
Car/truck/van	86.4	5 697.0
Walk	8.3	547.0
Bus	3.2	211.8
Taxi	0.8	53.4
Train	0.4	25.5
Bicycle	0.3	19.2
Tram	0.2	14.9
Motorbike or motor scooter	0.2	10.6
Other	0.2	15.7
Total	**100.0**	**6 595.1**

Source: Environmental Issues, People's Views and Practices, Australia (Cat. no. 4602.0).

The major reason that people gave for using public transport to get to work/study, or to go shopping, was that they did not own a car (34%). This was followed by cost (29%) and parking problems (23%).

Environmental concern was reported by only 5% of people as a reason for using public transport.

Car pooling to work

In 1996, around 83% of people who drove to work or study did not have a passenger in the vehicle. The remaining 17% took other passengers either from home or from work or both. Around 12% took passengers from their own household, and 7% took passengers from other households. Drivers in the Australian Capital Territory and the Northern Territory were the most likely to have been accompanied by a passenger from their own household (24% and 22% respectively). This is a reflection of the age and life-cycle characteristics of their populations.

The major reason people had passengers in their vehicle from the same household when driving to work or study was to drop off children at school (37%). Only 1% of people gave environmental concerns as the reasons for taking passengers from their own household.

The major reason why people took passengers from other households with them to work or study was because they worked or studied either with or nearby to the passenger (50%). Once again, environmental concerns was one of the least frequently given reasons for taking passengers from other households (4%). Saving on costs was over five times more likely a reason for taking passengers than environmental concerns.

In 1996, the most common reason given for not taking passengers from their own household when driving to work or study was that the passengers worked or studied at a different location or needed to travel in a different direction (37%).

Access to public transport

Approximately one in five people in Australia reported that they had no public transport options. Around 28% of Queenslanders (the highest proportion) stated that they had no public transport available to them. This reflects the higher proportion of people who live away from major urban centres. Rail services were more available in Victoria and New South Wales (to 46% and 44% of people respectively), whereas bus services were more available in the Australian Capital Territory (to 93% of people), reflecting the limited number of people who live outside Canberra.

Reasons people used public transport, April 1996

Reason	%	'000
Don't own a car	34.1	312.5
Cost	28.7	263.3
Parking problems	22.7	207.9
Proximity of home to public transport	17.9	164.0
Time taken	12.9	117.9
Partner uses car	7.4	68.1
Frequency of service	5.6	51.1
Environmental concerns	5.1	46.4
Personal safety	0.9	8.6
Other	23.0	210.7
Total(a)	**100.0**	**916.4**

(a) Totals do not equal the sum of items in each column because more than one reason may be specified.

Source: Environmental Issues, People's Views and Practices, Australia (Cat. no. 4602.0).

Endnotes

1 Newman, P. Kenworthy, J. Robinson, L. 1992, *Winning back the cities,* Australian Consumers' Association, Pluto Press, Sydney.

2 Australian Urban and Regional Development Review, 1995, *Timetabling For Tomorrow: an agenda for public transport in Australia*, Department of Housing and Regional Development, Canberra.

3 Australian Bureau of Statistics, 1995, *Survey of Motor Vehicle Use, Australia* (Cat. no. 9208.0), ABS, Canberra.

4 Australian Bureau of Statistics, 1997, *Motor Vehicles in Australia 1997*, Cat. No. 9311.0, ABS, Canberra.

Household waste management

WASTE MANAGEMENT

Between 1992 and 1996 the proportion of Australian households that did not recycle fell from 15% to 9%.

Our increasing environmental awareness is reflected in the way we dispose of household waste. The major change has been the increase in the proportion of households who set aside materials for recycling. The increase in the number of councils that provide kerbside collection of recyclables has probably encouraged more households to sort their rubbish. Recycling of household waste materials has a two-fold advantage: it reduces the volume of material going into landfill disposal sites and provides income to the council from the sale of the recyclable materials.

Household waste

The amount of rubbish generated by households has been estimated by analysing the contents of their rubbish bins. However, this method misses waste that has been incinerated, recycled at home or taken personally to a rubbish tip or recycling centre.

A survey in 1989 estimated that across Australia local councils collected an annual average of 370 kg of waste per person. A more recent survey in 1995 of 302 households in Mitcham, South Australia estimated that each year households in that area generated 355 kg of waste per person, or about 906 kg of waste per household. The survey estimated that about 10% of the waste went into the recycling stream.[1]

The Mitcham and earlier surveys[1] have estimated that, by weight, about half of domestic waste is made up of organic compostable materials like food scraps and garden waste. Paper waste accounts for about one quarter and the remaining quarter is composed mainly of plastics, glass, ferrous metals and general waste like dirt, dust, ash etc. A small proportion (0.5%) of household waste comprises hazardous materials such as paint, batteries, fluorescent globes and pharmaceuticals.

What materials are recycled?

The most commonly recycled materials from household waste are paper, glass, plastics, old clothing, cans and kitchen and garden waste.

In 1992 and 1996, the Australian Bureau of Statistics surveyed Australian households seeking people's views and practices on environmental issues. Nearly three quarters of households stated that they recycled paper waste in 1996, an increase of nearly 20 percentage points from 1992 when 55% of households stated that they recycled paper.

Glass was the next most common material recycled. The reported 73% of households which recycled glass was an increase from the 1992 proportion of 55%.

Domestic waste stream for the City of Mitcham, Adelaide, October and November 1995

		Annual waste generation	
		Per person	*Per household*
Material type	Includes	kg	kg
Organic compostable	Garden, food/kitchen, other compostables.	178.5	456.0
Paper	Newspaper, writing paper, packaging, cardboard, milk cartons etc.	91.2	233.0
Plastics	PET, HDPE, LDPE, plastic bags, polypropylene, polystyrene, etc.	25.1	64.1
Glass	Jars, bottles, plateglass etc.	23.9	61.1
Ferrous metal	Steel cans, white goods, packaging etc.	11.1	28.3
Other materials	Ceramics (bricks, tiles etc), dust, dirt, rock, soil, ash, etc.	10.2	26.1
Other organic	Textiles, wood, leather, rubber, oils.	9.5	24.3
Non-ferrous	Aluminium packaging and cans, copper, brass, etc.	3.1	8.0
Household hazardous	Paint, dry cell batteries, car batteries, fluorescent globes, etc.	1.9	4.9
Total		**354.5**	**905.8**

Note: Based on a survey of 302 households over a ten-day period.

Source: City of Mitcham, 1995, in *Australians and the Environment* (Cat. no. 4601.0).

Proportion of households recycling selected materials

Material recycled	1992 %	1996 %
Paper	54.7	74.5
Glass	55.3	73.4
Plastic	37.3	66.8
Old clothing/rages	63.3	66.6
Cans	44.1	62.1
Garden waste	47.3	50.8
Kitchen/food waste	35.6	44.9
No recycling	15.3	9.4

Note: The total will not add to 100% because households usually recycled more than one type of material.

Source: Environmental Issues: People's Views and Practices, Australia, 1992 and 1996 (Cat. no. 4602.0).

Recycling methods of households that recycled

Recycling method	1992 %	1996 %
Collection from house	49.4	76.3
Central collection points	52.5	62.6
Compost/mulch	44.9	53.6
Re-use within the household	41.9	40.2
Other method	2.8	12.5
Special areas at dump	9.7	8.4

Note: The total will not add to 100% because households that recycle may have used more than one method of recycling.

Source: Environmental Issues, People's Views and Practices, Australia, 1992 and 1996 (Cat. no. 4602.0).

Plastic and old clothing were both recycled by 67% of households in 1996. This was a small increase for clothing (63% in 1992) but a large increase for plastics which had been recycled by only 37% of households in 1992.

Although there were generally only small differences in the proportions of households recycling different materials between States, the two Territories had distinctly different rates. The Australian Capital Territory had particularly high proportions of households recycling most materials, for example, 98% recycled paper and 96% recycled glass. The Northern Territory had particularly low proportions of households who recycled, for example, 39% recycled paper and 30% recycled glass. These differences probably reflect the availability of recycling facilities and the economics of transporting recycled materials. The Australian Capital Territory has a comprehensive fortnightly kerbside collection of recyclable materials whereas in 1996 the Northern Territory had extremely low rates of kerbside collection of recyclables.

How households recycle

A householder can recycle waste materials in various ways. They can take materials to central collection points (such as clothing, bottle and can bins at a local shopping centre); if available, they can use their own recycling bin that is collected by their local council or private contractor; or they can take materials to collection points at their local dump. Householders can also recycle materials within their own home and garden, for example, by re-using glass containers, composting kitchen scraps and shredding garden waste for composting or use as a mulch.

In 1996, about three quarters of households who recycled had recyclable waste collected from their house (though kerbside collection is mainly used to collect paper, glass, cans

Households(a) recycling method, selected materials, March 1996

Recycling method	Paper %	Glass %	Cans %	Plastic %	Food waste %	Garden waste %	Old clothing and rags %
Central collection points	10.7	11.4	16.8	8.9	0.6	1.4	73.2
Collection from house	80.1	81.7	80.1	77.6	5.1	8.7	7.2
Special areas at dump	2.6	3.1	2.3	2.2	0.3	4.6	0.2
Other(b)	16.7	11.8	3.1	22.8	98.7	90.5	35.3

Note: The total will not add to 100% because households that recycled may have used more than one method of recycling.

(a) Refers only to households that recycled the surveyed material in each case.
(b) Includes composting or mulching and re-use within the household.

Source: Environmental Issues, People's Views and Practices, Australia,1996 (Cat. no. 4602.0).

and plastic containers). The growth in the provision of kerbside collection of recyclable waste has been quite rapid since 1992, when just under half of households who recycled had a kerbside collection service for recycled waste.

The use of central collection points has also increased. In 1996, 63% of households who recycled took recyclable waste to a central collection point compared to 53% in 1992. Old clothing in particular is mainly taken to collection points.

The use of special areas at dumps remained low and similar between the two surveys: 8% of households who recycled in 1996 and 10% in 1992. Composting or mulching also increased from 45% of households who recycled in 1992 to 54% in 1996. The re-use of materials within the household remained similar, 40% of households recycled in 1996 and 42% in 1992.

Households who did not recycle

Between 1992 and 1996 the proportion of Australian households that did not recycle fell from 15% to 9%. In 1996, 51% of households that stated a reason for not recycling one or more of the items surveyed said that they did not have enough recyclable materials. 23% stated that they did not have the services or facilities to recycle and 9% stated that they did not have enough storage area.

Hazardous waste disposal

In March 1996 only 31% of households were aware of special hazardous waste disposal facilities. Overall, most households that disposed of hazardous waste did so through the usual rubbish collection from the dwelling. Households disposing of motor oil were more likely to take it to a business or a shop (23%) or a special area in a dump (23%) (in both these cases the oil is probably recycled). However, 11% of households disposing of motor oil did so with household rubbish, 7% took it to the general area of a dump and 4% buried the oil. The majority of households disposing of car batteries did so at a business or shop or at a special area at a dump (61%), but 13% put them out with the household rubbish or took them to the general area of a dump.

Reasons given for not recycling at least one of the materials surveyed

	1992	*1996*
Reason for not recycling	%	%
No storage area	6.8	8.7
Not enough recyclable materials	31.2	51.0
No services/facilities	28.4	23.0
Inadequate services/facilities	14.4	6.9
Uncertain of services/facilities	6.9	5.2
Other	25.7	24.0

Note: Total will not add to 100% because households may have had more than one reason for not recycling.

Source: Environmental issues, People's Views and Practices, Australia, 1992 and 1996 (Cat. no. 4602.0).

Endnote

1 Australian Bureau of Statistics, 1996, ***Australians and the Environment,*** Cat. no. 4601.0, ABS, Canberra.

Household(a) disposal of hazardous waste, selected items, March 1996

	Garden chemicals	*Paint products*	*Fluorescent globes*	*Car batteries*	*Other batteries*	*Motor oil*	*Pharma-ceuticals*	*Total*
Method of disposal	%	%	%	%	%	%	%	%
With usual garbage collection	65.5	51.6	76.8	5.6	85.7	10.8	42.6	61.9
Special service from house	4.6	8.0	4.0	8.2	0.9	4.6	*0.5	6.2
Dump - general area	12.5	24.3	12.1	7.5	5.1	6.7	2.1	11.0
Dump - special area	10.8	12.5	3.3	19.8	2.7	23.0	*0.3	12.0
Collection point other than dump	3.5	3.0	*0.9	13.0	2.3	10.5	1.3	6.6
Poured down the drain	*0.7	*1.0	–	*0.1	–	*0.4	25.5	11.0
Taken to a business or shop	2.0	*0.9	2.0	41.1	2.5	22.9	29.2	24.9
Buried	*1.3	1.1	*0.7	1.5	0.9	4.0	1.3	2.3
Other	2.6	1.9	*0.8	4.2	*0.6	18.7	2.0	6.6

Note: Total will not add to 100% because households may have had more than one method of disposing of a hazardous product.
(a) Refers only to households that disposed of hazardous waste.

Source: Environmental issues, People's Views and Practices, Australia (Cat. no. 4602.0).

International

Caution

Statistics presented in this chapter have been reproduced from international statistical compendia. National statistical systems differ from country to country and therefore caution should be exercised when comparing international data. Details of national differences can be found in the country notes in the source publications.

Population composition

Country	Reference year	Total population	0–14 years	15–64 years	65 years and over
		'000	%	%	%
Australia	**1995**	**18 088**	**21.5**	**66.8**	**11.6**
Canada	1995	29 463	20.8	67.3	11.8
China	1995	1 221 462	26.4	67.5	6.1
France	1995	57 981	19.6	65.5	14.9
Greece	1995	10 451	16.7	67.4	15.9
Hong Kong	1995	5 865	19.1	70.7	10.2
Indonesia	1995	197 588	33.0	62.7	4.3
Italy	1995	57 187	15.1	68.9	16.0
Japan	1995	125 095	16.2	69.6	14.1
Korea (Republic of)	1995	44 995	23.6	70.8	5.6
Malaysia	1995	20 140	37.9	58.1	3.9
New Zealand	1995	3 575	23.4	65.3	11.3
Papua New Guinea	1995	4 302	39.6	57.6	2.9
Singapore	1995	2 848	22.7	70.5	6.7
Sweden	1995	8 780	19.0	63.7	17.3
UK	1995	58 258	19.6	65.0	15.5
USA	1995	263 250	22.0	65.3	12.6
Viet Nam	1995	74 545	37.5	57.7	4.9

Source: World Health Organisation *World Health Statistics Annual 1995*.

Population growth

Country	Reference year	Annual average growth rate	Reference year	Annual rate of natural increase(a)	Crude birth rate(a)	Crude death rate(a)	Reference year	Total fertility rate
		%		no.	no.	no.		no.
Australia	**1990–95**	**1.1**	**1994**	**7.4**	**14.5**	**7.1**	**1994**	**1.8**
Canada	1990–95	2.2	1994	6.0	13.2	7.2	1992	1.7
China	1990–95	1.1	1990–95	11.3	18.5	7.2	1990–95	2.0
France	1990–95	0.5	1995	3.4	12.5	9.1	1993	1.7
Greece	1990–95	0.6	1995	0.5	9.8	9.4	1994	1.4
Hong Kong	1990–95	1.6	1994	6.9	11.8	4.9	1994	1.2
Indonesia	1990–95	1.5	1990–95	16.4	24.7	8.4	1990–95	2.9
Italy	1990–95	-0.2	1994	-0.4	9.2	9.6	1993	1.2
Japan	1990–95	0.3	1994	2.9	9.9	7.0	1994	1.5
Korea (Republic of)	1990–95	0.9	1994	10.6	16.0	5.4	1994	1.8
Malaysia	1990–95	2.5	1990–95	23.6	28.7	5.1	1990–95	3.6
New Zealand	1990–95	1.0	1995	8.4	16.3	7.9	1992	2.1
Papua New Guinea	1990–95	1.9	1990–95	22.7	33.4	10.7	1990–95	5.1
Singapore	1990–95	2.0	1995	11.1	16.3	5.2	1995	1.7
Sweden	1990–95	0.6	1995	0.7	11.7	11.0	1994	1.9
UK	1990–95	0.2	1994	2.1	12.9	10.7	1994	1.7
USA	1990–95	1.0	1994	6.5	15.3	8.8	1993	2.0
Viet Nam	1990–95	2.4	1990–95	22.7	30.7	8.0	1990–95	3.9

(a) Per 1,000 population.

Source: United Nations *1995 Demographic Yearbook*.

Population projections(a)

Country	Population			Median age			0–14 years			65 years and over		
	2000	*2020*	*2050*	*2000*	*2020*	*2050*	*2000*	*2020*	*2050*	*2000*	*2020*	*2050*
	million	million	million	years	years	years	%	%	%	%	%	%
Australia(b)	**19.2**	**23.6**	**26.1**	**35.0**	**38.8**	**41.3**	**21.0**	**19.3**	**18.3**	**11.7**	**15.7**	**22.4**
Canada	31.0	36.9	39.9	36.3	39.3	40.8	20.6	19.2	18.5	12.2	16.8	21.7
China	1 284.6	1 488.1	1 606.0	29.9	35.9	39.2	25.3	20.7	19.3	6.7	10.5	18.2
France	59.0	60.9	60.5	37.5	42.1	42.8	18.8	17.2	17.6	15.7	19.7	24.5
Greece	10.6	10.1	8.6	39.6	46.0	49.2	15.0	13.7	14.7	18.0	22.2	31.4
Hong Kong	6.0	6.0	4.9	37.2	46.9	53.0	16.5	12.7	12.9	11.7	19.3	34.5
Indonesia	212.7	264.1	318.8	24.7	31.4	37.7	30.8	23.6	20.1	4.7	7.0	15.7
Italy	57.3	53.6	43.6	39.8	48.3	52.0	14.6	12.1	13.2	17.6	23.2	34.2
Japan	126.5	124.0	110.0	40.7	46.3	47.4	15.3	14.2	15.7	16.4	25.2	30.2
Korea (Republic of)	47.1	53.3	56.5	31.2	38.5	40.6	22.2	19.2	18.5	6.6	11.5	21.1
Malaysia	22.3	29.8	38.1	22.5	29.6	37.8	35.2	24.7	19.8	4.1	7.0	15.0
New Zealand	3.8	4.3	4.7	33.2	37.3	40.2	23.4	20.0	18.7	11.2	15.0	20.3
Papua New Guinea	4.8	7.0	9.6	20.5	24.2	34.1	38.7	32.0	22.4	3.0	4.0	9.7
Singapore	3.0	3.3	3.3	34.8	41.4	42.9	21.6	17.2	17.5	7.6	16.0	23.7
Sweden	9.0	9.6	10.0	38.7	40.9	41.6	19.9	18.1	18.0	16.7	20.7	22.3
UK	59.0	60.9	61.6	37.1	41.1	41.6	19.5	17.8	18.1	15.3	18.0	22.6
USA	275.1	320.6	349.0	35.5	38.0	40.3	21.8	19.8	18.8	12.4	16.1	20.8
Viet Nam	82.6	111.7	143.6	22.1	28.4	37.7	35.7	25.6	20.1	5.1	5.6	14.6

(a) Medium-variant projection.
(b) United Nations projections for Australia may not agree with ABS projections due to differences in assumptions and methodology.

Source: United Nations *World Population Prospects : The 1994 Revision*.

Health status

Country	Reference year	Infant mortality rate(a)	Reference year	Life expectancy at birth	
				Males	Females
		no.		years	years
Australia	**1994**	**5.9**	**1994**	**75.0**	**80.9**
Canada	1994	6.2	1985–87	73.0	79.8
China	1990–95	44.5	1990–95	66.7	70.5
France	1995	4.9	1992	72.9	81.2
Greece	1995	7.9	1990–91	74.6	80.0
Hong Kong	1994	4.5	1994	75.8	81.2
Indonesia	1990–95	58.1	1990–95	61.0	64.5
Italy	1994	6.6	1992	73.8	80.4
Japan	1994	4.2	1994	76.6	83.0
Korea (Republic of)	1990–95	10.9	1991	67.7	75.7
Malaysia	1990–95	13.0	1990–95	68.7	73.0
New Zealand	1995	6.7	1990–92	72.9	78.7
Papua New Guinea	1990–95	68.3	1990–95	55.2	56.7
Singapore	1995	4.0	1994	74.2	78.5
Sweden	1995	3.7	1994	76.1	81.4
UK	1994	6.2	1994	74.2	79.4
USA	1994	7.9	1993	72.2	78.8
Viet Nam	1990–95	42.0	1979	63.7	67.9

(a) Per 1,000 live births.

Source: United Nations *1995 Demographic Yearbook*.

Standardised death rates(a) for selected causes of death

Country	Reference year	Malignant neoplasms (cancer)	Ischaemic heart disease	Cerebro-vascular disease (stroke)	Motor vehicle traffic accidents	Suicide and self-inflicted injury(b)	All causes
		no.	no.	no.	no.	no.	no.
Australia	**1993**	**124.2**	**97.2**	**36.0**	**10.3**	**10.0**	**433.1**
Canada	1993	129.3	88.5	28.0	11.1	11.4	442.7
China (rural)	1994	111.9	26.5	110.2	13.8	25.8	698.7
China (urban)	1994	119.4	57.6	125.0	10.1	5.9	594.7
France	1993	133.9	35.3	28.8	13.7	16.2	439.9
Greece	1994	109.1	55.4	69.5	18.4	2.6	449.0
Hong Kong	1994	125.9	40.0	39.8	4.5	10.3	392.9
Indonesia	. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	1992	134.8	55.3	49.2	14.2	5.7	459.1
Japan	1994	106.2	21.7	44.5	8.9	12.2	364.0
Korea (Republic of)	1992	117.4	13.5	91.1	29.7	7.6	570.6
Malaysia	. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
New Zealand	1993	142.2	119.7	44.0	16.8	11.7	509.9
Papua New Guinea	. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Singapore	1993	128.7	101.5	59.4	9.2	9.3	517.0
Sweden	1993	108.4	102.3	37.7	5.9	12.1	435.4
UK	1993	141.7	126.2	45.5	6.0	6.4	517.2
USA	1992	132.2	100.3	28.0	14.6	10.2	519.6
Viet Nam	. .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(a) Standardised death rates are the overall death rates per 100,000 population that would have prevailed in a standard population if it had experienced at each age the death rates of the population being studied. The standard population used in this table is the World Health Organisation world standard population. Standardised death rates for Australia presented in the Health chapter of this publication or elsewhere in ABS publications are not comparable due the use of a different standard population and different reference periods.

(b) It is generally acknowledged that suicides are under-reported as a cause of death. The degree of under-reporting varies from country to country, partly for social and cultural reasons, but also because of differences in legal requirements and administrative procedures in arriving at a verdict of suicide.

Source: World Health Organisation *World Health Statistics Annual 1995*.

Health services and expenditure

Country	Reference year	Health expenditure as % of GDP	Health expenditure per capita at PPP(a)	Reference year	Doctors per 1,000 population	Reference year	Acute hospital beds per 1 000 population
		%	$US '000		no.		no.
Australia	**1996**	**8.4**	**1.8**	**1991**	**2.2**	**1993**	**4.3**
Canada	1996	9.2	2.0	1995	2.2	1993	3.6
China	. .	n.a.	n.a.	. .	n.a.	. .	n.a.
France	1996	9.6	2.0	1995	2.9	1995	4.6
Greece	1996	5.9	0.7	1994	3.9	1992	3.9
Hong Kong	. .	n.a.	n.a.	. .	n.a.	. .	n.a.
Indonesia	. .	n.a.	n.a.	. .	n.a.	. .	n.a.
Italy	1996	7.6	1.5	1992	1.7	1994	5.3
Japan	1995	7.2	1.6	1994	1.8	. .	n.a.
Korea (Republic of)	1995	5.3	0.7	1995	1.1	1995	2.8
Malaysia	. .	n.a.	n.a.	. .	n.a.	. .	n.a.
New Zealand	1996	7.2	1.3	1995	2.1	1991	7.2
Papua New Guinea	. .	n.a.	n.a.	. .	n.a.	. .	n.a.
Singapore	. .	n.a.	n.a.	. .	n.a.	. .	n.a.
Sweden	1995	7.2	1.4	1996	3.1	1995	3.1
UK	1996	6.9	1.3	1994	1.6	1995	2.0
USA	1996	14.2	3.7	1994	2.5	1995	3.3
Viet Nam	. .	n.a.	n.a.	. .	n.a.	. .	n.a.

(a) PPP (purchasing power parities) are the rates of currency conversion which eliminate the differences in price levels between countries.

Source: Organisation for Economic Co-operation and Development 1997, *OECD Health Data 97: a software for the comparative analysis of 29 health systems,* OECD, Paris.

Labour force

Country	Reference year	Economically active population(a)	Participation rate of persons aged 15 and over(a)		
			Total	Men	Women(b)
		'000	%	%	%
Australia	**1996**	**9 126.9**	**63.6**	**73.7**	**53.8**
Canada	1996	15 145.3	64.9	72.4	57.6
China	. .	n.a.	n.a.	n.a.	n.a.
France	1996	26 403.7	55.3	62.7	48.4
Greece	1995	4 244.5	49.7	64.7	36.1
Hong Kong	1996	3 093.9	61.8	76.0	47.8
Indonesia	1996	88 186.8	67.8	84.8	51.3
Italy	1996	22 849.0	47.6	61.6	34.6
Japan	1996	67 100.0	63.5	77.7	50.0
Korea (Republic of)	1996	21 190.0	62.0	76.1	48.7
Malaysia	1995	7 869.6	39.2	n.a.	n.a.
New Zealand	1997	1 812.6	65.1	74.4	56.2
Papua New Guinea	. .	n.a.	n.a.	n.a.	n.a.
Singapore	1996	1 801.9	64.6	78.7	51.5
Sweden	1996	4 311.0	77.9	80.0	75.6
UK	1996	28 552.4	62.4	71.9	53.5
USA	1996	133 943.0	66.8	74.9	59.3
Viet Nam	. .	n.a.	n.a.	n.a.	n.a.

(a) For most countries data are presented for the economically active population aged 15 and over. However, the age range varies for some countries: Malaysia — 15–64; Sweden — 16–64; UK, USA — 16 and over. Definitions also vary in terms of the inclusion or exclusion of certain other segments of the population such as the armed forces.

(b) Participation rates for women are frequently not comparable internationally since, in many countries, relatively large numbers of women assist on farms or in other family enterprises without pay. There are differences between countries in the criteria used to count economically active workers.

Source: International Labour Office *Year Book of Labour Statistics 1997*; ABS, *Labour Force, Australia* (Cat. no. 6203.0)

Employment and unemployment(a)

Country	Reference year	Employment	Reference year	Unemployment	Unemployment rate
		'000		'000	%
Australia	**1996**	**8 344.3**	**1996**	**782.6**	**8.6**
Canada	1996	13 676.0	1996	1 469.2	9.7
China(b)	1994	614 690.0	1996	5 528.0	3.0
France	1995	22 296.0	1996	3 162.0	12.4
Greece	1995	3 823.8	1995	424.7	10.0
Hong Kong	1996	3 007.7	1996	86.1	2.8
Indonesia	1996	85 701.8	1996	3 624.8	4.0
Italy	1995	19 942.0	1996	2 814.0	12.1
Japan	1996	64 860.0	1996	2 250.0	3.4
Korea (Republic of)	1996	20 764.0	1996	425.0	2.0
Malaysia	1996	8 399.5	1996	217.4	2.6
New Zealand	1996	1 687.5	1996	109.9	6.1
Papua New Guinea	. .	n.a.	. .	n.a.	n.a.
Singapore	1996	1 748.1	1996	53.8	3.0
Sweden	1996	3 963.0	1996	347.0	8.0
UK	1996	26 218.8	1996	2 335.5	8.2
USA	1996	126 708.0	1996	7 236.0	5.4
Viet Nam	. .	n.a.	. .	n.a.	n.a.

(a) For most countries the employed and unemployed populations are aged 15 and over. However, the age range varies for some countries: China — all ages; Greece and Italy — 14 and over; Indonesia — 10 and over; Malaysia — 15–64 (employed only); Sweden — 16–64 ; UK and USA — 16 and over. Definitions also vary in terms of the inclusion or exclusion of certain other segments of the population such as the armed forces.
(b) Employment relates to total economy; unemployment relates to urban areas only.

Source: International Labour Office *Year Book of Labour Statistics 1997.*

Cumulative topic list

SELF-HELP ACCESS TO STATISTICS

PHONE Call 1900 986 400 for the latest statistics on CPI, Labour Force, Earnings, National Accounts, Balance of Payments and other topics. (Call cost is 75c per minute)

INTERNET http://www.abs.gov.au

LIBRARY A range of ABS publications is available from public and tertiary libraries Australia wide. Contact your nearest library to determine whether it has the ABS statistics you require.

WHY NOT SUBSCRIBE?

PHONE +61 1300 366 323

FAX +61 3 9615 7848

CONTACTING THE ABS

ABS provides a range of services, including: a telephone inquiry service; information consultancy tailored to your needs; survey, sample and questionnaire design; survey evaluation and methodological reviews; and statistical training.

INQUIRIES

	By phone	*By fax*
Canberra	02 6252 6627	02 6253 1404
Sydney	02 9268 4611	02 9268 4668
Melbourne	03 9615 7755	03 9615 7798
Brisbane	07 3222 6351	07 3222 8283
Perth	08 9360 5140	08 9360 5955
Adelaide	08 8237 7400	08 8237 7566
Hobart	03 6222 5800	03 6222 5995
Darwin	08 8943 2111	08 8981 1218

POST Client Services, ABS, PO Box 10, Belconnen, ACT 2616

EMAIL client.services@abs.gov.au