

9. RESIDENTIAL USERS OF ONLINE SERVICES

9.1 Overview

Objectives

The objective underlying many government programs is to extend the range, accessibility and effective use of online services by residential users. It is believed the greater use of online services by consumers will improve their social and economic well-being.

Policy Outcomes

Access and use of the PC and Internet has increased amongst residential users in the last two years. This places Australia internationally as one of the leading users of online services.

The increase in access and use has been because the PC and Internet are seen as more useful and affordable. Growth in computer and Internet expertise is making for more ease of use. There has not been the same level of growth in online services such as Internet commerce and electronic money.

Access

Household access to the PC and the Internet has increased in the last two years. It is difficult however to pinpoint the exact quantum of the increase because access and use are not always differentiated.

- ◆ In February 1998 more than two-fifths of Australian households (42.4%) had access to the PC at home.
- ◆ Household access is not dependent on ownership. One fourth of the households with access did not own a PC.
- ◆ There is no data on the increase of PC and Internet access as differentiated from PC and Internet use.

Despite the increase in PC and Internet use, the telephone and the television remain the dominant household communication technologies.

International Comparisons

Australia ranks amongst the first three countries for household and population access to the Internet and PC

- ◆ In 1996 Australia ranked third in terms of household access to the PC, behind the United States and Singapore. Australia ranked ahead of the United Kingdom, Japan, France and Germany.
- ◆ In 1997 Australia was positioned third in terms of household Internet access – behind the United States and Japan.
- ◆ Australia also has a more even gender profile of Internet users than the United States & Canada, Europe, Japan, Singapore and China.

Use

There has been an increase in the number of households and persons who use the PC and the Internet from home for a range of activities.

- ◆ Household use of the Internet has more than quadrupled increasing from 190,000 households (2.9%) in February 1996 to 841,000 households (12.4%) in February 1998. Use of the Internet was defined as having used the Internet in the 12 months to February 1998.
- ◆ Household PC usage has risen by 22.5 per cent in the same period
- ◆ In February 1998 5.1 million persons 5 years and over used the PC at least once a week at home, compared to 3.9 million in February 1996.
- ◆ There were 1 million persons 18 years and over (7.7%) who used the Internet from home in February 1998 compared to 255,000 (2.0%) in February 1996.

- ◆ Australians use the PC and the Internet at work, home and neighbour or friend's house – in that order
- ◆ Females do more learning/study activities on the PC and the Internet compared to males. Males play more computer games, work related activities and Internet based activities on the PC. Males also use the Internet more for activities relating to work, goods and services and general browsing of the Web.

Effective Use

The increase of household access and use have come together with the increasing usefulness and affordability of the PC and Internet over the last two years.

The factors that hold back greater access and use are those that relate to a lack of trust, and an uneasy fit between characteristics of online services, activities and meaning.

Usefulness

- ◆ The incidence of PC and Internet use has increased. However lack of usefulness remains the most important concern for the households who do not have a PC.

Affordability

- ◆ Affordability has become less of a concern for PC access in February 1998 compared to February 1996. It continues however to be the second most important reason for households not having a PC.
- ◆ It is the main reason that PC households do not have Internet access.

Ease and comfort of use

- ◆ There is a greater availability of online services in different activity areas.
- ◆ Instant access from the home 24 hours a day to services in any part of the world are the attractive characteristics of some online services.
- ◆ Concerns about online services are about privacy, security, and useability

On-line shopping

- ◆ **Access and Use:** There has been an increase in online shopping over the last two years. Estimates for online shopping in 1998 vary between 38 per cent to 57 per cent of Internet users.

Online shopping is the primary activity of only 0.5 per cent of Internet users

- ◆ **Usefulness:** The range and value of products and services bought online has increased.
- ◆ **Affordability:** Online shopping is not cheaper in terms of the price of the good or service, mainly because of the delivery costs.

Cost of Internet access is the most important concern for Internet users (21%) who have not shopped online. It is the second most important concern (23%) for Internet users who have shopped online

- ◆ **Ease and comfort of use:** Immediate accessibility to goods and services at home and internationally is the main advantage of online shopping.

The major concerns relate to privacy and security.

The predominantly male usage of the Internet at home and particularly for shopping related activities does not fit the social

expectation that money will be jointly managed and controlled in marriage.

Electronic Money

Consumers continue to use a variety of financial channels to make payments.

Access and Use

- ◆ Cash and cheque remain dominant retail payments instruments in terms of volume and value.
- ◆ Retail electronic payments are increasing in volume but as yet comprise only 2 per cent of total retail payments in value.
- ◆ Direct debit has changed only slightly in volume from 4 per cent of non-cash payments in 1980 to 5 per cent in 1996.
- ◆ The Internet is not an important channel for payments, particularly for women.

Usefulness

- ◆ Greater convenience and accessibility has been responsible for the popularity of the Automated Teller Machines (ATMs) and Electronic Funds Transfer at Point of Sale (EFTPOS).

Affordability

- ◆ No study on the public record compares the cost of different payments instruments and channels for the residential user.
- ◆ The flow-on effects of the increased cost of electronic payments for merchants and governments have not been documented.

Ease and comfort of use

- ◆ Lack of perceived security, privacy and control are areas of concern.
- ◆ There is continued uncertainty about the liabilities of the residential consumer for Internet payments in case of a disputed transaction.

Policy Gaps

Access

- ◆ The focus has been on increasing household access to the PC and the Internet. The PC and the Internet however are as yet a small part of the mix of information and communication technologies in the household. The implications of the changing mix have not been adequately addressed.

Use

- ◆ There is a gender gap in the use of the Internet at home by males and females. More than twice as many males 18 years and over use the Internet at home compared to females. The gap narrows marginally for males and females 5 years and over.
- ◆ There is a large gap between PC and Internet usage for those still attending school. Australian Bureau of Statistics data show less than half the persons using the PC use the Internet.
- ◆ Residential users above 39 years old, those not employed and people in non-metropolitan areas use the Internet less than others.
- ◆ Online services are not always designed for easy useability.

Usefulness

- ◆ Lack of usefulness remains the most important reason for households not having a PC.

- ◆ Fewer households intend to purchase or upgrade the PC in 1998 compared to 1996. At the same time in 1998, more households say they lack interest in the PC.

Affordability

- ◆ A lack of affordability is the second most important reason for households not having a PC and the main reason for no Internet access.
- ◆ Households with an income of less than \$44,000 a year are under represented in terms of Internet access at home and intentions to acquire Internet access in the next 12 months.

Ease and comfort of use

- ◆ Consumer protection remains a vexed field.
- ◆ There is continued uncertainty about the liabilities of the residential consumer for Internet payments in case of a disputed transaction.
- ◆ Privacy for personal information is not assured online.

Data Gaps

Access

- ◆ Available figures do not enable us to distinguish between access, use and frequent use of the Internet.
- ◆ We do not have the data to judge how increased access to the Internet in educational institutions, public libraries, shops/stores/telecafes and community organisations has translated to use.
- ◆ The ABS picture of Internet use is incomplete as it only depicts usage patterns for persons 18 years and over. This is an enormous gap for the 5-17 years are the largest group of PC users (1.7 million) comprising a third of the 5.1 million frequent PC users at home.

Use

- ◆ It is not possible to chart the changing importance of online services for different activities in the household. The available data track the use of the PC and the Internet for different activities, and some online services. The data however do not always place this use in the context of the way a residential user shops, studies, works, pays or plays.
- ◆ There is little quantitative data on the public record focusing on the way individuals mix payments instruments and financial channels in different socio-economic groups for various activities.

Affordability

- ◆ Historical data on the affordability of the Internet are not available on the public record.
- ◆ There is also little data publicly available on the comparative cost of person-to-person, telephone, mail and online services for residential users.

Ease and comfort of use

A strong emphasis on quantitative surveys and issues of cost and competition has meant there are few studies on:

- ◆ The level of competency;

- ◆ Useability of online services;
- ◆ Satisfaction with online services;
- ◆ Control of information and the transaction;
- ◆ Comfort with the service and the provider; and
- ◆ Degree of care shown to the consumer.

Ongoing Review

- ◆ We are in dialogue with the Australian Bureau of Statistics (ABS) which is a world leader in data on the use of information technology in the household to make data collection in Australia more pertinent for monitoring policy and strategy.
- ◆ The ABS is also leading the push to have data more comparative across countries in the OECD.
- ◆ We are also exploring the possibility of access to proprietary data with other data collecting groups.
- ◆ We are placing our monitoring framework and performance evaluation on the World Wide Web for extensive review

9.2 Access to Online Services

Household Access to the PC and Internet

- ◆ Household access and use of the Internet and PC has increased between February 1996 and February 1998.
- ◆ In February 1998 more than two-fifths of Australian households (42.4%) had access to the PC at home.
- ◆ Household access is not dependent on ownership. A fourth of households with PC access did not own a PC.
- ◆ Despite the increase in PC and Internet use, the telephone and the television remain the dominant household communication technologies.
- ◆ Household decisions to purchase new technologies often revolve around Pay TV, the mobile phone and the fax.
- ◆ This mix of technologies is the background against which choices of communication channels are made for different activities.

Table 9.1 Household Access to Communication Technologies, Australia, February 1996-1998

Access to Communication Technology	February 1996		February 1998		% change Feb 96 – Feb 98
	'000	% of all households	'000	% of all households	
PC	1 960 (a)	29.5	2 880	42.0	46.9
Internet (c) (e)	190	2.9	841	12.4	342.6
Fixed telephone (b)	6 434	96.8	6 307	92.9	-2.0
Mobile phone (b)	1 604	24.1	2 874	42.3	79.2
Fax (b)	613	9.7	989	14.6	61.3
TV (1996)	6 698 (d)	98.5	NA	NA	NA
Pay TV (b)	201	3.0	703	10.4	249.8

- a) In 1996 there was no distinction made between access and use. Of the total of 6.6 million households, 2 million used the PC and 4.6 million did not have computing facilities.
- b) Figures are for households owning/paying for these communication technologies.
- c) Internet use of those households frequently using computers as in 1996, only households frequently using computers were asked about peripheral technologies used.
- d) The International Telecommunication Union gives the total number of households in Australia in 1996 as 6 800 000 compared to Australian Bureau of Statistics figure of 6 645 000
- e) In 1996 and 1998, access to the Internet was not distinguished from use of the Internet.

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service, Tables 2, 8, 9, 12, p, 3

Australian Bureau of Statistics. (1996). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service, Tables 1, 7, 8, 11, 12

Australian Bureau of Statistics. 1998. Unpublished data.

International Telecommunication Union. 1998. *World Telecommunication Development Report: Universal Access World Telecommunication Indicators*. Geneva: International Telecommunication Union.

Access and Ownership

Household access is not dependent on ownership.

- ◆ 738 000 households have access to a PC at home though they do not own the PC. This represents 26 per cent of households with access to a PC.
- ◆ Only 63 per cent of the households that have access to the Internet pay for Internet services.

Table 9.2 Household access and ownership of the PC and Internet services, Australia, February 1998

Communication Technology	Access		Ownership	
	'000	%	'000	%
PC	2 880	42.4	2 142	31.6
Internet	1 119 (a)	16.2	702 (b)	10.3

(a) Households with a modem best approximate to possible access, for there is no data on Internet access as opposed to use.

(b) The cost of using the Internet was incurred by the household or home based business.

Sources: Australian Bureau of Statistics. (1998). *Household use of Information Technology, Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

International Comparisons

It is difficult to assess the residential use of online services against international benchmarks. Figures for PC and Internet household use are drawn from multiple sources with different definitions and dates of collection. Comparative data when available are generally out of date and so are only indicative.

The best available data on the public record show that:

- ◆ In 1996, Australia ranked third in PC household penetration – behind United States and Singapore. Australia ranked ahead of the United Kingdom, Japan, France and Germany;
- ◆ In 1997 Australia was positioned third in terms of household Internet access – behind the United States and Japan;
- ◆ In 1996, Australia ranked ahead of the United States, Canada and Japan in terms of Internet Users per 100 inhabitants;
- ◆ Australia ranked second behind the United States for access to the PC across selected countries per 100 inhabitants in 1996;
- ◆ Australia also has a more even gender profile of Internet users than the United States & Canada, Europe, Japan, Singapore and China.

Table 9.3 Household Access to Communication Technologies – International Comparisons

Country	Total Households 1996 '000	Telephone 1996 %	Television 1996 %	PCs 1996 %	Internet access 1997 %	
<i>United States</i>						
United States	101 711	93.90	95.2	39	18	
<i>Europe</i>						
France	22 989	97.00	91.4	11	1.8	
Germany	36 957	89.30	89.5	11	3.5	
United Kingdom	23 732	91.10	86.8	15	4.4	
<i>Asia Pacific</i>						
Australia	6 800	96.40	98.5	29.5	16.2 (Feb 1998)	
Japan	44 192	-(a)	81.0	15	18	
Malaysia	4 090	50.00	75.8	NA	NA	
Singapore	774	-(a)	89.4	36	8.6	
<i>China</i>	375 450	12.80	62.5	NA	NA	
<i>India</i>	167 700	NA	34.4	NA	NA	
World Total	1 455 847	-(a)	66.0	NA	NA	

(a) Figures available are only for residential main lines per 100 households in 1996. They are:

- Singapore >100
- Japan 96.2
- World 39.9

Sources: Australian Bureau of Statistics. (1996). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

International Telecommunication Union. 1998. *World Telecommunication Development Report: Universal Access World Telecommunication Indicators*. Geneva: International Telecommunication Union.

National Computer Board, Singapore. 1997. *Penetration of computers in Singapore Households*. Singapore: National Computer Board.

Spectrum Strategy Consultants. 1997. *Moving into the information society. An International Benchmarking Study*. London: Department of Trade and Industry. <http://www.isi.gov.uk/isi/mitis/>

Spectrum Strategy Consultants. 1998. *Moving into the information society. An International Benchmarking Study*. London: Department of Trade and Industry. Pp. 41, 67 <http://www.isi.gov.uk/isi/bench/mitia/index.html>

Table 9.4 Persons' Access to Communication Technologies, International Comparisons, 1996

Country	Total Population (M)	Main Telephone Lines per 100 inhabitants	Television receivers per 100 inhabitants	Estimated PCs per 100 inhabitants	Internet Users per 100 inhabitants
<i>United States and Canada</i>					
United States	266.56	63.99	80.6	36.24	7.87
Canada	29.96	>100	70.9	24.36	6.67
<i>Europe</i>					
France	58.38	56.36	59.8	15.07	0.08
Germany	81.91	53.84	49.3	24.32	3.05
United Kingdom	58.14	52.76	61.2	19.26	4.29
<i>Asia Pacific</i>					
Australia	18.31	51.88	66.6	31.13	10.92
Japan	125.76	48.92	70.0	12.80	5.56
Malaysia	20.58	18.32	22.8	4.28	0.03
Singapore	3.04	51.33	36.1	21.68	4.92
China	1 232.08	4.46	25.2	0.30	0.01
India	944.58	1.54	6.4	0.15	0.008
World Total	5 778.10	12.88	23.8	4.72	0.91

Source: International Telecommunication Union. 1998. *World Telecommunication Development Report: Universal Access World Telecommunication Indicators*. Geneva: International Telecommunication Union.

Table 9.5 Gender of Internet Users - International Comparisons

Country	Males %	Females %
Australia 98 (a)	56.6	43.4
United States & Canada 97	58	42
Singapore 96 (at home)	72	28
Europe 98	78	22
Japan (June 97)	89	11
China (July 98)	92.8	7.2

% of WWW users from any site

Australian Bureau of Statistics. (1998). *Use of the Internet by householders. Australia*. Catalogue no. 8147.0. Canberra: Australian Government Publishing Service

CNET News.Com. 1998. China Net use exploding. <http://www.news.com/News/Item/0,4,24114,00.html> as at 22 July 1998.

CommerceNet. 1998. The CommerceNet Research Center World Wide Statistics. <http://www.commerce.net/stats/wwstats.html> at 10 July 1998

National Computer Board. (1997). *IT Household Survey Report. 1996*. <http://www3.ncb.gov.sg/ncb/hholdsurvey/penetration.html> at 8 July 1998

9.3 Use of Online Services

In Australia, we have rich data on household use of the PC and the Internet from the Australian Bureau of Statistics, which is a world leader in this field. The data reveal the increase in usage between February 1996 and 1998; sites where people in the household use the PC and the Internet; the socio-economic characteristics of residential users and the activities for which they are used.

- ◆ Household use of the Internet has more than quadrupled increasing from 190,000 households (2.9%) in February 1996 to 841,000 households (12.4%) in February 1998.
- ◆ Household PC usage has risen by 22.5 per cent in the same period.
- ◆ In February 1998 5.1 million persons 5 years and over used the PC at least once a week at home, compared to 3.9 million in February 1996.
- ◆ There were 1 million persons 18 years and over (7.7%) who used the Internet from home in February 1998 compared to 255,000 (2.0%) in February 1996.
- ◆ It is important to distinguish between access, use and frequency of use.
- ◆ In 1998 of the 2.9 million households with access to the PC at home, 124 000 did not use the PC at all, and 479 000 used it less than once a week.
- ◆ We do not have similar data for the PC for 1996 to monitor the growth of use as differentiated from access.
- ◆ We do not have data distinguishing between access, use and frequent use of the Internet in 1996 and 1998.

Differentiating Use and Access

Table 9.6 Household Use and Access of the PC and Internet, 1996-1998, Australia

Communication Technology	February 1996				February 1998			
	Access '000	%	Use '000	%	Access '000	%	Use '000	%
PC	NA	NA	1 960	29.5	2 880	42.4	2 401	35.4 (a)
Internet	459 (b)	6.9	190 (c)	2.9	1 119	16.2	854 (d)	12.6

- a) Households that use the computer at least once a week. In the 12 months to February 1998, 2 756 (40.5%) households used the PC ranging from less than once every month to daily.
- b) Households with a modem best approximate to possible access, for there is no data on Internet access as opposed to use.
- c) Internet use of those households frequently using computers as in 1996, only households frequently using computers were asked about peripheral technologies used.
- d) Households that have used the Internet in the 12 months to February 1998.

Sources: Australian Bureau of Statistics. (1996). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

Australian Bureau of Statistics. 1998. Unpublished data.

- Place of Use of the PC and the Internet**
- ◆ Australians use the PC and the Internet at work, home and neighbour or friend's house – in that order.
 - ◆ We do not as yet have the data to judge how increased access to the Internet in educational institutions, public libraries, shops/stores/telecafes and community organisations has translated to use.

Table 9.7 Residential Users: Place of Use of the PC and the Internet, Australia, February 1998

Place of use (a)	PC		Internet	
	Persons 18 years and over '000	%	Persons 18 years and over '000	%
Work	4 295	32.0	1 302	42.9
Home	4 269	31.8	1 038	34.2
Neighbour or friend's house	1 733	12.9	806	26.6
TAFE/Tertiary institution	1 230	9.2	519	17.1
Public library	1 156	8.6	219	7.2
School	41	3.1	181	6.0
Shops/Stores/Telecafes	437	3.3	NA	NA
Community or Voluntary organisation	161	1.2	NA	NA
Other	190	1.4	184	6.1
Accessed from any site (b)	7 472	55.7	3 032	22.6

(a) Percentages are of persons 18 years and over who used the PC or the Internet in the 12 months to February 1998.

(b) Percentages are of all persons 18 years and over.

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service Table 16

Australian Bureau of Statistics. (1998). *Use of the Internet by householders. Australia*. Catalogue no. 8147.0. Canberra: Australian Government Publishing Service, Table 2

Socio-economic characteristics of residential users of the PC and Internet

- ◆ Relatively fewer females than males use the PC and the Internet, both in terms of percentages of males and females and in the profile of PC and Internet users.
- ◆ The younger the person, the greater is the likelihood of the person being a PC and Internet user.
- ◆ The data for Internet use is incomplete as it only depicts usage patterns for persons 18 years and over. This is an enormous gap for the 5-17 years are the largest group of PC users (1.7 million) comprising a third of the 5.1 million frequent PC users.¹
- ◆ For persons who have completed school, a higher education

¹ Australian Bureau of Statistics. 1998. *Household Use of Information Technology*. Catalogue No. 8128.0. Canberra: Australian Government Publishing Service, Table 18.

translates to higher PC and Internet usage.

- ◆ There is however a large gap between PC and Internet usage for those still attending school. Less than half the persons using the PC use the Internet.
- ◆ Persons born outside Australia are more likely to be Internet users, though they comprise under a third of Internet users.
- ◆ More than four-fifths of the Internet users are employed. However less than a third of those employed use the Internet.
- ◆ Close to a third of the Internet users are from New South Wales and Victoria use the Internet. But nearly half the adults of the Australian Capital Territory use the Internet, followed by 30.5 per cent from the Northern Territory.
- ◆ People from non-metropolitan areas are less likely to use the Internet compared to people from metropolitan areas (See also section on non-metropolitan users)

Table 9.8 Socio-economic characteristics of residential users of the PC and Internet from any site, Australia, February 1998

Socio-economic characteristics	PC(a)(b)		Internet (c)(d)	
	'000	%	'000	%
Total	7 472	55.7	3 032	22.6
Gender				
Male	3 712	56.2	1 715	26.0
Female	3 760	55.2	1 317	19.3
Age				
18-24 years	1 441	79.3	770	42.4
25-39 years	2 989	70.1	1 329	31.2
40-54 years	2 366	63.1	822	21.9
55 + years	677	18.9	111	3.1
Highest educational qualification				
Still attending school	77	89.0	26	30.2
Secondary school certificate	2 838	41.1	986	14.3
Trade certificate/ Apprenticeship	1 024	55.3	319	17.2
Other certificate	1 400	68.0	468	22.7
Associate undergraduate diploma	677	79.3	304	35.7
Bachelors degree	1 449	88.0	921	55.9
Other	7	100.0	7	97.7
Place of birth				
Australia	5 580	56.7	2 114	21.5
Outside Australia	1 890	53.0	918	25.7
Labour force status				
Not in the labour Force	1 141	25.2	346	7.7
Unemployed	429	62.7	190	27.7
Employed	5 902	72.0	2 496	30.4

continued

Socio-economic characteristics	PC(a)(b)		Internet (c)(d)	
	'000	%	'000	%
Occupation				
Managers and Administrators	436	62.8	220	31.7
Professionals	1 270	90.7	695	49.6
Para professionals	748	80.9	314	34.0
Trade persons	869	65.9	364	27.6
Clerks	346	90.4	144	37.6
Sales/personal service Workers	1 395	79.7	505	28.8
Plant/machinery Operators and drivers	271	40.6	52	7.8
Labourers and related Workers	309	68.6	108	24.0
Not stated	258	42.1	94	15.3
State and Territory				
New South Wales	NA	NA	971	21.3
Victoria			878	26.0
Queensland			475	19.4
South Australia			183	16.8
Western Australia			313	24.5
Tasmania			75	22.2
Northern Territory			28	30.5
Australian Capital Territory			109	49.4
Region				
Metropolitan (e)	NA	NA	2 516	26.4
Other			516	13.3

- a) Persons 18 years and over who used the computer at least once a week from any site.
- b) Percentages are of all persons aged 18 years and over
- c) Persons of 18 years and over who have used the Internet in the 12 months to February 1998
- d) Percentages are of all persons 18 years and over
- e) Includes all capital cities and the major urban centres of 100 000 or more

Source: Australian Bureau of Statistics. (1998). *Use of the Internet by householders. Australia*. Catalogue no. 8147.0. Canberra: Australian Government Publishing Service, Table 4, 5

Australian Bureau of Statistics, 1998. Unpublished data.

Table 9.9 Profile of PC and Internet Residential Users, Australia, February 1998

Socio-economic characteristics	PC(a)(b)		Internet (c)(d)	
	'000	%	'000	%
Total	7 472	100.0	3 032	100.0
Gender				
Male	3 712	49.7	1 715	56.6
Female	3 760	50.3	1 317	43.4
Age				
18-24 years	1 441	19.3	770	25.4
25-39 years	2 989	40.0	1 329	43.8
40-54 years	2 366	31.7	822	27.1
55 + years	677	9.0	111	3.7
Highest educational qualification				
Still attending school	77	1.0	26	0.9
Secondary school certificate	2 838	38.0	986	32.5
Trade certificate/Apprenticeship	1 024	13.7	319	10.5
Other certificate	1 400	18.7	468	15.4
Associate undergraduate diploma	677	9.1	304	10.0
Bachelors degree	1 449	19.4	921	30.4
Other	7	0.1	7	0.2
Place of birth				
Australia	5 580	74.7	2 114	69.7
Outside Australia	1 890	25.3	918	30.3
Labour force status				
Not in the labour force				
Unemployed	429	5.7	190	6.3
Employed	5 902	78.0	2 496	82.3
Occupation (e)				
Managers and Administrators	436	7.4	220	8.8
Professionals	1 270	21.5	695	27.8
Para professionals	748	12.7	314	12.6
Trade persons	869	14.7	364	14.6
Clerks	346	5.9	144	5.8
Sales/personal service workers	1 395	23.6	505	20.2
Plant/machinery Operators and drivers	271	4.6	52	2.1
Labourers and related workers	309	5.2	108	4.3
Not stated	258	4.4	94	3.8
Total	5 902	100.0	2 496	100.0

continued

Socio-economic characteristics	PC(a)(b)		Internet (c)(d)	
	'000	%	'000	%
State and Territory				
New South Wales	NA	NA	971	32.0
Victoria			878	29.0
Queensland			475	15.7
South Australia			183	6.0
Western Australia			313	10.3
Tasmania			75	2.5
Northern Territory			28	0.9
Australian Capital Territory			109	3.6
Region				
Metropolitan (f)	NA	NA	2 516	83.0
Other			516	17.0

- a) Persons 18 years and over who use the computer at least once a week.
- b) Percentages are of PC users aged 18 years and over
- c) Persons of 18 years and over who have used the Internet in the 12 months to February 1998
- d) Percentages are of all Internet users 18 years and over
- e) Percentages are of those employed.
- f) Includes all capital cities and the major urban centres of 100 000 or more

Source: Australian Bureau of Statistics. (1998). *Use of the Internet by householders. Australia*. Catalogue no. 8147.0. Canberra: Australian Government Publishing Service, Table 4, 5
 Australian Bureau of Statistics. 1998. Unpublished data.

Gender and the Use of the PC and the Internet

- ◆ There is a larger gender gap in the use of the Internet from home compared to the PC. This is despite the relatively even gender balance of Internet users.
- ◆ There are more than twice as many males 18 years and over use the Internet at home compared to females. The gap narrows marginally for males and females 5 years and over.
- ◆ Females do more learning/study activities on the PC and the Internet compared to males. Males play more computer games, work related activities and Internet based activities on the PC. They also use the Internet more for activities relating to work, goods and services and general browsing of the Web.
- ◆ The largest increase in use of the PC for males and females has been in accessing other online services/databases/bulletin boards (other than via the Internet); Internet based activities; and keeping personal or family records and/or correspondence.
- ◆ The greatest increase in the use of the Internet has been for general browsing and/or surfing the website; and activities related to work. Women have had a larger percentage increase than men for activities related to goods and services, whereas men have increased their activities in relation to studies more than women.

Table 9.10 Place of Use of PC and the Internet by gender, February 1998

Use	Males '000 %	% increase Feb 96–Feb 98	Females '000 %	% increase Feb 96–Feb 98	Persons '000 %	% increase Feb 96–Feb 98
Internet use- from any site	1 715 26.0 (a)	NA	1 317 19.3%	NA	3 032 22.6%	NA
Internet use at home	711 10.8% (b)	344.4	327 4.8%	244.2	1 038 7.7%	307
Use of the PC at any site (c)	3 713 56.2% (d)	NA	3 760 55.2%	NA	7 472 55.7%	NA
Use of the PC at home (e)	2 728 32.7% (f)	23.6	2 385 28.2%	40.5	5 113 30.4%	31.0
Internet based activities on home computer of persons 5 years and over	737 27.0% (g)	256.0	382 16.0%	260.4	1 119 21.9%	257.5

(a) Percentages are of all persons 18 years and over

(b) Percentages are of persons 18 years and over who accessed the Internet in the 12 months to February 1998.

(c) Persons 18 years and over who used the PC in the 12 months to February 1998.

(d) Percentages are of persons 18 years and over who used the PC in the 12 months to February 1998.

(e) Persons 5 years and over who used the PC at least once a week at home.

(f) Percentages are of persons 5 years and over

(g) Percentages are of persons 5 years and over who used the PC at least once a week at home.

Source: Australian Bureau of Statistics. (1998). *Use of the Internet by householders. Australia*. Catalogue no. 8147.0. Canberra: Australian Government Publishing Service, Tables 2, 3

Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service, Table 16 18, 19

Table 9.11 PC and Internet Usage by Gender, Australia, Feb 1998

Usage	Male % (million)	% change from Feb 1996	Female % (million)	% change from Feb 1996	Total % (million)	%change
PC Usage at Home (a)						
Total – Persons aged 5 years and over	32.7% (2.7)	23.6	28.2% (2.4)	40.5	30.4 (5.1)	31.0
Playing computer games	66.1% (1.8)	26.5	51.0% (1.2)	32.2	59% (3.0)	28.6
Learning/study activities	51.4% (1.4)	17.7	57% (1.4)	35.0	54% (2.8)	25.6
Work related activities	40.6% (1.1)	25.1	34.6% (0.8)	56.5	37.8% (1.9)	36.7
Keeping personal or family Records/correspondence	29.0% (0.8)	52.9	31.9% (0.8)	99.5	30.3% (1.6)	72.3
Internet based activities	27.0% (0.7)	256.0	16.0% (0.4)	260.4	21.9% (1.1)	257.5
Accessing other on-line services/databases/bulletin boards (other than via Internet)	8.9% (0.2)	132.7	2.7% (0.06)	441.7	6.0% (0.3)	164.7
Other	3.0% (0.08)	-33.9	3.2% (0.07)	-44.9	3.1% (0.15)	-40.3
Internet Usage at any site(b)						
Total – Persons 18 years and over	26% (1.7)	NA	19.3% (1.3)	NA	22.6% (3.0)	NA
Activities in relation to studies	27.9% (0.5)	NA	39.1% (0.5)	NA	32.8% (1.0)	NA
Activities relating to work	52.6% (0.9)	NA	44.5% (0.6)	NA	49.1% 1.5	NA
General browsing/surfing the website	67% (1.15)	NA	61.2% (0.8)	NA	64.5% (0.95)	NA
Activities about goods and services	43.5% (0.7)	NA	30.1% (0.4)	NA	37.7% 1.1	NA
Other	9.5% (0.16)	NA	11.9% (0.16)	NA	10.6% (0.32)	NA

(a) Percentages for PC usage are of all persons aged five years and over using a computer at home once a week or more.

(b) Persons 18 years and over accessing a computer at any site in the 12 months to Feb 1998

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service , Tables 18, 19

Australian Bureau of Statistics. (1998). *Use of the Internet by householders. Australia*. Catalogue no. 8147.0. Canberra: Australian Government Publishing Service , Tables 2, 6

9.4 Effective Use

- ◆ The increase of household access and use has come together with the increasing usefulness and affordability of the PC and Internet over the last two years.
- ◆ The factors that hold back greater access and use are those that relate to a lack of trust, and an uneasy fit between characteristics of online services, activities and meaning.

Usefulness

The PC and the Internet are seen as more useful in February 1998 compared with February 1996.

- ◆ The incidence of use of the PC has increased. Fewer households see the PC as not useful. It remains however the most important reason why households do not have a PC.
- ◆ Fewer households intend to purchase or upgrade the PC in 1998 compared to 1996. At the same time in 1998, more households say they lack interest in the PC. This suggests a possible boundary of household PC access at approximately 50 per cent of the households.
- ◆ Use of the Internet has quadrupled in the last two years.

Table 9.12 Usefulness of the PC and the Internet in the Household

Usefulness	PC		Internet	
	February 1996 % of households	February 1998 % of households	February 1996 % of households	February 1998 % of households
Incidence of use	29.5	35.4	2.9	12.4
Used daily	NA	19.8	NA	NA
Intending to purchase/ upgrade/access in the next 12 months	18.5	16.2	NA	7
Main reason for households not having a computer/ Internet access				
Lack of interest	8.5	10.6	NA	8.6
Not useful	28.5	21.3	NA	NA

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service, Tables 1, 2, 7, 15

Affordability

- ◆ Affordability is directly related to usefulness. The more useful a service, the higher will be its priority in the household budget.
- ◆ Affordability has become less of a concern for PC access in February 1998 compared to February 1996. It continues however to be the second most important reason for households not having a PC.
- ◆ The main reason why households with computers do not have access to the Internet in February 1998 is that the costs are too high. Data on the affordability of the Internet is not available for 1996.
- ◆ The majority of households spent less than \$1,000 a year on computer equipment, computer services or Internet services.

- ◆ Households with an income of less than \$44,000 a year are under represented in terms of Internet access at home and intentions to acquire Internet access in the next 12 months.

Table 9.13 Concerns about affordability, February 1996-February 1998, Australia

Socio-economic characteristics	February 1996		February 1998	
	'000	% of households	'000	% of households
PC (a)	1 434	30.8	1 030	26.4
Internet (b)	NA	NA	NA	NA

(a) Percentages are for households not having a computer.

(b) Percentages are for households with computers but no access to the Internet.

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

Table 9.14 Households using the Internet from home by household income, February 1998, Australia

Household income	Internet Use from Home		Households intending to acquire Internet Access in the Next 12 months	
	'000	% (a)	'000	% (b)
\$0-\$14 000	56	4.6	15	13.2
\$14 001 - \$27 000	60	5.3	45	19.0
\$27 001 - \$44 000	103	8.8	77	18.1
\$44 001 - \$66 000	153	14.2	112	23.9
\$66 001+	301	27.0	147	31.8
Not stated	181	17.2	77	25.0
Australia	854	12.6	474	23.5

a) Percentages are of all households with access to the Internet

b) Percentages are of all households with computers and no Internet access

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

Table 9.15 Expenditure on the PC and Internet

Household expenditure	February 1996 % of households	February 1998 % of households
On computer equipment and software in the last 12 months (a)		
- Up to \$1000	NA	72.6
- \$1000 +	NA	24.6
- Don't know	NA	2.8
On computer equipment and software in the last 12 months		
- Up to \$1000	NA	97.5
- \$1000 +	NA	0.5
- Don't know	NA	1.9
Internet services (b)		
- Up to \$1000	NA	88.7
- \$1000 +	NA	3.5
- Don't know	NA	7.8

- a) Percentages are for the 2.4 million households that frequently used a computer and spent money on computer equipment and services in the past 12 months.
- b) Percentages are for the 702,000 households with Internet access where the household or the home based business incurs Internet costs.

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

Ease and comfort of use

There is a greater availability of online services in different activity areas.

Instant access from the home 24 hours a day to services in any part of the world are the attractive characteristics of some online services.

The factors that take away from the effectiveness of online services are those that relate to a lack of ease and comfort of use. Competency, useability, satisfaction, control of information and the transaction, comfort with the service and the provider, and degree of care shown to the consumer are some of the indicators.

- ◆ One third (34%) of the 5.7 million persons who frequently used a computer from any site saw themselves as competent.
- ◆ It takes at least five years before the majority of users see themselves as competent.
- ◆ More females saw themselves as competent in the first two years of computer use compared to males (ABS, 1998, Cat 8128.0)
- ◆ Lengthy downloading time, inefficient search, ordering and payment processes are some of the reasons why online services are not easy to use.
- ◆ Qualitative studies show there continues to be a lack of trust, and an uneasy fit between characteristics of online services, activities and meaning.
- ◆ Issues of privacy and security remain important.
- ◆ These points will be seen in the context of online shopping and electronic money.

On-line Shopping

Access and Use

- ◆ There has been an increase in online shopping over the last two years. Estimates for online shopping in 1998 vary between 38 per cent to 57 per cent of Internet users. This variance is likely to be related to different samples and definitions of Internet use and online shopping.
- ◆ There is a large gap between people with and without access to the Internet who say they are interested in on-line shopping from home; those who have purchased or ordered goods on-line from home; and those who have purchased goods and paid for them on-line.
- ◆ Online shopping is the primary activity of only 0.5 per cent of Internet users (Department of Industry, Science and Tourism. 1998. *Stats. Electronic Commerce in Australia April 1998*. Canberra: Australian Government Publishing Service, p. 12)

It is estimated that the annual value of consumer Internet purchases has tripled from \$16 million in December 1996 to \$55 million in December 1997. (DIST, 1998, p. 18)

Table 9.16 Use of Internet to make purchases for own private use (a) (b)

	'000	%
Interest in accessing on-line shopping from home ©	3 244	24.2
Activities about goods and services	1 142	37.7
Purchased or ordered goods/services (d)	207	6.8
Location from which order made		
Home	159	5.3
At work	13	0.4
Other	35	1.2
Goods purchased and paid for online	170	5.6

- a) Percentages are of persons 18 years and over who accessed the Internet.
- b) Period covers the 12 months to February 1998.
- c) The numbers and percentages are of persons aged 18 years and over.
- d) ABS figures for online shopping are lower than those by [www.consult](http://www.consultco.com/pr/online5.html). The fifth Australian Online User Report concludes that "25% of Internet users have shopped online more than once, with an additional 13% having shopped online once and a further 3% having tried online shopping but having cancelled before completing the transaction online. A further 16% of Internet users had used the Internet to support purchasing decisions" <http://www.consultco.com/pr/online5.html> on 28 July 1998. It is also worth noting that [www.consult](http://www.consultco.com/pr/online5.html) estimates there were some 1.6 million Internet users in Australia at the start of 1998 (Department of Industry, Science and Tourism. 1998. *Stats. Electronic Commerce in Australia April 1998*. Canberra: Australian Government Publishing Service), compared to ABS figures of 3 million Internet users.

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service, Tables 23

Australian Bureau of Statistics. (1998). *Use of the Internet by householders. Australia*. Catalogue no. 8147.0. Canberra: Australian Government Publishing Service, Table 6, 7

Usefulness

- ◆ The main advantage of online shopping is convenience and immediate information. It enables a person to purchase goods and services at home 24 hours a day from any part of the world.
- ◆ The range of products and services purchased online has increased. Software, books, music and magazine subscriptions have dominated on-line purchases between December 1996 and December 1997.

Between June 1997 and December 1997 new online products emerged. These were online classified, flowers, concert or event tickets, food and wine. (DIST, 1998, p. 15)

- ◆ Response times is a top concern (24%) for Internet users who have shopped online. (DIST, 1998, p. 16)

Affordability

- ◆ Most of the attention has been focused on the efficiency of online delivery of goods and services for the providers. The data that are being reported on the relative price of books and CDs online compared to the price of books and CDs in the physical stores in Australia show there is little difference in price for the residential consumer once delivery charges are taken into account.
- ◆ Cost of Internet access is the most important concern for Internet users (21%) who have not shopped online. It is the second most important concern (23%) for Internet users who have shopped online (DIST, 1998, p. 16)

Ease and Comfort of Use

The lack of comfort with online shopping is a major barrier to use.

- ◆ 13 per cent of Internet users who have shopped on-line are concerned about the security of financial transactions. (DIST, 1998, p. 16)
- ◆ Lack of privacy is the second most important concern (20%) for Internet users who have not tried online shopping.
- ◆ The lack of consumer protection for purchases outside Australia is a concern that has been articulated by regulatory bodies and consumer organisations.
- ◆ The predominantly male usage of the Internet at home and particularly for shopping related activities does not fit the social expectation that money will be jointly managed and controlled in marriage.

Table 9.17 Use of the Internet and PC for Electronic Commerce related activities by gender, Australia, February 1998

Use of the Internet & PC	Males '000 %	% increase Feb 96– Feb 98	Females '000 %	% increase Feb 96– Feb 98	Persons '000 %	% increase Nov96– Feb 98
Internet activities about goods and services from any site of access	745 43.5% (a)	NA	397 30.1%	NA	1 142 37.7%	NA
Internet purchases	168 9.8%	NA	39 3.0%	NA	207 6.8%	NA
Interest in online shopping	1 858 28.1%	30.0	1 387 20.4%	-3.9	3 245 24.2%	13.0

a) Percentages are of persons 18 years and over who accessed the Internet in the 12 months to February 1998

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology. Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service

Australian Bureau of Statistics, 1998. Unpublished data

Electronic Money

Access

- ◆ Residential users have potential access to different kinds of bank accounts, ATMs and EFTPOS provided they have a bank account and are literate.
- ◆ People with bank accounts have widespread access to telephone banking for 92.9 per cent of households have a fixed telephone.
- ◆ Access to Internet payments is limited to the 12.4 % of households with Internet access at home.

Use

- ◆ Consumers continue to use a variety of financial channels to make payments.
- ◆ Cash and cheque remain dominant retail payments instruments in terms of volume and value.
- ◆ Cash “remains the most popular and convenient medium of exchange for low value payments... (It) may account for up to 90 per cent of the number of all transactions in Australia.”²
- ◆ The number of cheques written increased between 1993 and 1997. However cheques have nearly halved in relative importance because of the increase in high value electronic transactions.
- ◆ Retail electronic payments are increasing in volume but as yet comprise only 2 per cent of total retail payments in value.
- ◆ Direct debit has changed only slightly in volume from 4 per cent of non-cash payments in 1980 to 5 per cent in 1996.
- ◆ Men and women equally use the ATMs, EFTPOS and the telephone for money transactions.
- ◆ Men use the Internet more than women to make payments.
- ◆ Persons 55 years and over use electronic money transactions the least of any age group. Two-thirds had not used an ATM.
- ◆ There is no noticeable difference in the percentage of people making electronic transactions from the capital cities and the rest of Australia except for paying bills or transferring funds by phone (See also section on non-metropolitan users).
- ◆ People from the rest of Australia pay bills and transfer funds by phone relatively less compared to persons from capital cities.

Qualitative study reveals that the choice of payments instrument and channel is influenced by the characteristics of the payment activity. Cash and EFTPOS are used predominantly for grocery payments and small everyday payments; cheques for bill payments where record is important; credit cards for gifts, entertainment and holiday expenses.³

² Australian Payments System Council (1997). *Annual Report: 1996/97*. Sydney: Australian Payments System Council, p. 49.

³ See Singh, Supriya (1996). *The use of electronic money in the home*. Policy Research Paper 41. Melbourne: Centre for International Research on Communication and Information Technologies; Singh Supriya and Slegers, Claudia (1997). *Trust and electronic money*. Policy Research Paper 42. Melbourne: Centre for International Research on Communication and Information Technologies

Table 9.18 Payments Transactions by volume and value, 1997

Transaction type	Volume Billion \$ (A)	%	Value	%
Cash	18.5	88	\$90-220 billion	-
Electronic	1.5	7	\$16 Trillion	65
Cheques	1.0	5	\$ 8 Trillion	35
Total	21	100.0	\$24 Trillion	100

Source: Department of Industry, Science and Tourism. 1998. *Stats. Electronic Commerce in Australia. April 1998.* Canberra: DIST, p. 3

Table 9.19 Value of Non-Cash Payments, 1991-1997, Australia

Payments Instruments	\$ billion (% of non-cash payments per day)			
	1991	1993	1995	1997
Cheques and other paper debits	30 (58.8 %)	25 (35.7%)	27 (34.6%)	31 (34.0%)
Retail electronic				
Direct entry	1 (2.0)	1 (1.4 %)	1 (1.3%)	2 (2.2%)
Plastic cards	~	~		~
Wholesale electronic				
BITS	12 (23.5%)	20 (28.6%)	22 (28.2%)	26 (28.6%)
Austraclear	7 (13.7%)	14 (20.0%)	18 (23.1%)	18 (19.8%)
RITS	1 (2.0%)	10 (14.3%)	10 (12.8%)	14 (15.4%)
Total	51 (100.0%)	70 (100.0%)	78	91

~Figures for plastic card payments total less than half of \$1 billion per day.

Source: Australian Payments System Council (1997). *Annual Report: 1996/97.* Sydney: Australian Payments System Council

Table 9.20 Volume of non-cash payments, 1980-1996

Payments Instruments	Volume % of non-cash payments		
	1980	1991	1996
Cheques	85	60	43
Direct entry transfers			
Credits	3	20	20
Debits	4	5	5
Credit cards	7	10	13
Debit cards (EFTPOS)	-	5	18

Source: Australian Payments System Council (1997). *Annual Report: 1996/97.* Sydney: Australian Payments System Council

Table 9.21 Survey of Transactions using Specific Financial Channels (September 1996)

Financial Channel	Percentage of Respondents (a)
ATM	55
Cheque	39
Credit/Charge card	47
EFTPOS	45
Telephone banking	9
Personal Computer banking	1
Branch visits	63

(a) Respondents were 14 years and over.

Source: Australian Payments System Council (1997). *Annual Report: 1996/97*. Sydney: Australian Payments System Council

Table 9.22 Electronic money transactions undertaken by persons aged 18 years and over – by gender , February 1998, Australia (a)(b)

Electronic money transactions by persons 18 years and over	Total		Males		Females	
	'000	%	'000	%	'000	%
Paid bills or transferred funds via the Internet	44	0.3	32	0.5	12	0.2
Paid bills or transferred funds via information kiosk	69	0.5	28	0.4	41	0.6
Paid bills or transferred funds via phone	3 929	29.3	1 958	29.7	1971	29.0
Paid bills or withdrew funds via EFTPOS	7 755	57.8	3 529	53.5	4,226	62.1
Transferred or withdrew funds via ATM	8 858	66.0	4 354	65.9	4,504	66.1

a) Period covers the 3 months to February 1998

b) Percentages are of all persons 18 years and over

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology, Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service , Table 22

Table 9.23 Electronic money transactions undertaken by persons aged 18 years and over – by age group, February 1998, Australia (a)(b)

Electronic money transactions by persons 18 years and over	Total '000 %	18-24 yrs '000 %	25-39 yrs '000 %	40-54 yrs '000 %	55+ yrs '000 %
Paid bills or transferred funds via the Internet	44 (0.3)	- (-)	12 (0.3)	32 (0.9)	- (-)
Paid bills or transferred funds via information kiosk	69 (0.5)	12 (0.7)	27 (0.6)	19 (0.5)	11 (0.3)
Paid bills or withdrew funds via EFTPOS	7 755 (57.8)	1 408 (77.5)	3 394 (79.6)	2 162 (57.7)	792 (22.1)
Transferred or withdrew funds via ATM	8 858 (66.0)	1 592 (87.6)	3 624 (85.0)	2 499 (66.7)	1 142 (31.9)

- a) Period covers the 3 months to February 1998
b) Percentages are of all persons 18 years and over

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology, Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service ,, Table 22

Table 9.24 Electronic transactions undertaken by persons aged 18 years and over – by region (a)(b)

Electronic transactions by persons 18 years and over	Total		Capital city		Rest of Australia	
	'000	%	'000	%	'000	%
Paid bills or transferred funds via the Internet	44	0.3	24	0.3	20	0.4
Paid bills or transferred funds via information Kiosk	69	0.5	36	0.4	33	0.7
Paid bills or transferred funds via Phone	3 929	29.3	2 787	32.3	1 143	23.0
Paid bills or withdrew Funds via EFTPOS	7 755	57.8	5 111	59.2	2 644	55.4
Transferred or withdrew funds via ATM	8 858	66.0	5 849	67.7	3 009	63.0

- a) Period covers the 3 months to February 1998
b) Percentages are of all persons 18 years and over

Source: Australian Bureau of Statistics. (1998). *Household use of Information Technology, Australia*. Catalogue no. 8128.0. Canberra: Australian Government Publishing Service ,, Table 22

Usefulness ♦ Greater convenience and accessibility has been responsible for the increased use of the Automated Teller Machines (ATMs) and Electronic Funds Transfer at Point of Sale (EFTPOS).

Affordability ♦ There is no study on the public record which compares the cost of different payments instruments and channels for the residential user.
 ♦ The flow-on effects of the increased cost of electronic payments for merchants and governments have not been documented.

Ease and comfort of use ♦ Cash and cheque continue to dominate retail payments for they are familiar payments instruments which offer the greatest control of information and control of the transaction.
 ♦ Electronic payments as yet do not offer the same degree of evidence as cheques.
 ♦ The use of the Internet for payments is hindered by concerns of a lack of security and privacy of personal information.
 ♦ A lack of control over the payment transaction is responsible for the stagnant volume of direct debit transactions.

9.5 Policy Gaps

Access ♦ The focus has been on increasing household access to the PC and the Internet. The PC and the Internet however are as yet a small part of the mix of information and communication technologies in the household. The implications of the changing mix have not been adequately addressed.

Use ♦ There is a gender gap in the use of the Internet at home by males and females. More than twice as many males 18 years and over use the Internet at home compared to females. The gap narrows marginally for males and females 5 years and over.
 ♦ There is a large gap between PC and Internet usage for those still attending school. Less than half the persons using the PC use the Internet.
 ♦ Residential users above 39 years old, those not employed and people in non-metropolitan areas use the Internet less than others.
 ♦ Online services are not always designed for easy useability.

Usefulness ♦ Lack of usefulness remains the most important reason for households not having a PC.
 ♦ Fewer households intend to purchase or upgrade the PC in 1998 compared to 1996. At the same time in 1998, more households say they lack interest in the PC.

Affordability ♦ A lack of affordability is the second most important reason for households not having a PC and the main reason for no Internet access.
 ♦ Households with an income of less than \$44,000 a year are under represented in terms of Internet access at home and intentions to acquire Internet access in the next 12 months.

Ease and comfort of use ♦ Consumer protection remains a vexed field.
 ♦ There is continued uncertainty about the liabilities of the residential consumer for Internet payments in case of a disputed transaction.
 ♦ Privacy for personal information is not assured online.

9.6 Data Gaps

- Access**
- ◆ Available figures do not enable us to distinguish between access, use and frequent use of the Internet.
 - ◆ We do not have the data to judge how increased access to the Internet in educational institutions, public libraries, shops/stores/telecafes and community organisations has translated to use.
 - ◆ The picture of Internet use is incomplete as it only depicts usage patterns for persons 18 years and over. This is an enormous gap for the 5-17 years are the largest group of PC users (1.7 million) comprising a third of the 5.1 million frequent PC users at home.⁴
- Use**
- ◆ It is not possible to chart the changing importance of online services for different activities in the household. The available data track the use of the PC and the Internet for different activities, and some online services. The data however do not always place this use in the context of the way a residential user shops, studies, works, pays or plays.
 - ◆ There is little quantitative data on the public record focusing on the way individuals mix payments instruments and financial channels in different socio-economic groups for various activities.
- Affordability**
- ◆ Historical data on the affordability of the Internet are not available on the public record.
 - ◆ There is also little data publicly available on the comparative cost of person-to-person, telephone, mail and online services for residential users.
- Ease and comfort of use**
- A strong emphasis on quantitative surveys and issues of cost and competition has meant there are few studies on:
- ◆ The level of competency;
 - ◆ Useability of online services;
 - ◆ Satisfaction with online services;
 - ◆ Control of information and the transaction;
 - ◆ Comfort with the service and the provider; and
 - ◆ Degree of care shown to the consumer.
- Ongoing Review**
- ◆ We are in dialogue with the Australian Bureau of Statistics (ABS) which is a world leader in data on the use of information technology in the household to make data collection in Australia more pertinent for monitoring policy and strategy.
 - ◆ The ABS is also leading the push to have data more comparative across countries in the OECD.
 - ◆ We are also exploring the possibility of access to proprietary data with other data collecting groups.
 - ◆ We are placing our monitoring framework and performance evaluation on the World Wide Web for extensive review.

⁴ Australian Bureau of Statistics. 1998. *Household Use of Information Technology*. Catalogue No. 8128.0. Canberra: Australian Government Publishing Service, Table 18.