



HOUSEHOLD USE OF INFORMATION TECHNOLOGY

AUSTRALIA

EMBARGO: 11:30AM (CANBERRA TIME) TUES 6 JUNE 2000

C O N T E N T S

	<i>page</i>
Notes	2
List of tables and graphs	3
Main findings	4
SECTIONS	
1 Household access to computers and the Internet	6
2 Use of the Internet by adults	12
3 Internet and selected electronic transactions	18
4 Teleworking	23
ADDITIONAL INFORMATION	
Explanatory notes	24

- For further information about these and related statistics, contact John Ovington on Canberra, 02 6252 5189, or the National Information Service on 1300 135 070.

NOTES

- ABOUT THIS PUBLICATION** This publication is the third of its type presenting a detailed profile on the use of information technologies by Australians. It contains information on the use of computers and the Internet by private households. For adults (persons aged 18 years or over), details are given of their Internet activities, including location and frequency of use, Internet purchasing, the use of other electronic means to carry out financial transactions and teleworking are also included.
- ABOUT THE SURVEY** This publication contains results based on the four quarterly Household Use of Information Technology Surveys conducted in 1999. Analysis based upon the combined quarterly surveys has produced more reliable results than any analysis of the individual quarterly surveys. In particular the increased sample, roughly 13,000 households, allows the analysis to focus on smaller target groups or upon activities undertaken by fewer people.
- The estimates presented in this publication should be viewed as an average over all of 1999. They do not relate to any point in time during that year. When interpreting results which might have changed significantly over the year, e.g. access to the Internet, users should be aware that estimates in this publication may be lower than estimates based solely on one of the later quarters in that year.
- SCOPE AND COVERAGE** Households in remote and sparsely settled parts of Australia (Statistical Local Areas (SLA) of fewer than 200 people) are excluded from the survey. The exclusion of persons in these households (approximately 175,000 people) has an insignificant effect on estimates produced for individual States and Territories. The exception is the Northern Territory where such persons account for over 20% of the population.
- DATA COLLECTED** The range of information sought in the Household Use of Information Technology Surveys has changed over the last few years, evolving from simple statistics on the number of computer and Internet users to include more detailed information on Internet activities. For the year 2000, a further four Household Use of Information Technology surveys will be undertaken which will focus on computer and Internet activities.
- END OF THE QUARTERLY DATA SERIES** The four surveys conducted during 2000 will be the last quarterly Household Use of Information Technology surveys conducted by the ABS. The Population Survey Monitor (PSM), through which the data are currently collected, will be conducted for the last time for the November quarter 2000. The ABS is currently developing an annual survey vehicle to replace the existing quarterly PSM surveys.

W. McLennan
Australian Statistician

LIST OF TABLES AND GRAPHS

		page
HOUSEHOLD ACCESS TO COMPUTERS AND THE INTERNET	1.1 Growth in home access, by family type (graph)	6
	1.2 Households with computer access, by family type (graph)	7
	1.3 Households with home computer access	8
	1.4 Households with Internet access, by family type (graph)	9
	1.5 Households with home Internet access	10
	1.6 Frequency of household computer use (graph)	11
	1.7 Frequency of household computer and Internet use	11
USE OF THE INTERNET BY ADULTS	2.1 Adult Internet access, 1998 and 1999	12
	2.2 Adult Internet access by site	13
	2.3 Other sites of Internet access, excluding home and work	14
	2.4 Adult Internet access, by age (graph)	15
	2.5 Internet access by occupation and qualification	16
	2.6 Frequency of adult Internet access by site	17
INTERNET AND SELECTED ELECTRONIC TRANSACTIONS	3.1 Adults undertaking Internet and selected electronic transactions	18
	3.2 Adults purchasing or ordering goods or services via the Internet for private use	19
	3.3 Internet purchases and orders	21
	3.4 Expenditure on Internet purchases and orders	22
TELEWORKING	4.1 Characteristics of adult teleworkers	23

MAIN FINDINGS

In 1999 almost half (48%) of the households in Australia had access to a computer at home. This was more than double the number with home Internet access (22%). However during 1999, growth in Internet access was much greater than growth in computer access. For every two households which acquired access to a computer at home during 1999, more than three households acquired home Internet access.

An estimated 5.6 million adults, or 41% of all Australian adults, accessed the Internet in 1999. This represents an increase of 31% from 1998 when 4.2 million adults or 32% of all Australian adults accessed the Internet. During 1999, an estimated 2.4 million adults (18% of all adults) accessed the Internet at home, while 2.7 million adults (20% of all adults) accessed the Internet at work and 3.1 million adults (23% of all adults) accessed the Internet elsewhere.

Only 3% of all adults used the Internet to pay bills or transfer funds during 1999, compared to 40% of adults who used a telephone for this purpose. Also, 63% of all adults used EFTPOS and 71% used ATMs to transfer or withdraw funds during 1999.

An estimated 653,000 adults, or 5% of all Australian adults, used the Internet to purchase or order goods or services for their own private use during 1999. Adult males were twice as likely as adult females to be Internet shoppers. The most popular types of goods or services ordered or purchased were books and magazines or computer software and equipment. Only 29% of Internet shoppers spent \$501 or more, while 35% spent between \$101 and \$500 and the remaining 35% spent \$100 or less.

Very few employed adults (6%) had access to an employer's computer system at home via a modem. The majority of these adults (5%) had an agreement with their employer to use this access to work from home.

REGIONAL SUMMARY

The uptake of computer and Internet services has been greater in metropolitan areas than in other areas. By 1999, 52% of the households in metropolitan areas had access to a computer at home compared to 41% of households in other areas. Home Internet access was also more common in metropolitan areas where 26% of households had access compared to 15% of households in other areas.

REGIONAL SUMMARY
continued

In both metropolitan and other areas, adults were more likely to access the Internet at sites other than home or work. In metropolitan areas there was no difference in the number of adults who had accessed the Internet at home (21% of adults) or work (22% of adults) while the number who had accessed the Internet at other sites was only slightly higher (25% of adults). In other areas there was more difference between the number of adults who chose to access the Internet at particular sites. More adults accessed the Internet at other sites (19% of all adults) than at home (12% of adults) or work (15% of adults).

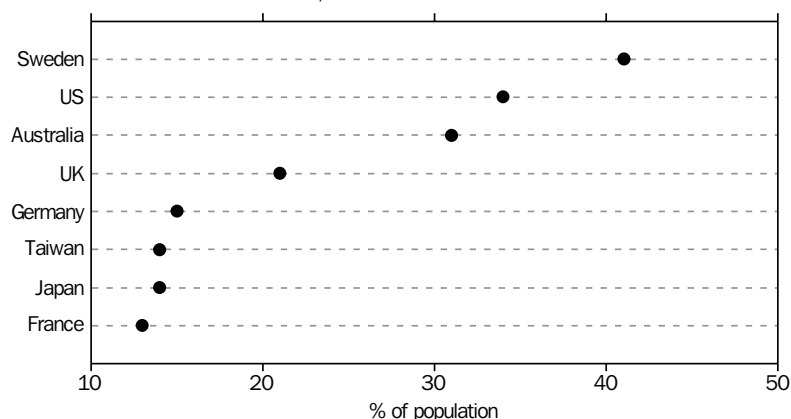
By States and Territories, the most notable difference in terms of access was in the Australian Capital Territory (ACT). Households in the ACT had the highest level of access to a computer at home (68% of households) and the highest level of home Internet access (35% of households). Tasmania had the lowest levels of access; only 41% of households had access to a computer at home and 18% of households had home Internet access.

INTERNATIONAL
COMPARISON

Australia is among the leading countries in terms of the proportion of the population which are Internet users. By mid-1999, the uptake of Internet services by Australians was almost as high as that of US residents. The figures included in the graph below have been compiled from a number of surveys conducted around the world. Consequently differences exist in the timing, scope and methodologies employed. There are, however, similarities between the US and Australian surveys. The US survey presents results for April 1999 including all persons aged 16 years or over and the Australian survey presents results for May 1999 including all persons aged 18 years or over.

Figures in the graph were obtained from the NUA website <URL:http://www.nua.ie/surveys/how_many_online> (accessed 17/5/2000). Interested readers are referred to the NUA website for details relating to particular countries.

INTERNET ACCESS BY COUNTRY, 1999



SECTION 1

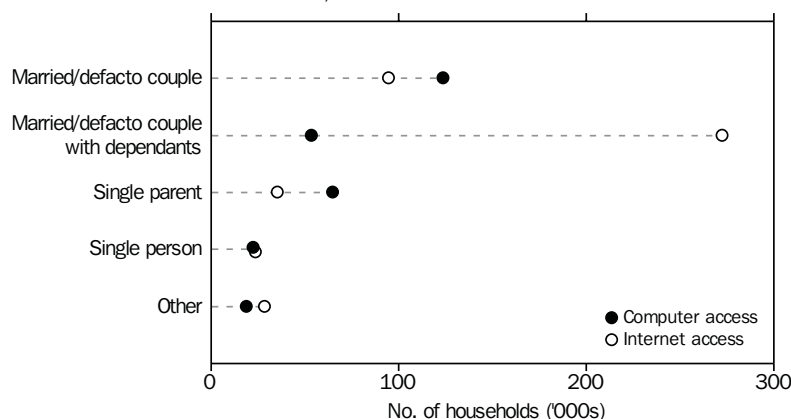
HOUSEHOLD ACCESS TO COMPUTERS AND THE INTERNET

GROWTH IN ACCESS

Between 1998 and 1999 the proportion of households in Australia with access to a computer at home rose from 45% to 48%, an increase of approximately 284,000 households. The proportion of households with home Internet access rose from 16% in 1998 to 22% in 1999, an increase of approximately 454,000 households.

The following graph shows the increase between 1998 and 1999 of the number of households with a home computer or Internet access, by family type. The main feature of the graph is the large growth in home Internet access for married/defacto couple with dependants. For any other family type, the growth in home computer access was either similar to or greater than the growth in home Internet access. The family type married/defacto couple with dependants provided 60% of the overall growth in home Internet access while married/defacto couples provided just over 40% of the overall growth in home computer access.

1.1 GROWTH IN HOME ACCESS, BY FAMILY TYPE



For households without children under 18 years, the increase in home computer access (from 33% in 1998 to 37% in 1999) was similar to the increase in home Internet access (from 13% in 1998 to 17% in 1999). However for households with children under 18 years, the increase in home Internet access (from 22% in 1998 to 31% in 1999) was far greater than the increase in home computer access (from 64% in 1998 to 66% in 1999).

Households with incomes in the range \$50,000 to \$74,999 had the highest growth in both home computer access and home Internet access. In this income group, home computer access rose from 61% in 1998 to 64% in 1999, while home Internet access rose from 21% in 1998 to 31% in 1999.

GROWTH IN ACCESS
continued

Among the States and Territories, the largest increase in the proportion of households with home computer access occurred in the Northern Territory (from 45% in 1998 to 54% in 1999) and Western Australia (from 43% in 1998 to 51% in 1999). It should be noted that the figures exclude sparsely settled areas, which contribute 20% of the population in the Northern Territory. The increase in home Internet access was fairly similar across States and Territories. New South Wales had the lowest increase (from 18% in 1998 to 22% in 1999) while the Northern Territory had the highest (from 16% in 1998 to 29% in 1999).

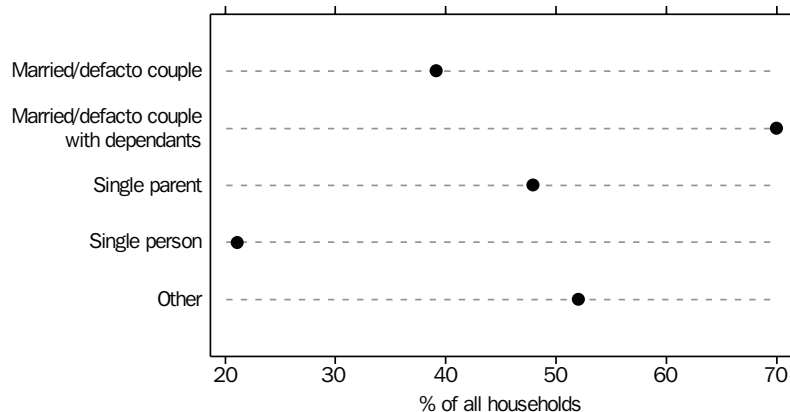
Growth in home computer access in metropolitan areas (from 48% in 1998 to 52% in 1999) was similar to the growth in other areas (from 38% in 1998 to 41% in 1999). In metropolitan areas, growth in home Internet access (from 19% in 1998 to 26% in 1999) was higher than in other areas (from 11% in 1998 to 15% in 1999).

COMPUTER ACCESS

Almost half (48%) of the households in Australia had access to a computer at home in 1999. Across groups of households the proportion of households with home computer access varied considerably. Notably, higher levels of access were shown among groups containing households with higher incomes and among groups containing households with children under 18 years.

The following graph shows that there were significant differences between family types in the level of access to a computer at home. The highest level of access was for the family type married/defacto couple with dependants (70%) while single persons, i.e. persons living alone, had the lowest level of access to a computer at home (21%).

1.2 HOUSEHOLDS WITH COMPUTER ACCESS, BY FAMILY TYPE



Overall, households with children under 18 years were far more likely to have access to a computer at home (66%) than households without children under 18 years (37%).

COMPUTER ACCESS
continued

While only one in five households (21%) with incomes under \$25,000 had access to a computer at home, three out of every five households (64%) with incomes in the range \$50,000 to \$74,999 had access and four out of every five households (81%) with incomes of \$100,000 or more had access.

Households in the Australian Capital Territory were more likely than households in any other State or Territory to have access to a computer at home (68%), while households in Tasmania were the least likely to have access (41%).

Households in metropolitan areas were more likely to have access to a computer at home than households in other areas (52% compared to 41%).

1.3 HOUSEHOLDS WITH HOME COMPUTER ACCESS

	<i>Number of households</i>		<i>Proportion(a) of all households</i>	
	1998 '000	1999 '000	1998 %	1999 %
<i>Family type</i>				
Married/defacto couple	553	676	33	39
Married/defacto couple with dependants	1 608	1 662	67	70
Single parent	240	306	43	48
Single person	293	316	19	21
Other	351	369	51	52
<i>Households</i>				
Without children under 18	1 448	1 652	33	37
With children under 18	1 598	1 677	64	66
<i>Household income</i>				
\$0-\$24,999	418	412	20	21
\$25,000-\$49,999	699	733	44	45
\$50,000-\$74,999	695	786	61	64
\$75,000-\$99,999	382	459	71	73
\$100,000 or more	369	452	80	81
Not stated/Don't know	482	487	49	53
<i>Location</i>				
New South Wales	1 013	1 092	44	47
Victoria	792	873	47	51
Queensland	550	575	43	45
South Australia	244	266	43	46
Western Australia	288	346	43	51
Tasmania	65	74	36	41
Northern Territory	21	29	45	54
Australian Capital Territory	72	74	66	68
<i>Region</i>				
Metropolitan areas	2 072	2 308	48	52
Other areas	973	1 021	38	41
Total	3 045	3 329	45	48

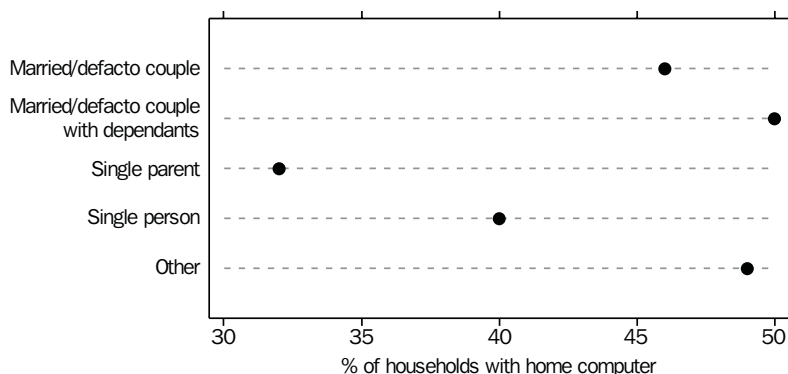
(a) Proportions are of all households in each category.

INTERNET ACCESS

In 1999, 22% of Australian households had access to the Internet at home. Higher levels of home Internet access were seen in metropolitan areas and among households with higher incomes. Of the households that had access to a computer at home, almost half also had home Internet access.

For households with access to a computer at home, the following graph shows the proportion that also had home Internet access, by family type. The proportion is highest for the family type married/defacto couple with dependants where one-half of the households that had access to a computer at home also had home Internet access. The proportion is lowest for single parent households where one-third of the households that had access to a computer at home also had home Internet access.

1.4 HOUSEHOLDS WITH INTERNET ACCESS, BY FAMILY TYPE(a)



(a) % relates only to households that had access to a computer at home.

Households with children under 18 years were just as likely as households without children under 18 years to have home Internet access once the household had access to a computer at home.

For households with access to a computer at home, the proportion that also had home Internet access dropped as income decreased. From a high of almost two-thirds for households with incomes of \$100,000 or more the proportion dropped to a low of just over one-quarter for households with incomes under \$25,000.

By State and Territory, for households that had access to a computer at home there was a lot of similarity in the proportion that also had home Internet access. The proportions were highest in the Territories where one-half of the households that had access to a computer at home also had home Internet access. It should be noted that the figures do not include sparsely settled areas, which contribute 20% of the Northern Territory's population.

In metropolitan areas, one-half of the households that had access to a computer at home also had home Internet access. In other areas, just over one-third of the households that had access to a computer at home also had home Internet access.

1.5 HOUSEHOLDS WITH HOME INTERNET ACCESS

	Number of households		Proportion(a) of all households	
	1998 '000	1999 '000	1998 %	1999 %
Family type				
Married/defacto couple	215	310	13	18
Married/defacto couple with dependants	550	823	23	35
Single parent	62	97	11	15
Single person	103	127	7	8
Other	151	180	22	25
Households				
Without children under 18	544	764	13	17
With children under 18	538	772	22	31
Household income				
\$0-\$24,999	96	116	5	6
\$25,000-\$49,999	193	272	12	17
\$50,000-\$74,999	240	385	21	31
\$75,000-\$99,999	173	248	32	39
\$100,000 or more	204	289	44	52
Not stated/Don't know	176	225	18	24
Location				
New South Wales	406	521	18	22
Victoria	256	395	15	23
Queensland	191	265	15	21
South Australia	74	115	13	20
Western Australia	97	153	15	23
Tasmania	19	33	10	18
Northern Territory	7	15	16	29
Australian Capital Territory	31	38	28	35
Region				
Metropolitan areas	815	1155	19	26
Other areas	267	381	11	15
Total	1 082	1 536	16	22

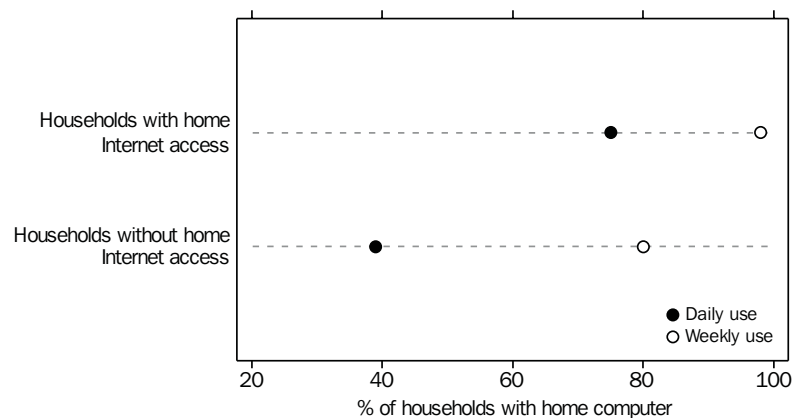
(a) Proportions are of all households in each category.

FREQUENCY OF HOUSEHOLD ACCESS

During 1999, most households (89%) with access to a computer at home made use of the computer at least once a week, while over half (55%) used that computer every day. For households with home Internet access, 90% accessed the Internet at least once a week while 42% accessed the Internet every day.

Households with home Internet access tended to use their computer more frequently than households without home Internet access. In households without home Internet access, 40% used their home computer daily while 80% used their home computer at least once a week. In comparison 75% of households with home Internet access used their home computer daily while 98% used their home computer at least once a week.

1.6 FREQUENCY OF HOUSEHOLD COMPUTER USE



1.7 FREQUENCY OF HOUSEHOLD COMPUTER AND INTERNET USE

	<i>Computer(a)</i>	<i>Internet(b)</i>
	%	%
Daily	55	42
2 to 6 times a week	26	37
Once a week	8	11
Once every fortnight	3	3
Once a month	3	3
Less than once a month	3	3
Don't know	3	1
Total	100	100

(a) Proportions are of all households with access to a computer at home.

(b) Proportions are of all households with access to the Internet at home.

SECTION 2

USE OF THE INTERNET BY ADULTS

GROWTH IN ACCESS

There was a large increase in the number of adults who accessed the Internet during 1999 compared to the number who accessed the Internet during 1998. In 1998, 4.2 million adults or 32% of Australian adults accessed the Internet. By 1999 the figure had risen to 5.6 million adults or 41% of the adult population, a rate of growth of 31% representing an increase of 1.3 million adults. The rate of growth in the number of adults who accessed the Internet was similar for each of the sites of access, i.e. home, work or other sites.

2.1 ADULT INTERNET ACCESS—1998 AND 1999(a)

	<i>Number of adults</i>		<i>Proportion(b) of adults</i>	
	1998	1999	1998	1999
	'000	'000	%	%
<i>Age group (years)</i>				
18–24	1 048	1 291	58	72
25–34	1 297	1 575	46	56
35–44	1 005	1 326	36	46
45–54	646	894	27	36
55–64	198	346	13	22
65 or over	37	118	2	6
<i>Sex</i>				
Males	2 300	3 001	35	45
Females	1 930	2 550	28	37
<i>Personal income</i>				
\$0–\$39,999	2 665	3 341	27	34
\$40,000–\$79,999	1 146	1 565	54	63
\$80,000 or more	227	301	62	73
<i>Employment status</i>				
Not employed	776	941	16	19
Employed	3 455	4 610	41	54
<i>Location</i>				
New South Wales	1 397	1 894	31	41
Victoria	1 068	1 435	32	42
Queensland	771	922	31	38
South Australia	297	408	27	38
Western Australia	436	582	34	45
Tasmania	107	123	32	36
Northern Territory	36	53	39	51
Australian Capital Territory	119	135	55	62
<i>Region</i>				
Metropolitan areas	3 034	4 016	35	45
Other areas	1 196	1 534	25	33
Total	4 230	5 551	32	41

(a) Includes access at any site.

(b) Proportions are of all adults in each category.

SITE OF ACCESS

While adults were more likely to access the Internet at work (20%) than at home (18%) during 1999, they were even more likely to access the Internet at sites other than home or work (23%). The most popular sites of access outside of the home or work were at a neighbour or friend's home (12%), TAFE or other tertiary institution (8%) and library (6%). One-half of the adults who accessed the Internet during 1999 did so only at home or at work, while one-quarter only accessed the Internet at sites other than home or work.

While 18% of all adults accessed the Internet at home, another 8% (1.0 million) had access to the Internet at home but chose not to access the Internet there. Only one-quarter of these adults (0.2 million) accessed the Internet either at work or other sites.

2.2 ADULT INTERNET ACCESS BY SITE(a)(b)

	<i>Site of Internet access</i>			
	<i>Home</i>	<i>Work</i>	<i>Other sites</i>	<i>Any site</i>
	%	%	%	%
Age group (years)				
18-24	27	19	59	72
25-34	22	31	33	56
35-44	23	26	21	46
45-54	18	22	13	36
55-64	11	9	9	22
65 or over	4	*1	3	6
Sex				
Males	21	23	25	45
Females	15	17	21	37
Personal income				
0-\$39,999	14	11	22	34
\$40,000-\$79,999	30	48	26	63
\$80,000 or more	44	61	23	73
Employment status				
Not employed	8	n.a	15	19
Employed	24	30	27	54
Location				
New South Wales	18	20	23	41
Victoria	19	21	23	42
Queensland	16	17	21	38
South Australia	16	18	23	38
Western Australia	18	21	24	45
Tasmania	16	15	22	36
Northern Territory	24	29	24	51
Australian Capital Territory	29	36	31	62
Region				
Metropolitan areas	21	22	25	45
Other areas	12	15	19	33
Total	18	20	23	41

(a) Adults can nominate more than one site if applicable.

(b) Proportions are of all adults in each category.

2.3 OTHER SITES OF INTERNET ACCESS, EXCLUDING HOME AND WORK(a)

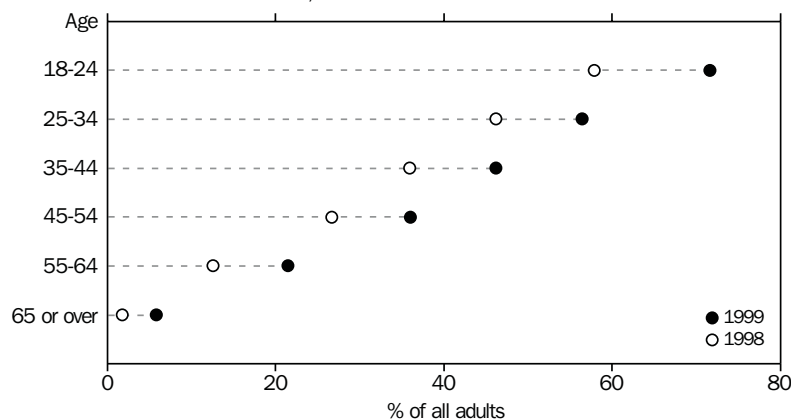
	<i>Neighbour or friend's home</i>	<i>TAFE or other tertiary institution</i>	<i>Public library</i>	<i>Shops, stores, telecafes</i>
	%	%	%	%
Age group (years)				
18-24	32	30	14	5
25-34	20	8	7	4
35-44	11	5	6	2
45-54	6	3	4	*1
55-64	3	2	2	—
65 or over	*1	*1	*1	—
Sex				
Males	14	8	6	3
Females	10	7	5	2
Personal income				
0-\$39,999	12	8	6	2
\$40,000-\$79,999	15	7	6	4
\$80,000 or more	11	*2	*5	*4
Employment status				
Not employed	6	6	4	1
Employed	15	9	6	3
Location				
New South Wales	12	7	6	3
Victoria	12	9	6	2
Queensland	11	7	4	2
South Australia	14	7	5	3
Western Australia	13	10	7	2
Tasmania	12	7	*5	*1
Northern Territory	9	9	6	*3
Australian Capital Territory	17	12	8	4
Region				
Metropolitan areas	13	9	6	2
Other areas	10	5	5	2
Total	12	8	6	2

(a) Proportions are of all adults in each category.

CHARACTERISTICS OF INTERNET USERS

The fastest rate of growth in the number of adults accessing the Internet occurred among older adults. Between 1998 and 1999 the number of adults aged 55 years or over who accessed the Internet nearly doubled. Despite this high rate of growth, as age increased, the likelihood that an adult had accessed the Internet decreased (see graph 2.2). Also, the site at which the Internet was accessed varied with the age of the Internet user. The most popular site of access was at home for adults aged 55 years or over, at work for adults aged 35 to 54 years and at sites other than home or work for adults aged 18 to 34 years. In terms of numbers, over half the Internet users during 1999 were aged 18 to 34 years while only one in every twelve users were aged 55 years or over.

2.4 ADULT INTERNET ACCESS, BY AGE



There was little difference in the rate of growth in the number of males and females who accessed the Internet. Overall, the number of males who accessed the Internet during 1999 exceeded the number of females by just over 450,000 (3.0 million males, or 45% of all adult males, compared to 2.5 million females, or 37% of all adult females).

Adults with higher incomes were more likely to have accessed the Internet. During 1999 adults with incomes of \$80,000 or more were more than twice as likely as adults with incomes under \$40,000 to have accessed the Internet (73% compared to 34%). In terms of the number of adults, of the 5.5 million adults who accessed the Internet during 1999 over 60% (3.3 million) had an income under \$40,000. Access at sites other than home or work did not show any relationship to income. However, the likelihood that an adult accessed the Internet either at home or work increased with income.

Growth in Internet access was higher among adults that were employed (from 41% in 1998 to 54% in 1999) than among adults who were not employed (from 16% in 1998 to 19% in 1999). Adults who were not employed were twice as likely to have accessed the Internet at other sites (15%) than at home (8%). In comparison, adults who were employed were slightly more likely to have accessed the Internet at work (30%) than at other sites (27%) or at home (24%). Only one in every six Internet users during 1999 was not employed.

Both of the Territories showed higher levels of Internet access among adults than any of the States. This difference was exhibited in the level of access both at home and work. However, excluding the ACT, there was little difference across States and Territories in the proportion of adults accessing the Internet at sites other than home or work.

Adults in metropolitan areas were more likely to have accessed the Internet during 1999 than adults in other areas (45% compared to 33%). Both adults in metropolitan areas and those in other areas were more likely to access the Internet at sites other than home and work. In terms of numbers, just over a quarter of Internet users during 1999 were located outside the metropolitan areas.

CHARACTERISTICS OF
INTERNET USERS *continued*

The likelihood that an adult accessed the Internet during 1999 varied greatly depending upon their occupation. Where particular occupations were more likely to involve use of the Internet at work, adults in these occupations were also more likely to access the Internet at home than adults in other occupations.

The higher the level of qualification that an adult held, the more likely it was that they were an Internet user during 1999. This relationship was exhibited at each site of access; home, work and other sites. Adults whose highest level of qualification was to complete secondary school were the least likely to have accessed the Internet (11% at home, 9% at work, 18% at other sites and 28% at any site). In comparison, adults who had completed a bachelor's degree were the most likely to have accessed the Internet (41% at home, 56% at work, 39% at other sites and 80% at any site).

2.5 INTERNET ACCESS BY OCCUPATION AND QUALIFICATION(a)(b)

	Site of Internet access			
	Home %	Work %	Other sites %	Any site %
Occupation				
Manager and professional	35	51	29	69
Clerk, sales and personal services	20	29	30	55
Trades person, plant or machinery operator, labourer	15	10	25	38
Qualifications				
Secondary	11	9	18	28
Trade certificate/apprenticeship	11	11	18	31
Other certificate	15	18	22	41
Assoc/undergrad diploma	31	34	28	59
Bachelors degree	41	56	39	80
Total	18	20	23	41

(a) Adults can nominate more than one site if applicable.

(b) Proportions are of all adults in each category.

FREQUENCY OF ACCESS

The frequency with which adults accessed the Internet during 1999 varied by site. Almost one-third (31%) of adults who accessed the Internet from home did so daily compared to 43% of adults who accessed the Internet at work. The majority of adults who accessed the Internet at home or at work accessed the Internet at least once a week (82% and 74% respectively). However, access at sites other than home or work occurred much less frequently. Only one-quarter (25%) of adults who accessed the Internet at sites other than home or work did so at least once a week, while half (51%) did so less than once a month.

2.6 FREQUENCY OF ADULT INTERNET ACCESS BY SITE(a)

	<i>Site of Internet access(b)</i>		
	<i>Home</i>	<i>Work</i>	<i>Other sites</i>
	<i>%</i>	<i>%</i>	<i>%</i>
Daily	31	43	4
2 to 6 times a week	34	19	12
Once a week	17	12	9
Once every fortnight	6	5	6
Once a month	7	9	15
Less than once a month	4	12	51
Don't know	1	1	4
Total	100	100	100

(a) Proportions are of all adults accessing the Internet at that site.

(b) Adults can nominate more than one site if applicable.

SECTION 3

INTERNET AND SELECTED ELECTRONIC TRANSACTIONS

TRANSACTION METHODS

Each year more Australian adults are using the Internet and other electronic methods to perform a variety of transactions. The likelihood that a particular method was used largely depended upon how long that method had been available. Older methods such as EFTPOS and ATMs were widely used (63% and 71% of all adults respectively in 1999) so growth in the number of adults using these methods was very low. The use of the telephone to pay bills or transfer funds was still showing growth as 40% of all adults used this method during 1999. The newer methods, which are facilitated by the Internet, appear to be showing rapid growth but were still used by very few adults.

3.1 ADULTS UNDERTAKING INTERNET AND SELECTED ELECTRONIC TRANSACTIONS(a)

	<i>Paid bills or transferred funds via the Internet</i>	<i>Paid bills or transferred funds via phone</i>	<i>Paid bills or withdrew funds via EFTPOS</i>	<i>Transferred or withdrew funds via ATM</i>
	%	%	%	%
Age group (years)				
18-24	3	33	78	89
25-34	5	52	83	89
35-44	3	49	72	80
45-54	3	41	61	72
55-64	*1	33	44	56
65 or over	—	19	23	29
Sex				
Males	4	40	62	72
Females	2	39	64	71
Personal income				
0-\$39,999	2	34	61	69
\$40,000-\$79,999	6	60	74	84
\$80,000 or more	10	68	72	81
Employment status				
Not employed	1	25	45	54
Employed	4	48	73	81
Location				
New South Wales	2	42	61	71
Victoria	3	39	61	68
Queensland	3	39	67	75
South Australia	4	31	56	68
Western Australia	3	42	68	76
Tasmania	2	37	59	64
Northern Territory	4	45	78	84
Australian Capital Territory	5	47	72	82
Region				
Metropolitan areas	3	44	64	73
Other areas	2	32	60	68
Total	3	40	63	71

(a) Proportions are of all adults in each category.

(b) Period covers 3 months.

PURCHASING AND
ORDERING VIA THE
INTERNET

During 1999, 653,000 adults or 5% of all Australian adults used the Internet to purchase or order goods or services for their private use. While purchasing or ordering does not appear to be a common activity among Internet users, it does appear to be on the increase. Compared to 1998, an additional 306,000 adults purchased or ordered goods or services via the Internet for their own private use during 1999.

Although the rate of increase is difficult to measure when numbers are low, the growth in purchasing or ordering appears to be higher than the growth in Internet users. While just over one in every nine Internet users (653,000 from 5.6 million users) used the Internet during 1999 to purchase or order goods or services for their private use, roughly one in every twelve Internet users (347,000 from 4.2 million users) did so during 1998.

3.2 ADULTS PURCHASING OR ORDERING GOODS OR SERVICES VIA THE INTERNET FOR PRIVATE USE(a)

	<i>Number of adults</i>		<i>Proportion(b) of adults</i>	
	<i>Internet shoppers</i>	<i>Internet users</i>	<i>Internet shoppers</i>	<i>Internet users</i>
	'000	'000	%	%
Age group (years)				
18-24	87	1 291	5	72
25-34	243	1 575	9	56
35-44	152	1 326	5	46
45-54	127	894	5	36
55-64	31	346	2	22
65 or over	*13	118	*1	6
Sex				
Males	445	3 001	7	45
Females	208	2 550	3	37
Personal income				
0-\$39,999	255	3 341	3	34
\$40,000-\$79,999	275	1 565	11	63
\$80,000 or more	71	301	17	73
Employment status				
Not employed	66	941	1	19
Employed	587	4 610	7	54
Location				
New South Wales	223	1 894	5	41
Victoria	185	1 435	5	42
Queensland	100	922	4	38
South Australia	43	408	4	38
Western Australia	62	582	5	45
Tasmania	14	123	4	36
Northern Territory	8	53	7	51
Australian Capital Territory	17	135	8	62
Region				
Metropolitan areas	504	4 016	6	45
Other areas	149	1 534	3	33
Total	653	5 551	5	41

(a) Purchases or orders were made over a 12 month period for private use.

(b) Proportions are of all adults in each category.

CHARACTERISTICS OF INTERNET SHOPPERS

The likelihood that an adult was an Internet shopper, i.e. someone who purchased or ordered goods or services for their private use via the Internet, varied markedly with age, gender, income and location.

During 1999, four out of every five adult Internet shoppers were aged 25 to 54 years. Very few Internet shoppers were either young adults or older adults. The age group that dominated Internet shopping during 1999 were adults aged 25 to 34 years. Over one-third of Internet shoppers were in this age group.

There were more than twice as many male Internet shoppers as female Internet shoppers during 1999. About 445,000 adult males (7%) were Internet shoppers compared to 208,000 adult females (3%). However, the growth in Internet shopping was higher among females than males. Only one-quarter of Internet shoppers in 1998 were female, compared to one-third of Internet shoppers in 1999.

As the personal income of an adult increased so did the likelihood that they were an Internet shopper during 1999. However only a small proportion of the population had high incomes, so a low number of Internet shoppers had high incomes. Although 17% of adults with an income of \$80,000 or more were Internet shoppers, only 11% of Internet shoppers were in this income group. In comparison, while fewer than 3% of adults with incomes under \$40,000 were Internet shoppers, 39% of Internet shoppers had an income under \$40,000.

Adults in metropolitan areas (6%) were twice as likely as adults in other areas to be Internet shoppers (3%) during 1999. In terms of numbers, three out of every four Internet shoppers resided in metropolitan areas (504,000 adults).

SHOPPING PROFILE

One-half of Internet shoppers purchased or ordered only one type of good or service during 1999. Contributing to this high proportion is the fact that one-third of Internet shoppers purchased or ordered on only one occasion during 1999, almost exclusively purchasing or ordering only one type of good or service on that occasion. The most popular types of goods or services were books and magazines or computer software and equipment. However, a diverse range of goods or services were purchased or ordered via the Internet. Almost one-third (32%) of Internet shoppers could only classify the good or service to the type 'other' from the broad types given in table 3.3.

On average, Internet shoppers purchased or ordered on four occasions during 1999. However, one-third (34%) of Internet shoppers purchased or ordered on only one occasion while one-quarter (26%) did so on five or more occasions.

SHOPPING PROFILE
continued

The majority (70%) of Internet shoppers purchased or ordered from home during 1999, however 20% of Internet shoppers didn't have access to the Internet at home. Only a small proportion (7%) purchased or ordered from more than one location. The number of Internet shoppers who purchased or ordered goods or services from Australia (60%) was very similar to the number who purchased or ordered from overseas (57%).

Just over one-third (35%) of Internet shoppers purchased or ordered goods or services worth \$100 or less during 1999. Another third (35%) spent between \$101 and \$500, while the remainder (29%) spent \$501 or more. Only 77% of Internet shoppers paid online for all or part of their purchases or orders.

3.3 INTERNET PURCHASES AND ORDERS(a)

	Personal income			
	\$0-\$39,999	\$40,000-\$79,999	\$80,000 or more	Total
	%	%	%	%
Type of goods or services purchased/ordered				
Music	16	14	*22	16
Books/magazines	33	38	58	37
Computer software/equipment	26	29	37	30
Clothing, shoes etc.	14	*7	*9	10
Sporting equipment	10	*3	*3	6
Holidays	9	*5	*18	8
Entertainment/tickets to entertainment events	*6	12	*4	9
Other	30	29	34	32
Number of occasions on which purchases/orders made				
One	37	34	12	34
Two	14	21	14	17
Three	12	13	21	13
Four	7	5	17	7
Five or more	27	25	34	26
Location from which purchase/order made				
Home	67	67	79	70
At work	14	39	33	26
Other	22	4	0	11
Purchased/ordered from				
Australia only	47	47	25	43
Overseas only	35	42	47	40
Both Australia & Overseas	18	11	28	17

(a) Proportions are of all adults making purchases or orders via the Internet for private use in each income range.

3.4 EXPENDITURE ON INTERNET PURCHASES AND ORDERS(a)

<i>Level of expenditure</i>	<i>Personal income</i>			
	<i>0-\$39,999</i>	<i>\$40,000-\$79,999</i>	<i>\$80,000 or more</i>	<i>Total</i>
	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>
Total value of purchases/orders				
\$1-\$100	42	32	19	35
\$101-\$500	30	40	30	35
More than \$500	*27	*27	51	29
Total	100	100	100	100
Online payment				
\$1-\$100	32	29	16	28
\$101-\$500	28	33	26	30
More than \$500	*16	*16	40	19
Total	76	79	82	77

(a) Proportions are of all adults making purchases or orders via the Internet for private use in each income range.

SECTION 4

TELEWORKING

Very few employed adults were able to access their employer's computer system at home via a modem during 1999 (only 6% of all employed adults). Three-quarters of these adults had an agreement to use that access to work from home (5% of all employed adults). Four out of every five teleworkers were either professionals or managers.

The likelihood that an employed adult had access to an employer's computer system at home via a modem was lower for employed adults aged 55 years or over and those aged 18 to 24 years. Employed males (8%) were more likely than employed females (5%) to have access, as were employed adults with higher incomes (3% of employed adults with a incomes under \$40,000 compared to 23% of employed adults with a incomes of \$80,000 or more). Employed adults in metropolitan areas (8%) were twice as likely to have access as employed adults in other areas (4%).

As characteristics varied, the likelihood that an employed adult had access at home via a modem to an employer's computer system showed similar relationships to the likelihood that an employed adult had an agreement to use this access so that they could work from home.

4.1 CHARACTERISTICS OF ADULT TELEWORKERS(a)

	<i>Able to access employer's computer system through a modem</i>	<i>Had agreement with employer to access their computer system via a modem to work from home</i>
Age group (years)		
18-24	4	*2
25-34	8	6
35-44	7	6
45-54	6	5
55-64	4	*3
65 or over	**2	**2
Sex		
Males	8	6
Females	5	3
Personal income		
0-\$39,999	3	1
\$40,000-\$79,999	13	10
\$80,000 or more	23	21
Location		
New South Wales	7	6
Victoria	7	5
Queensland	5	3
South Australia	5	4
Western Australia	7	5
Tasmania	3	*2
Northern Territory	4	*3
Australian Capital Territory	9	6
Region		
Metropolitan areas	8	6
Other areas	4	3
Total	6	5

(a) Proportions are of all employed adults.

EXPLANATORY NOTES

POPULATION SURVEY MONITOR

1 During 1999 the ABS Population Survey Monitor carried questions on household use of information technology (IT) in its February, May, August and November surveys. From the fully responding households, details on computer and Internet use were obtained. In each household, an adult (person aged 18 years or over) was randomly selected and information collected about their use of the Internet at home, work and other locations. Comparable data are also available from 1998. For each year, the statistics presented in this publication are estimates based upon the combined results from the four quarterly surveys of that year.

SCOPE AND COVERAGE

2 Households in remote and sparsely settled parts of Australia (Statistical Local Areas (SLA) of fewer than 200 people) are excluded from the survey. The exclusion of persons in these households (approximately 175,000 people) has only a minor impact on the aggregate estimates produced for individual States and Territories. The exception is the Northern Territory where such persons account for over 20% of the population.

DATA COLLECTED

3 For the 1998 and 1999 surveys, data were collected on a number of topics relating to the use of computers and the Internet in the home. Data were also collected on the use of the Internet by adults outside of the home, on the use of electronic means to carry out financial transactions and teleworking.

INFORMATION TECHNOLOGY DATA

4 In this publication data are presented on the following:

For households:

- presence of a computer in the home;
- frequency of home computer use;
- home Internet access; and
- frequency of home Internet access;

For adults:

- use of the Internet at home;
- frequency of Internet access at home;
- use of the Internet outside the home, i.e. work and other sites;
- frequency of Internet access at work;
- frequency of Internet access at other sites;
- use of the Internet to purchase or order goods or services;
- expenditure on goods and services purchased or ordered via the Internet;
- types of goods and services purchased via the Internet;

INFORMATION TECHNOLOGY DATA <i>continued</i>	<ul style="list-style-type: none"> ■ use of internet banking and other electronic means to carry out financial transactions; and ■ teleworking.
HOUSEHOLD DATA	<p>5 In addition to gathering data on the use of IT, the surveys collected data on the characteristics of the household. These characteristics include:</p> <ul style="list-style-type: none"> ■ household income; ■ family classifications; ■ State and Territory; and ■ region (metropolitan or ex-metropolitan).
PERSONAL DATA	<p>6 The surveys also gathered data on the characteristics of the adult including:</p> <ul style="list-style-type: none"> ■ age; ■ gender; ■ highest educational qualification; ■ income; ■ labour force status; and ■ occupation.
DEFINITION OF HOUSEHOLD	<p>7 A group of one or more persons in a private dwelling who consider themselves to be separate from other persons in the dwelling, and who make regular provision to take meals separately from those other persons. Lodgers who receive accommodation and meals are not treated as separate households. A household may consist of any number of family and non-family members.</p>
DEFINITION OF METROPOLITAN	<p>8 Refers to capital city statistical divisions. These delimit an area which is stable for general statistical purposes. The boundary is defined to contain anticipated development of the city for a period of 20 years. They contain more than just the urban centre, and represent the city in the wider sense.</p>
ACCURACY OF DATA	<p>9 As the estimates in this publication are based on information obtained from a sample drawn from households in the surveyed population, the estimates are subject to sampling variability; that is, they may differ from the figures that would have been produced if all households in Australia had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of households was included. There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all households had been included in the survey, and about 19 chances in 20 that the difference will be less than two SEs.</p>

ACCURACY OF DATA
continued

10 The SEs for some statistics are relatively high and users are advised to exercise caution in interpreting these statistics. Estimates with SEs of 25% or more have been marked with an asterisk. The following tables of SEs relate to estimates of the number of households and adults.

STANDARD ERRORS FOR HOUSEHOLD ESTIMATES—1999

Size of estimate	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
2 000	—	—	—	900	1 000	500	300	300	1 200
5 000	2 500	2 200	2 100	1 400	1 500	800	500	500	1 800
10 000	3 400	3 100	2 900	1 900	200	1 000	600	700	2 600
20 000	4 700	4 300	3 900	2 500	2 800	1 400	800	900	3 700
50 000	7 000	6 500	5 600	3 700	4 000	1 900	1 100	1 200	5 700
100 000	9 300	8 700	7 200	4 700	5 300	2 400	1 300	1 400	7 800
200 000	12 300	11 300	9 200	6 000	6 800	3 100	1 500	1 700	10 500
500 000	17 600	15 500	12 400	8 100	9 400	4 000	—	2 000	15 100
800 000	20 400	17 300	13 600	8 900	10 500	4 400	—	—	17 500
1 000 000	22 900	19 300	15 200	9 900	11 800	4 900	—	—	19 600
1 500 000	25 400	20 400	15 900	10 400	12 700	5 100	—	—	21 700
2 000 000	29 400	23 500	18 300	12 000	14 600	5 800	—	—	25 100

STANDARD ERRORS FOR ADULT ESTIMATES—1999

Size of estimate	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
2 000	1 600	1 700	1 400	1 000	1 200	700	400	500	1 200
5 000	2 800	2 900	2 500	1 800	2 000	1 100	700	800	2 300
10 000	4 200	4 200	3 800	2 600	2 800	1 500	900	1 100	3 500
20 000	6 100	6 000	5 500	3 700	3 900	2 100	1 100	1 500	5 200
50 000	9 600	9 300	8 400	5 600	6 000	3 000	1 500	2 200	8 500
100 000	13 000	12 600	11 300	7 200	8 200	3 900	1 800	2 800	11 900
200 000	17 100	16 700	14 700	9 100	10 800	5 000	2 100	3 500	16 200
500 000	23 600	23 300	19 900	11 600	15 300	6 500	2 500	4 600	23 300
800 000	27 300	27 300	22 700	12 900	18 100	7 400	2 700	5 100	27 600
1 000 000	29 100	29 300	24 100	13 400	19 500	7 800	2 800	5 400	29 700
1 500 000	32 500	33 100	26 500	14 400	22 300	8 600	2 900	5 900	33 800
2 000 000	34 900	35 900	28 200	15 000	24 400	9 200	3 000	6 200	36 900

Example using the standard error table

11 From table 1.4, 1,021,000 households outside of the metropolitan areas had access to a computer at home. This estimate has a SE around 19,600. This means there are about two chances in three that the true value (i.e. the value that would have been obtained from a complete census) is within the range 1,001,400 to 1,040,600 households and about 19 chances in 20 that the true value is in the range 981,800 to 1,060,200 households.

12 Particular care should be taken when comparing figures over time. It is not correct to assume that an apparent difference between figures is actually significant. Such an estimate is subject to sampling error. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x - y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

Example using the standard error table *continued*

13 From table 2, the increase in the number of households with access to the Internet at home was roughly 454,000 households (from 1,082,000 households in 1998 to 1,536,000 households in 1999). The SE on this movement is around 29,250. There are two chances in three that the true value is within the range 424,750 to 483,250 households and 19 chances in 20 that the true value is in the range 395,500 to 512,500 households. If the range does not include the value zero, the movement can be considered to be statistically significant.

ACKNOWLEDGMENT

14 Australian Bureau of Statistics (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. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

RELATED PUBLICATIONS

15 Other ABS publications on the production and use of information technology and telecommunication goods and services in Australia are:

Household Use of Information Technology, Australia, 1998
(Cat. no. 8146.0)

Use of the Internet by Householders, Australia (Cat. no. 8147.0)
February, May, August and November 1999 issues

Use of Information Technology on Farms, 1998–99 (Cat. no. 8150.0)

Information Technology, Australia, Preliminary 1998–99
(Cat. no. 8143.0)

Telecommunications Services, Australia, 1996–97 (Cat. no. 8145.0)

Business Use of Information Technology, Australia, 1997–98
(Cat. no. 8129.0)

Government Use of Information Technology, 1997–98 (Cat. no. 8119.0)

AVAILABILITY OF UNPUBLISHED STATISTICS

16 As well as statistics included in this publication, the ABS has a range of data on the use of selected information technologies in households. Inquiries about these statistics should be made by telephoning John Ovington on Canberra 02 6252 5189 or email john.ovington@abs.gov.au.

SYMBOLS AND OTHER USAGES

ABS	Australian Bureau of Statistics
*	Estimates have a relative standard error between 25% and 50%
**	Estimates have a relative standard error of 50% or more
—	nil or round to zero
n.a	not available
ATM	Automatic Teller Machine
EFTPOS	Electronic Funds Transfer at Point of Sale
IT	Information Technology
SE	Standard Error
TAFE	Tertiary and Further Education

FOR MORE INFORMATION...

- INTERNET** www.abs.gov.au the ABS web site is the best place to start for access to summary data from our latest publications, information about the ABS, advice about upcoming releases, our catalogue, and Australia Now—a statistical profile.
- 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, or visit our web site for a list of libraries.
- CPI INFOLINE** For current and historical Consumer Price Index data, call 1902 981 074 (call cost 75c per minute).
- DIAL-A-STATISTIC** For the latest figures for National Accounts, Balance of Payments, Labour Force, Average Weekly Earnings, Estimated Resident Population and the Consumer Price Index call 1900 986 400 (call cost 75c per minute).

INFORMATION SERVICE

Data which have been published and can be provided within five minutes are free of charge. Our information consultants can also help you to access the full range of ABS information—ABS user pays services can be tailored to your needs, time frame and budget. Publications may be purchased. Specialists are on hand to help you with analytical or methodological advice.

- PHONE** **1300 135 070**
- EMAIL** **client.services@abs.gov.au**
- FAX** 1300 135 211
- POST** Client Services, ABS, GPO Box 796, Sydney 1041

WHY NOT SUBSCRIBE?

ABS subscription services provide regular, convenient and prompt deliveries of ABS publications and products as they are released. Email delivery of monthly and quarterly publications is available.

- PHONE** 1300 366 323
- EMAIL** subscriptions@abs.gov.au
- FAX** 03 9615 7848
- POST** Subscription Services, ABS, GPO Box 2796Y, Melbourne 3001



2814600001996
ISSN 1329-4067

RRP \$17.00

© Commonwealth of Australia 2000

Produced by the Australian Bureau of Statistics