

ANNUAL SURVEY ON INFOCOMM USAGE IN HOUSEHOLDS AND BY INDIVIDUALS FOR 2008

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Infocomm Development Authority of Singapore
8 Temasek Boulevard
#14-00 Suntec Tower Three
Singapore 038988
Republic of Singapore
Tel: (65) 6211-0888
Fax: (65) 6211-2222
Website: www.ida.gov.sg

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INTRODUCTION

The 2008 Annual Survey on Infocomm Usage in Households and by Individuals (“Survey”) is the 13th in its series conducted by IDA since the 1990s. The objective of the Survey is to assess the extent of infocomm adoption and usage in Singapore resident households¹ and residents².

Survey Methodology

Data was collected from 5,000 resident households and 5,000 residents via face-to-face interviews conducted from October to April 08. The sample was selected from the National Dwelling Database maintained by the Singapore Department of Statistics, using a two-stage stratified design to maintain a random and representative sample.

Report Structure

This report presents the Survey findings to the following areas:

- Part A: Infocomm access in households.
- Part B: Infocomm adoption and usage by residents.

A glossary of terms used in this report can be found in Annex A.

Notes on Data

Past years’ data are included for comparison purposes where available. Due to the rounding of figures to the nearest whole number, the sum of individual figures may not add up to 100%.

¹ Only households with at least one resident (Singapore Citizen or Permanent Resident) were interviewed; households comprising wholly of foreigners were not interviewed.

² Refer to Citizens and Permanent Residents.

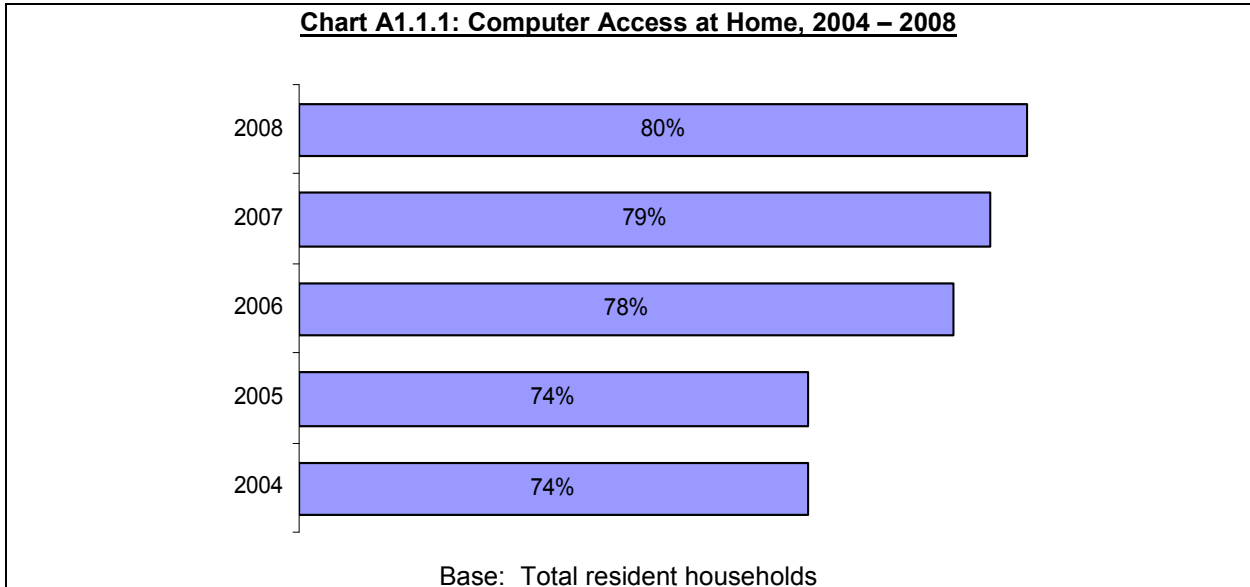
PART A: INFOCOMM ACCESS IN HOUSEHOLDS

A1. COMPUTER ACCESS WITHIN HOUSEHOLDS

A1.1 Home Computer Access

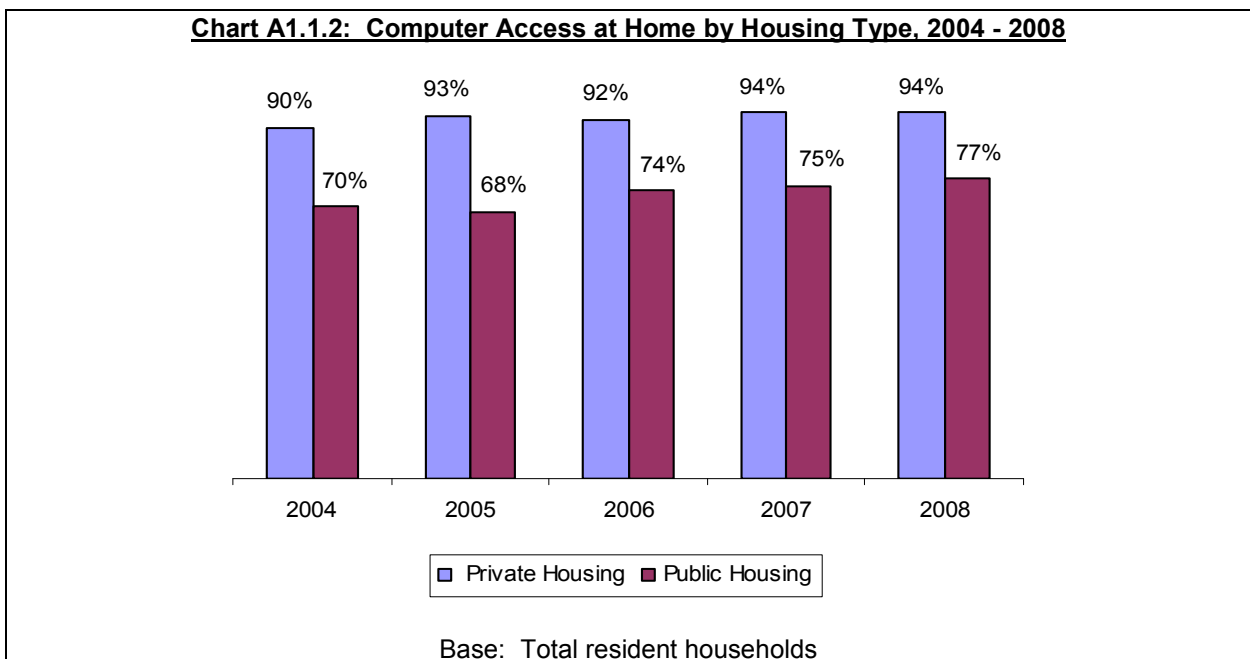
a. Home computer access

About 80% of resident households had access to a computer at home in 2008 (Chart A1.1.1).



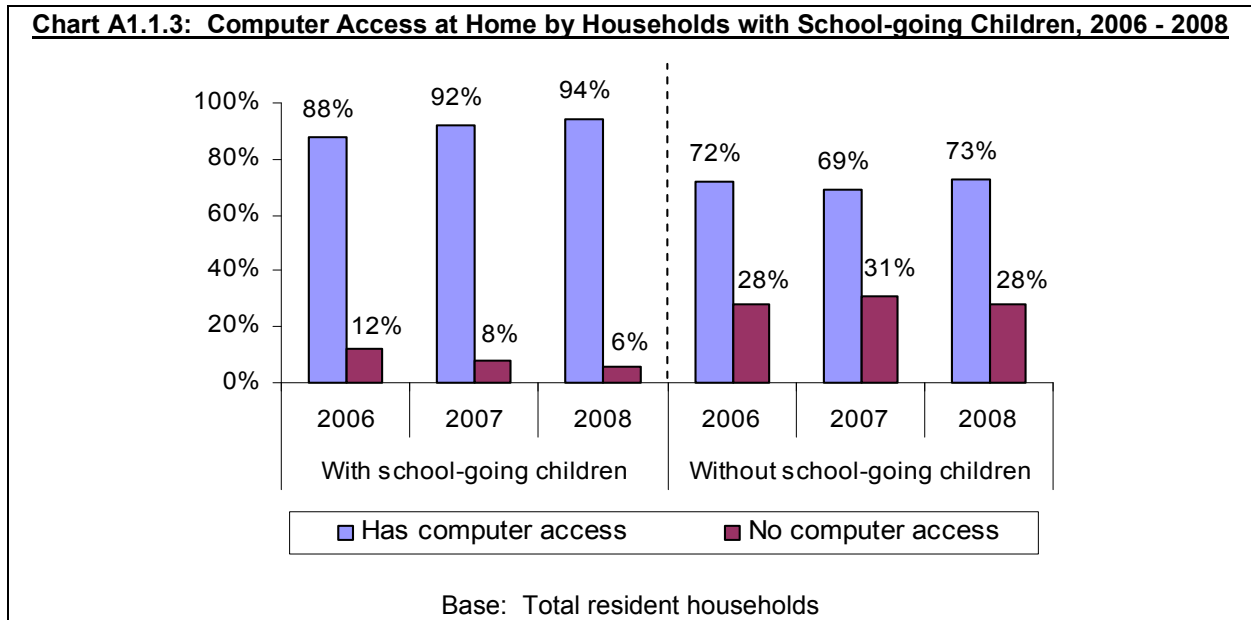
b. Home computer access by housing type

Home computer access remained higher for households in private housing than for households in public housing (Chart A1.1.2).



c. Home computer access in households with school-going children

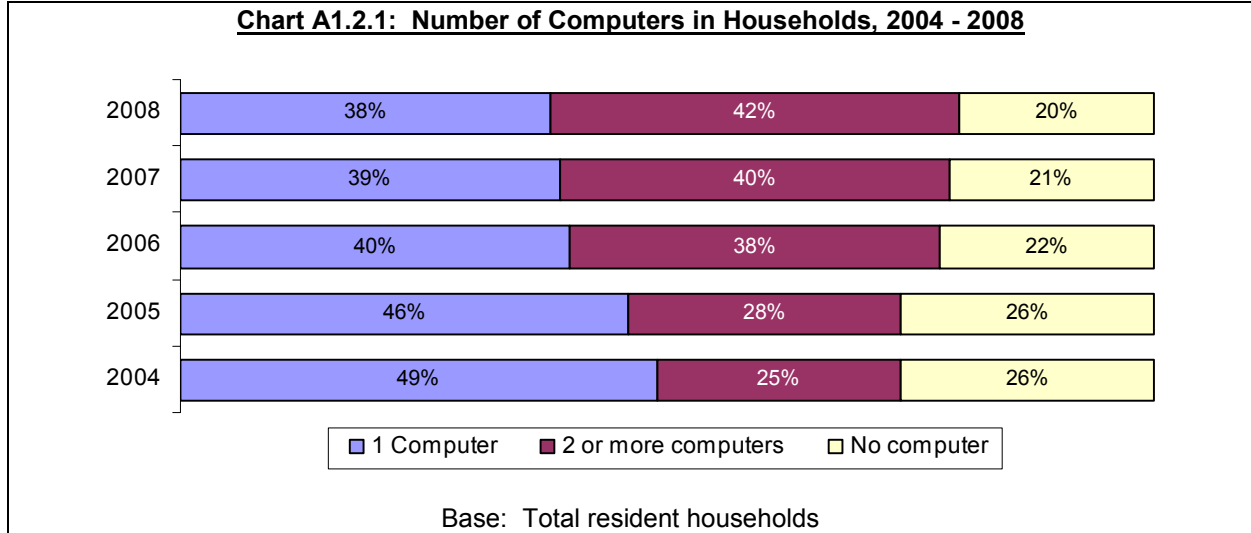
Amongst households with school-going children, 94% of them had access to a computer at home in 2008 (Chart A1.1.3).



A1.2 Households with Access to Two or More Computers at Home

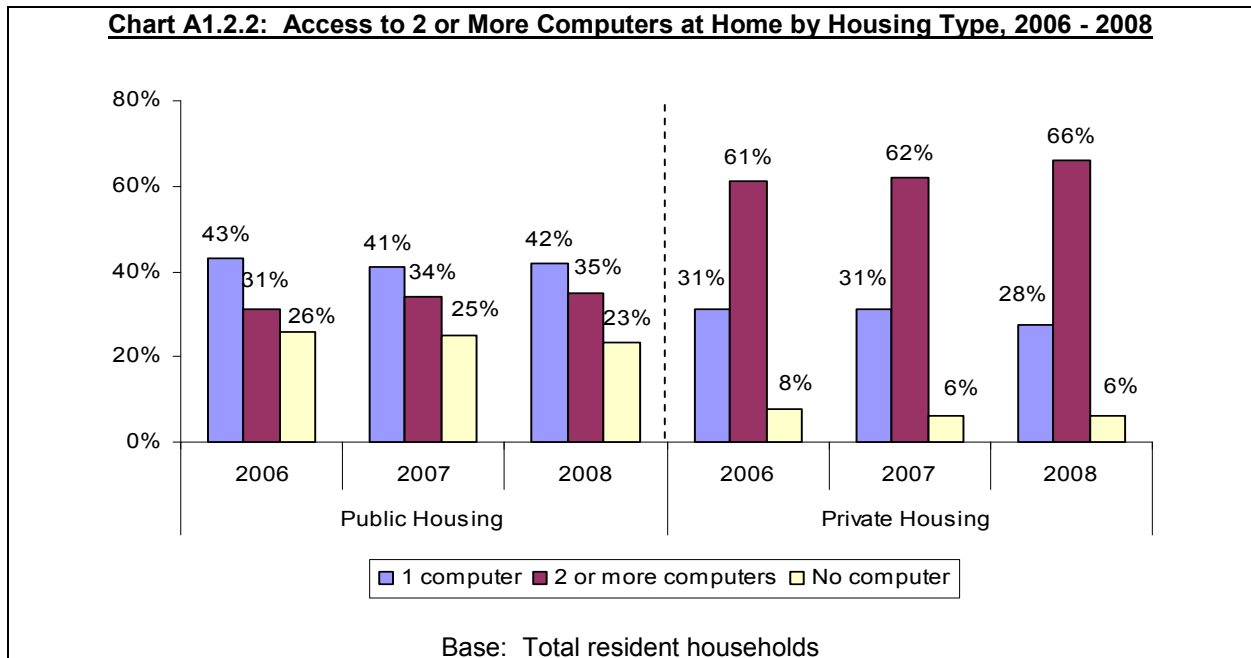
a. Household access to two or more computers at home

More households have access to two or more computers at home ([Chart A1.2.1](#)).



b. Access to two or more computers at home by housing type

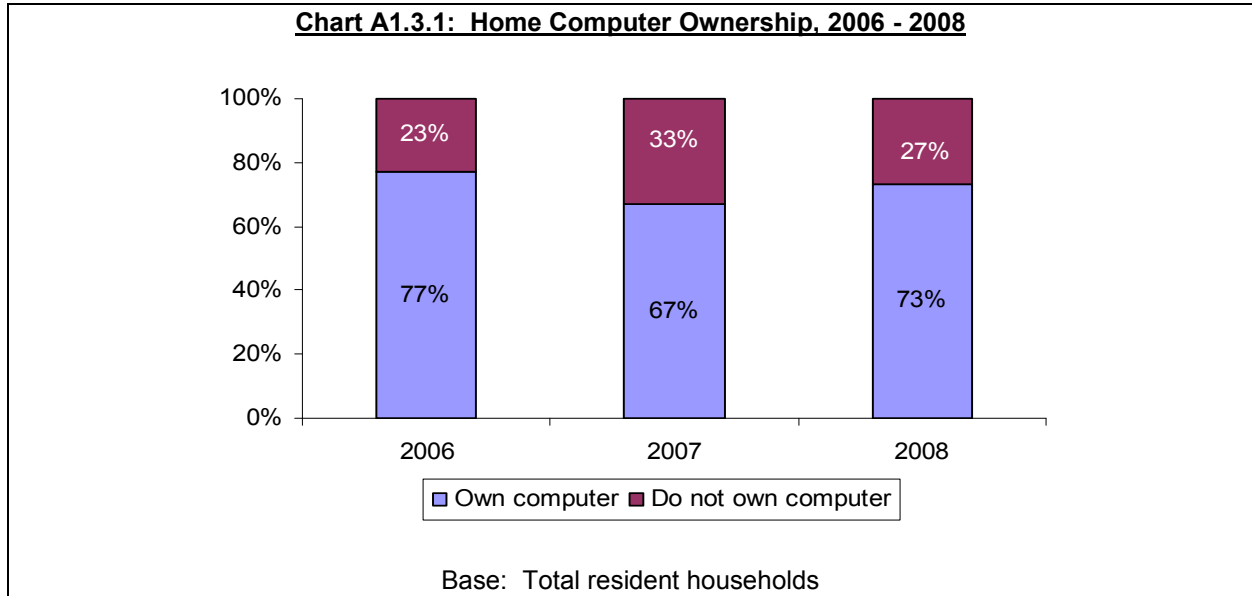
A larger proportion of households in private housing continued to have access to two or more computers at home than households in public housing ([Chart A1.2.2](#)).



A1.3 Home Computer Ownership

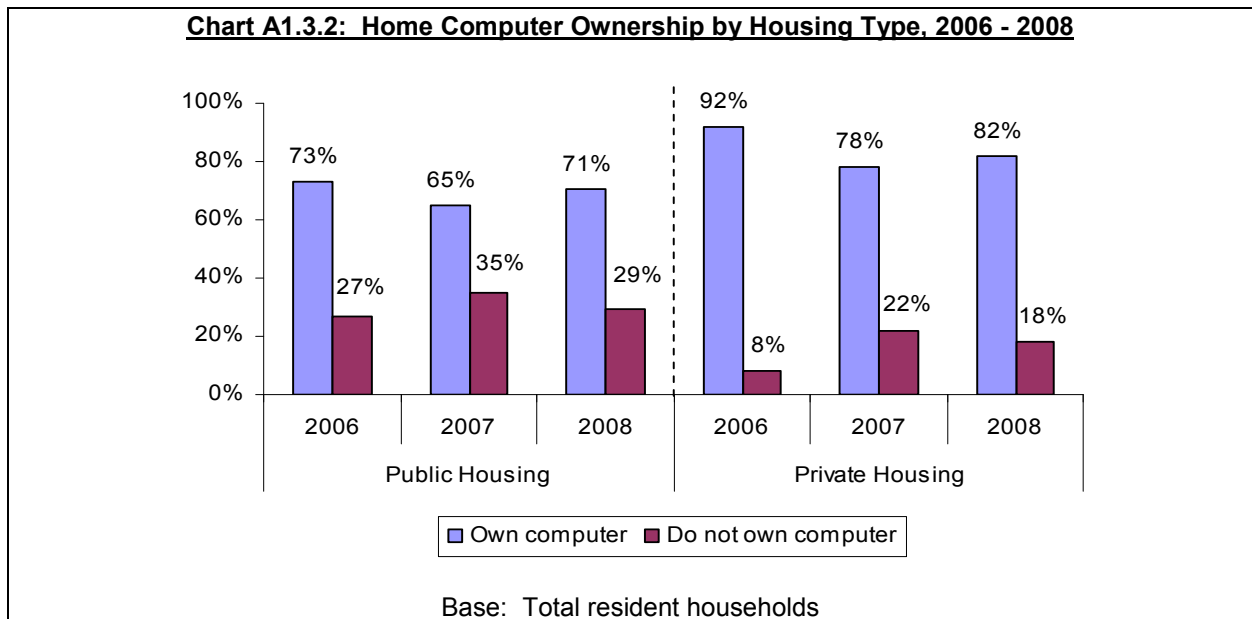
a. Home computer ownership

About 73% of households owned at least one computer at home in 2008 ([Chart A1.3.1](#)).



b. Home computer ownership by housing type

Similar to the trend for computer access, a larger proportion of households in the private housing owned at least one computer than households in public housing ([Chart A1.3.2](#)).



A1.4 Main Reason for Not Having Access to a Home Computer

The top two reasons flagged out by households for not having access to a computer at home remained “No need to use” and “Lack of skills” (Table A1.4.1).

Table A1.4.1: Main Reason for Not Having Access to a Computer at Home, 2004 – 2008

No.	Main Reason	2004	2005	2006	2007	2008
1	No need to use	42%	35%	43%	46%	38%
2	Lack of skills	19%	32%	20%	29%	32%
3	Too costly to purchase a computer	16%	15%	17%	11%	14%
4	Old age is a barrier to learn computer skills	9%	12%	8%	7%	13%
5	Children are too young	3%	6%	4%	2%	3%

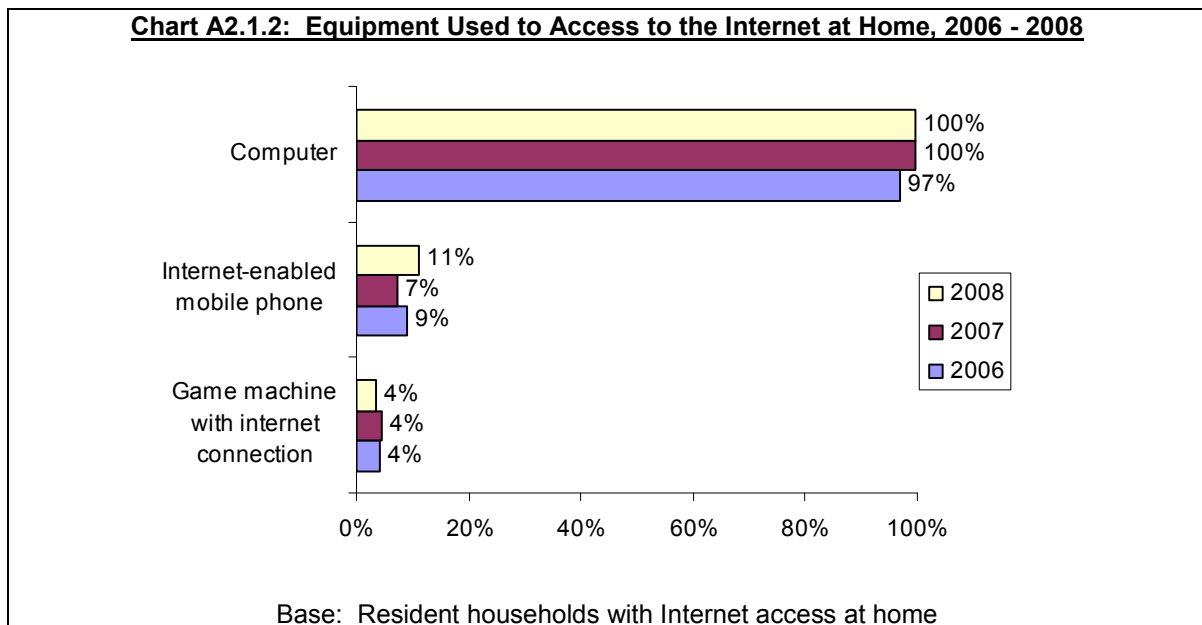
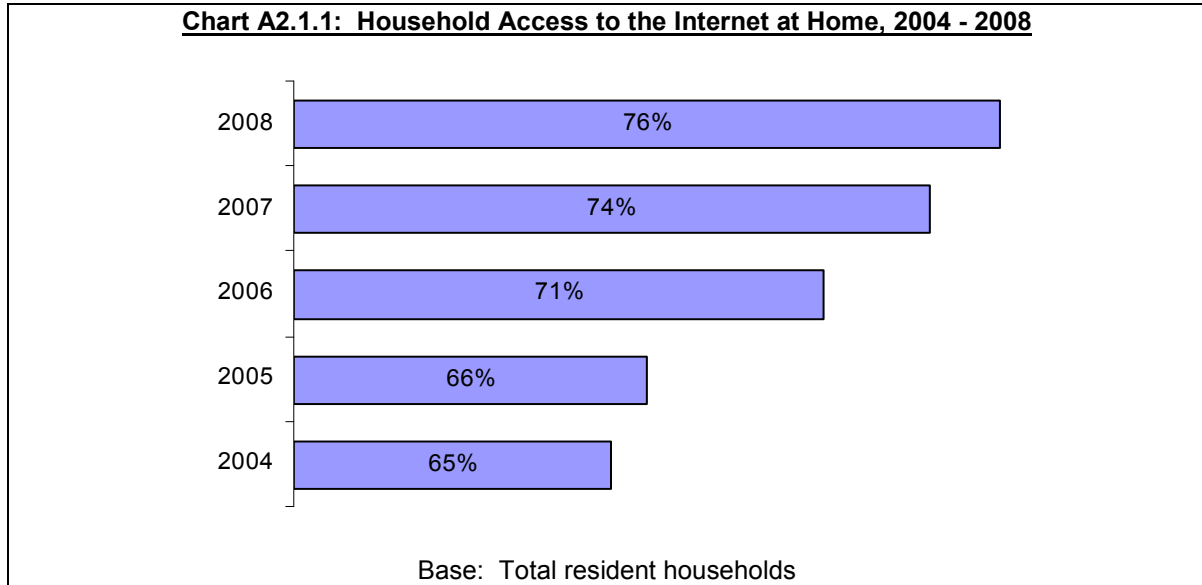
Base: Resident households who did not have access to a computer at home

A2. INTERNET ACCESS WITHIN HOUSEHOLDS

A2.1 Internet Access at Home

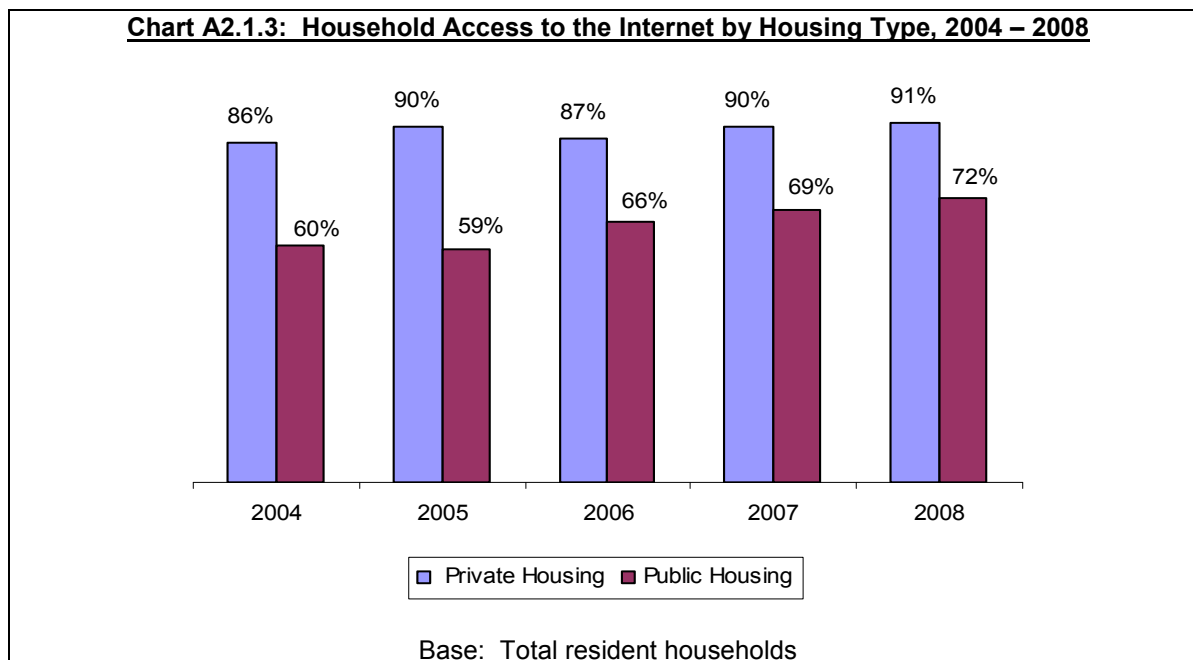
a. Access to the Internet at home & equipment used

In 2008, 76% of households had access to the Internet at home ([Chart A2.1.1](#)) and all accessed to the Internet using computers ([Chart A2.1.2](#)).



b. Internet access at home by housing type

Home Internet access for households in private housing remained higher than that for households in public housing (Chart A2.1.3).



A2.2 Main Reason for Not Having Internet Access at Home

Similar to the reasons for not having computer access at home in Table 1, “Lack of interest / no need to use” and “Lack of knowledge / skills / confidence” remained the most commonly cited reasons by households that did not have Internet access at home (Table A2.2.1).

Table A2.2.1: Main Reason for Not Having Internet Access at Home, 2004 - 2008

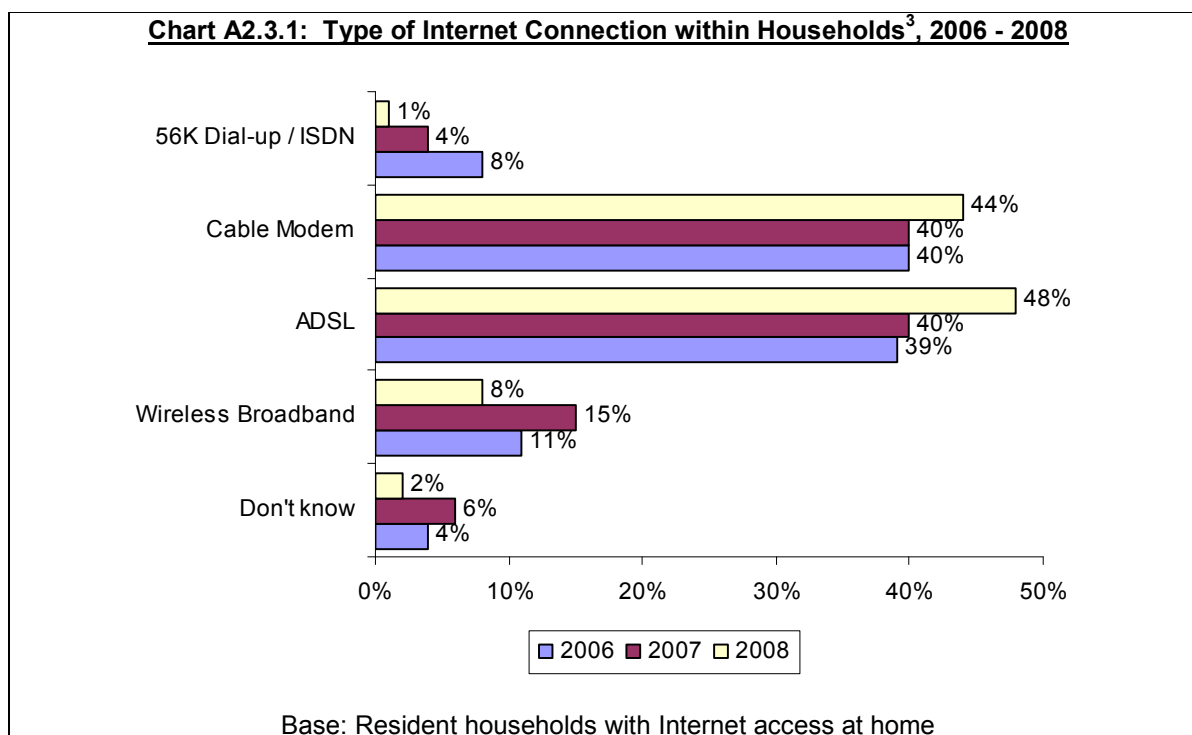
No.	Main Reason	2004	2005	2006	2007	2008
1	Lack of interest / No need to use	24%	27%	43%	55%	50%
2	Lack of knowledge / skills / confidence	11%	6%	18%	11%	23%
3	Have access to Internet elsewhere	29%	17%	7%	9%	13%
4	Costly equipment costs	6%	-	14%	8%	8%
5	Subscription to the Internet is too costly	12%	29%	4%	3%	4%

Base: Resident households with no access to the Internet at home

A2.3 Internet Connection within Households

a. Type of Internet connection within households

Amongst households with access to the Internet at home, 99% connected to the Internet via broadband (Chart A2.3.1).



b. Main reason for not subscribing to broadband

The most commonly cited reason by households that only subscribed to narrowband access but not broadband at home was “Low usage of the Internet at home” (Table A2.3.1).

Table A2.3.1: Main Reason for Not Subscribing to Broadband Access Service, 2006 - 2008

No.	Main reason for not subscribing to broadband	2006	2007	2008
1	Low usage of the Internet at home	39%	44%	30%
2	Have access to broadband access service elsewhere	12%	15%	27%
3	Dial-up is fast enough / No need to use broadband	17%	11%	22%
4	Subscription to broadband access service is too costly	15%	14%	15%
5	Cost of upgrading equipment	4%	7%	4%

Base: Resident households with only narrowband access at home

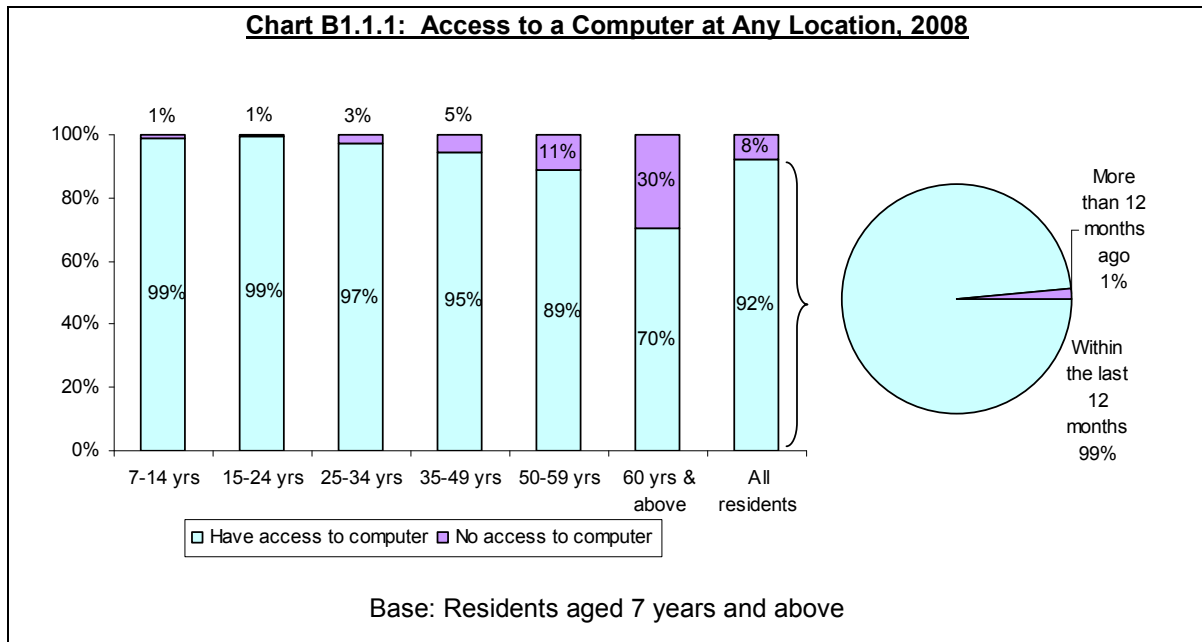
³ There are households with access to the Internet via both broadband and narrowband. These households had been categorised as households with broadband Internet access.

**PART B: INFOCOMM ADOPTION AND USAGE BY
INDIVIDUALS**

B1. COMPUTER ACCESS AND USAGE BY INDIVIDUALS

B1.1 Computer Access

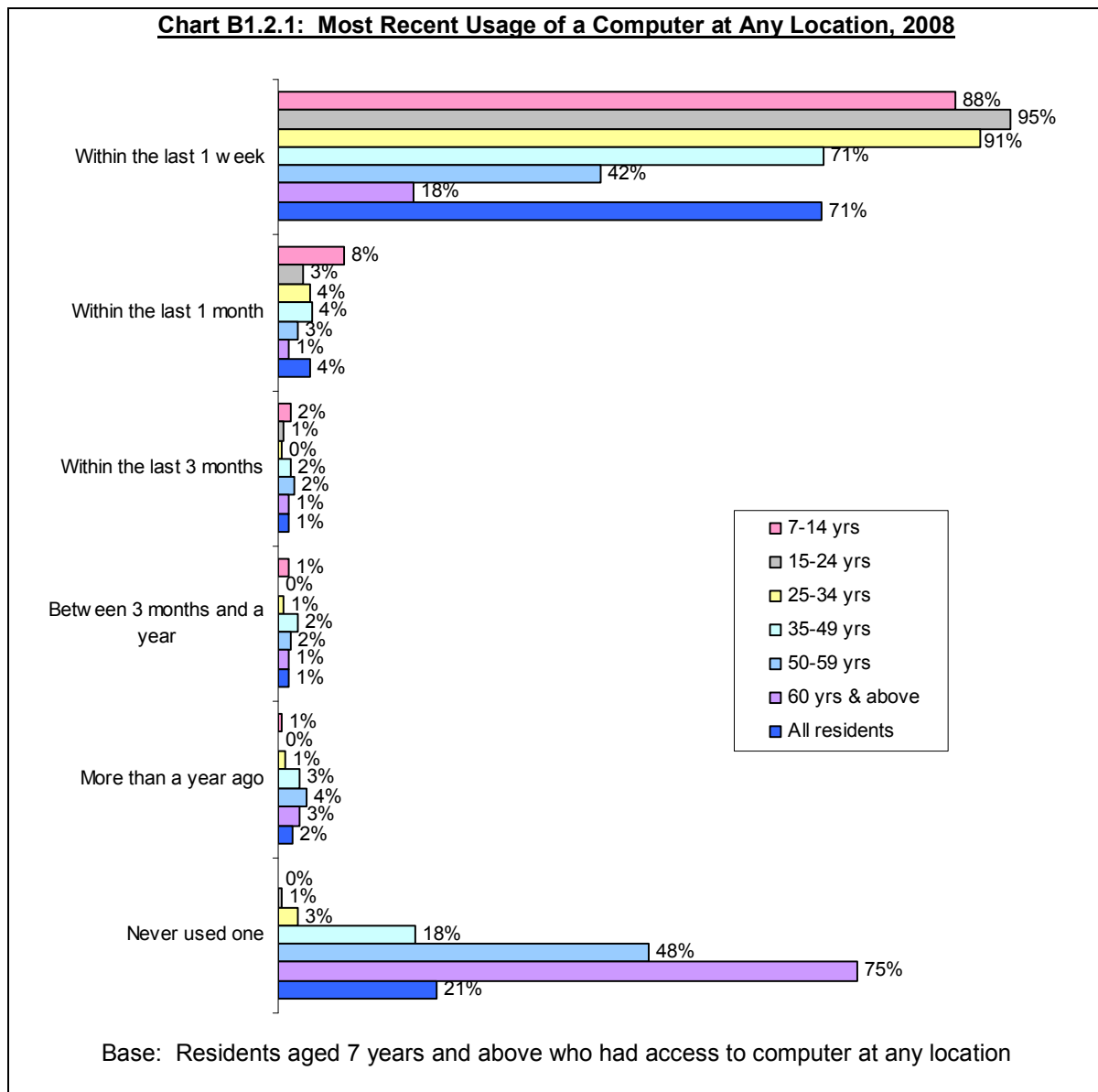
In 2008, 92% of residents aged seven years and above had access to the computer at any location, among which 99% of them had access within the last 12 months (Chart B1.1.1).



B1.2 Computer Usage

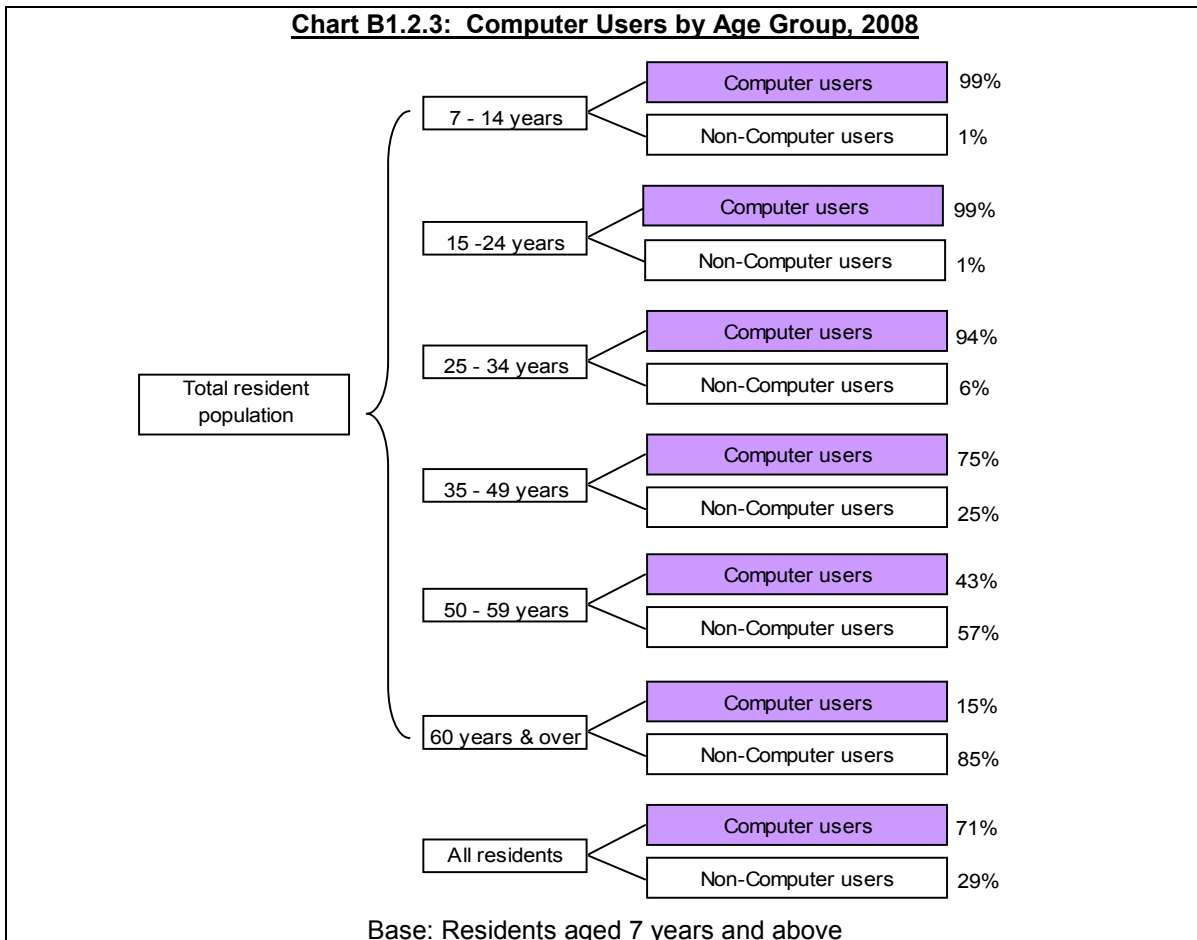
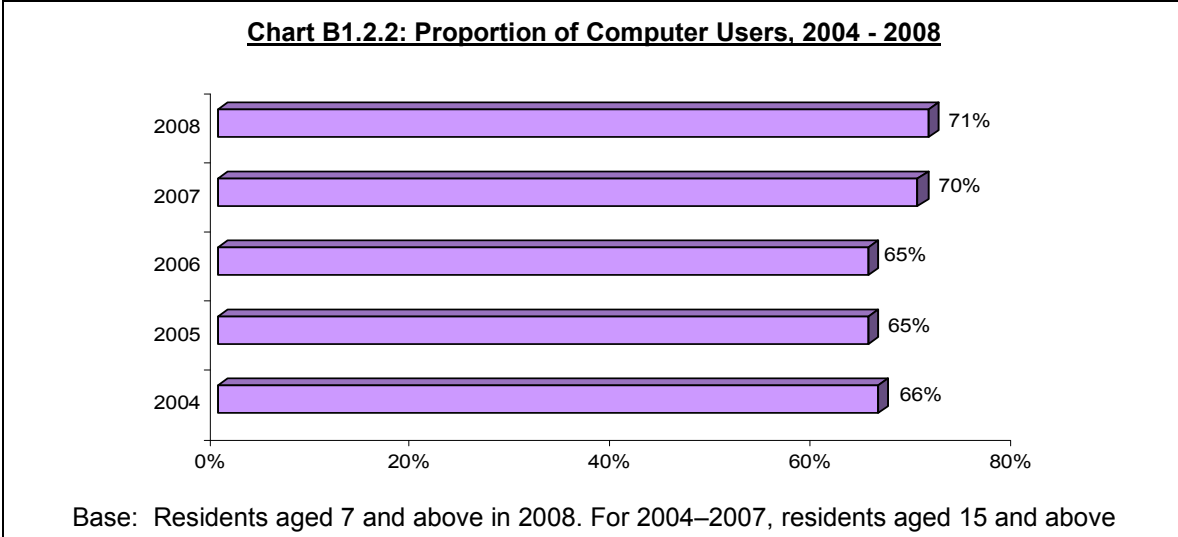
a. Most recent usage of a computer at any location

71% of residents who had access to a computer at any location used the computer within the last one week (Chart B1.2.1). Compared to the other age groups, there was a higher proportion of residents in age groups '50-59 years' and '60 years and above' who had never used a computer before even if they had access to one.



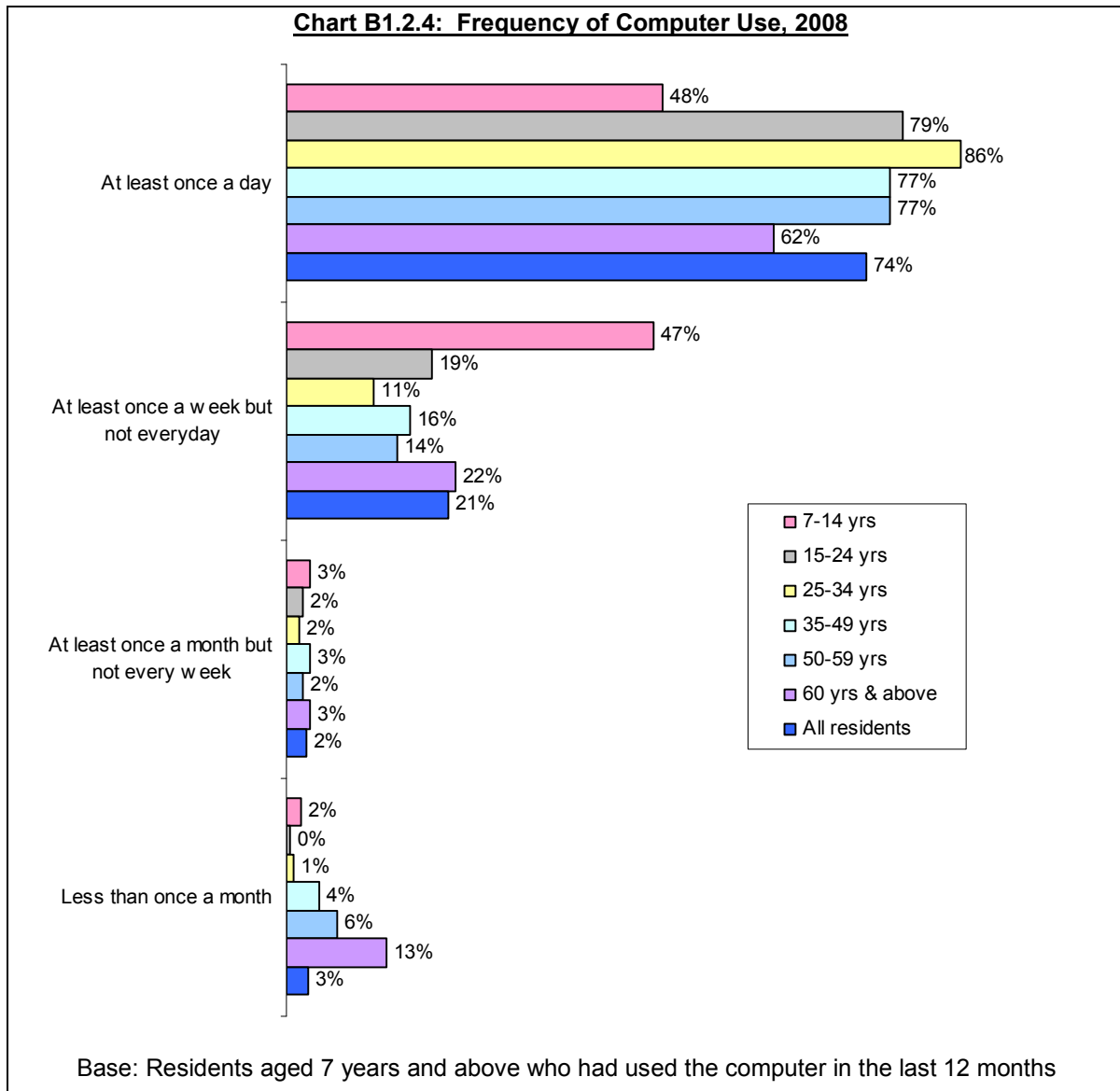
b. Computer Users by Age Group

Chart B1.2.2 shows that amongst residents aged seven years and above, 71% of them used the computer in the last 12 months (defined as computer users). Within the different age groups, the proportion of computer users was higher in the younger age groups (Chart B1.2.3).



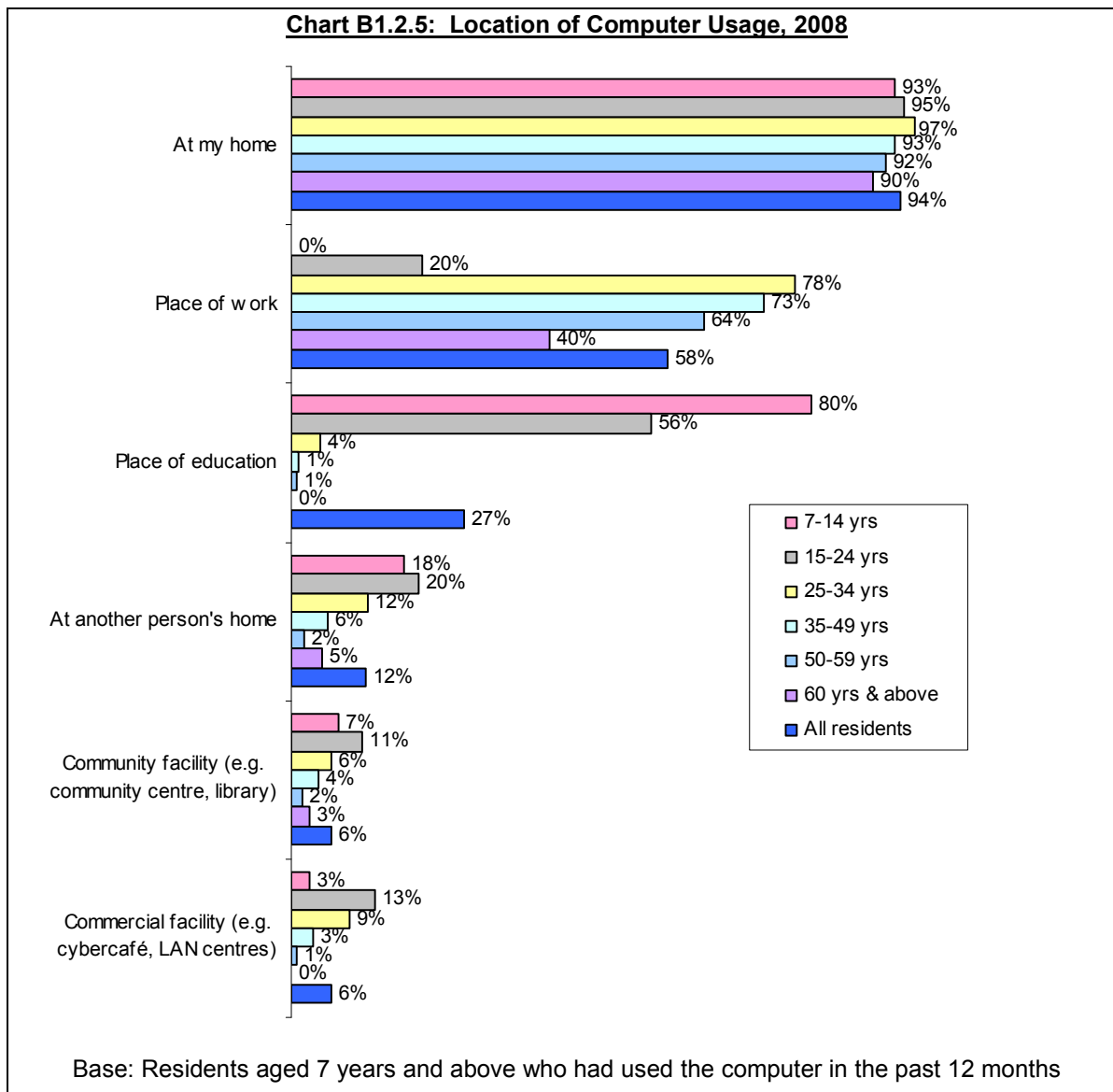
c. Frequency of Computer Use

About 74% of computer users used the computer at least once a day in 2008, followed by another 21% who had used the computer at least once a week but not everyday (Chart B1.2.4).



d. Location of Computer Use

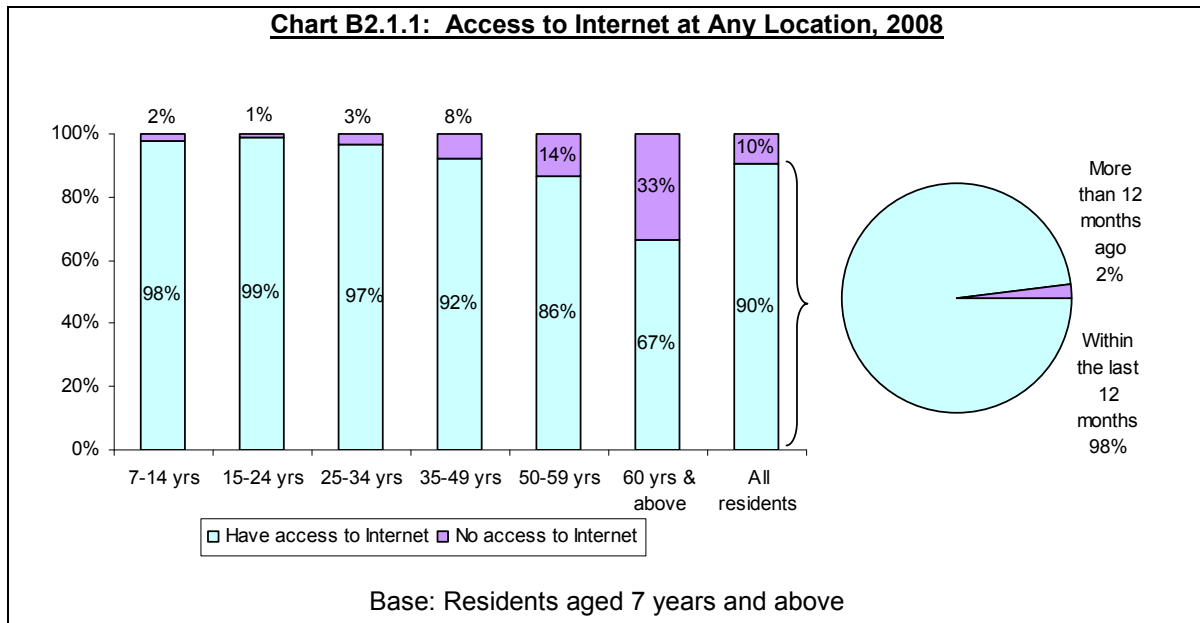
Computer usage was largely at home (94%) followed by place of work (58%) (Chart B1.2.5).



B2. INTERNET ACCESS AND USAGE BY INDIVIDUALS

B2.1 Internet Access

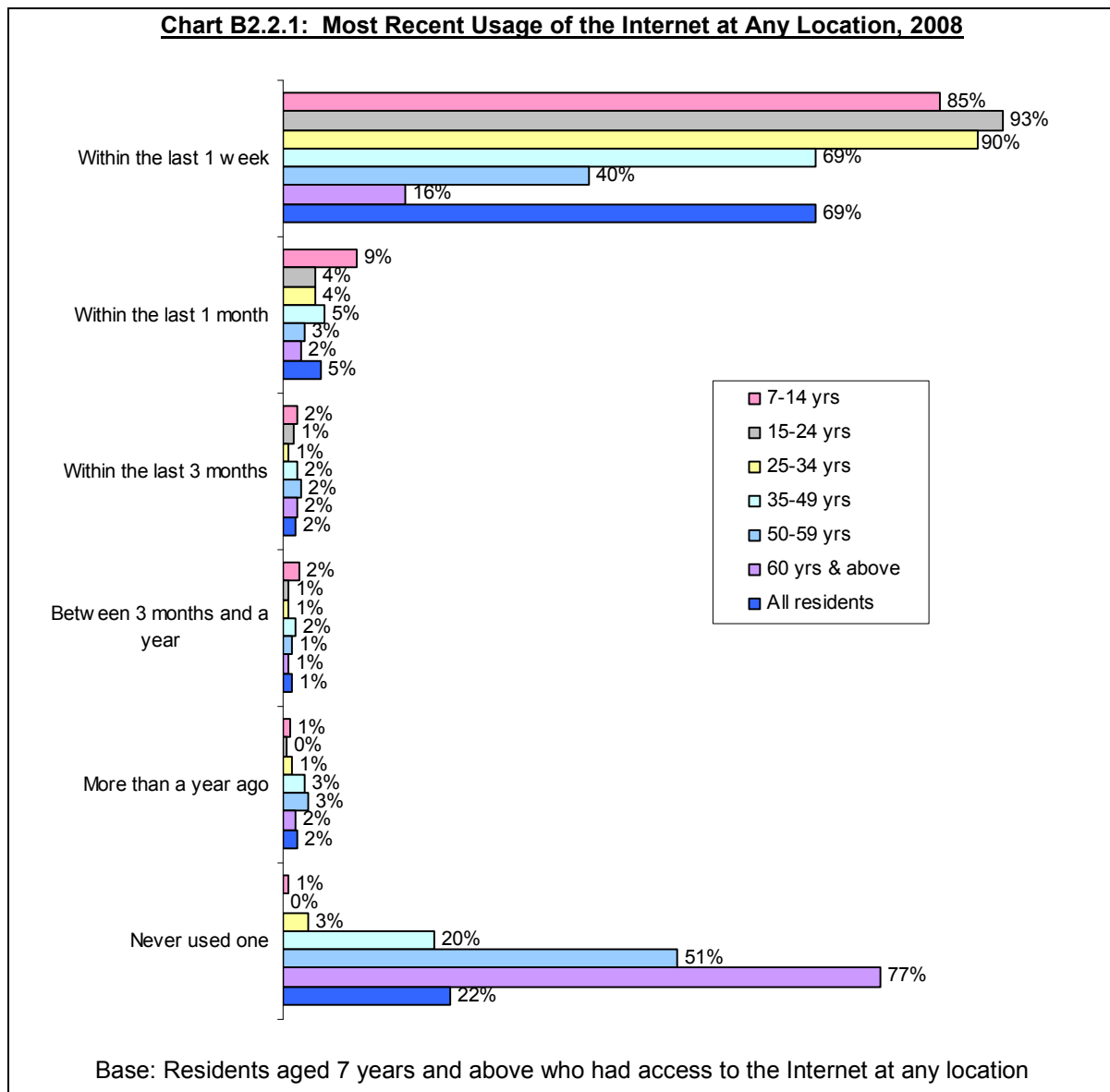
In 2008, 90% of residents aged seven and above had access to the Internet at any location using any access equipment. Out of these residents, 98% had access to the Internet in the last 12 months (Chart B2.1.1).



B2.2 Internet Usage

a. *Most recent usage of a computer at any location*

Amongst residents with access to the Internet at any location via any type of access equipment, 69% had used the Internet within the last one week (Chart B2.2.1). Even with access to the Internet, more than half of the residents in age groups “50-59 years” and “60 years and above” had not used the Internet before.



b. Main reason for not using the Internet

Table B2.2.1 shows the main reasons cited by non-Internet users for not using the Internet before. The most commonly cited reason was “Lack of knowledge, skills or confidence”.

Table B2.2.1: Main Reason for Not Using the Internet by Age Group⁴, 2008

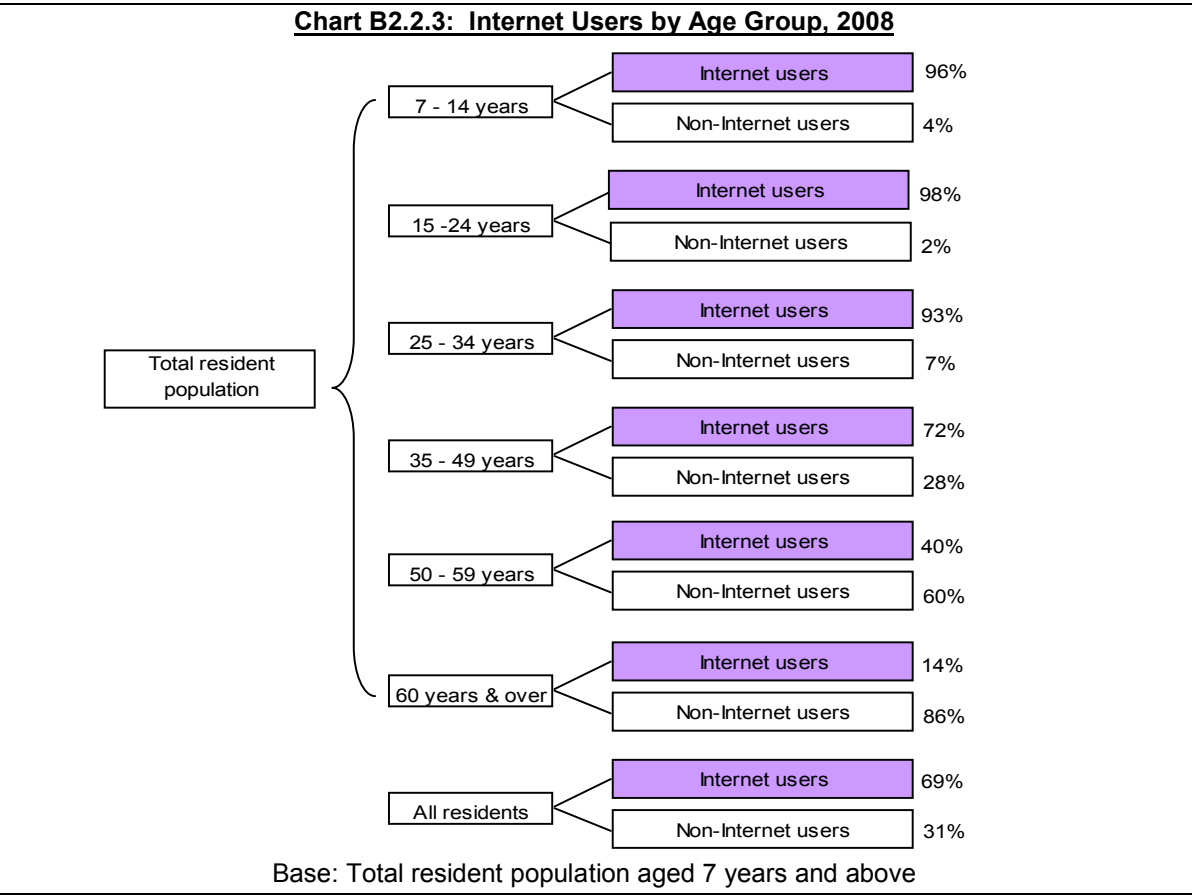
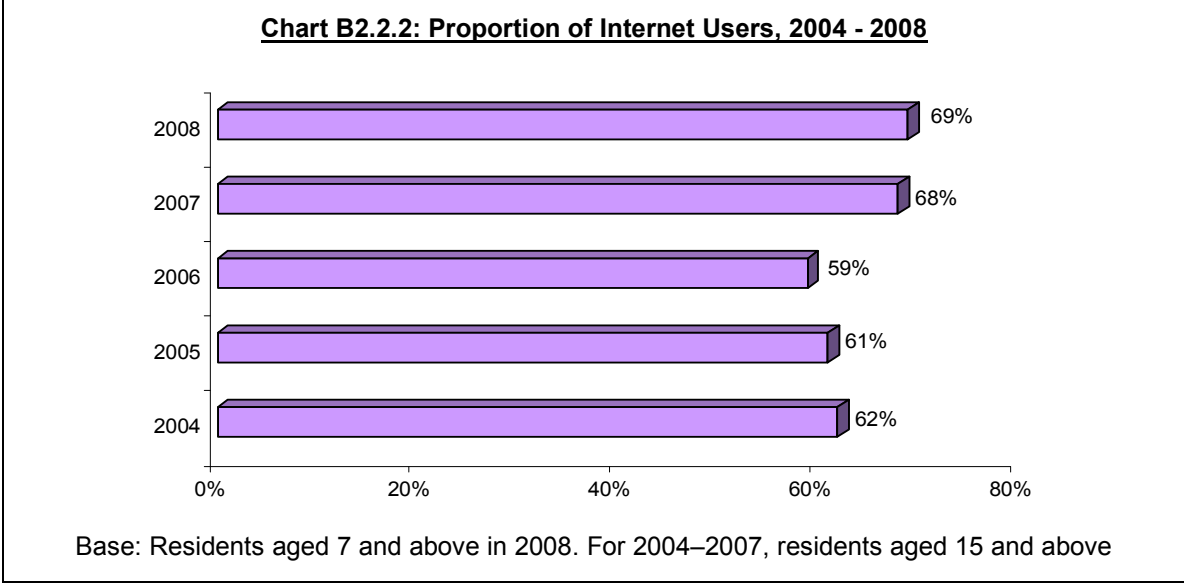
No.	Main reason for not using the Internet	35-49 yrs	50-59 yrs	60 yrs & above	All residents
1.	Lack of knowledge, skills or confidence	47%	53%	58%	52%
2.	Not interested / No need to use	51%	45%	41%	45%
3.	Equipment costs are too high	0%	0%	0%	1%
4.	Access subscription too costly	1%	0%	0%	1%
5.	Concern about exposure to inappropriate or harmful content	0%	1%	0%	1%

Base: Non-Internet users aged 7 years and above who had never used the Internet before.

⁴ Note: Data breakdown for age groups “7-14 years”, “15-24 years” and “25-34 years” are not presented individually due to due to small sample sizes.

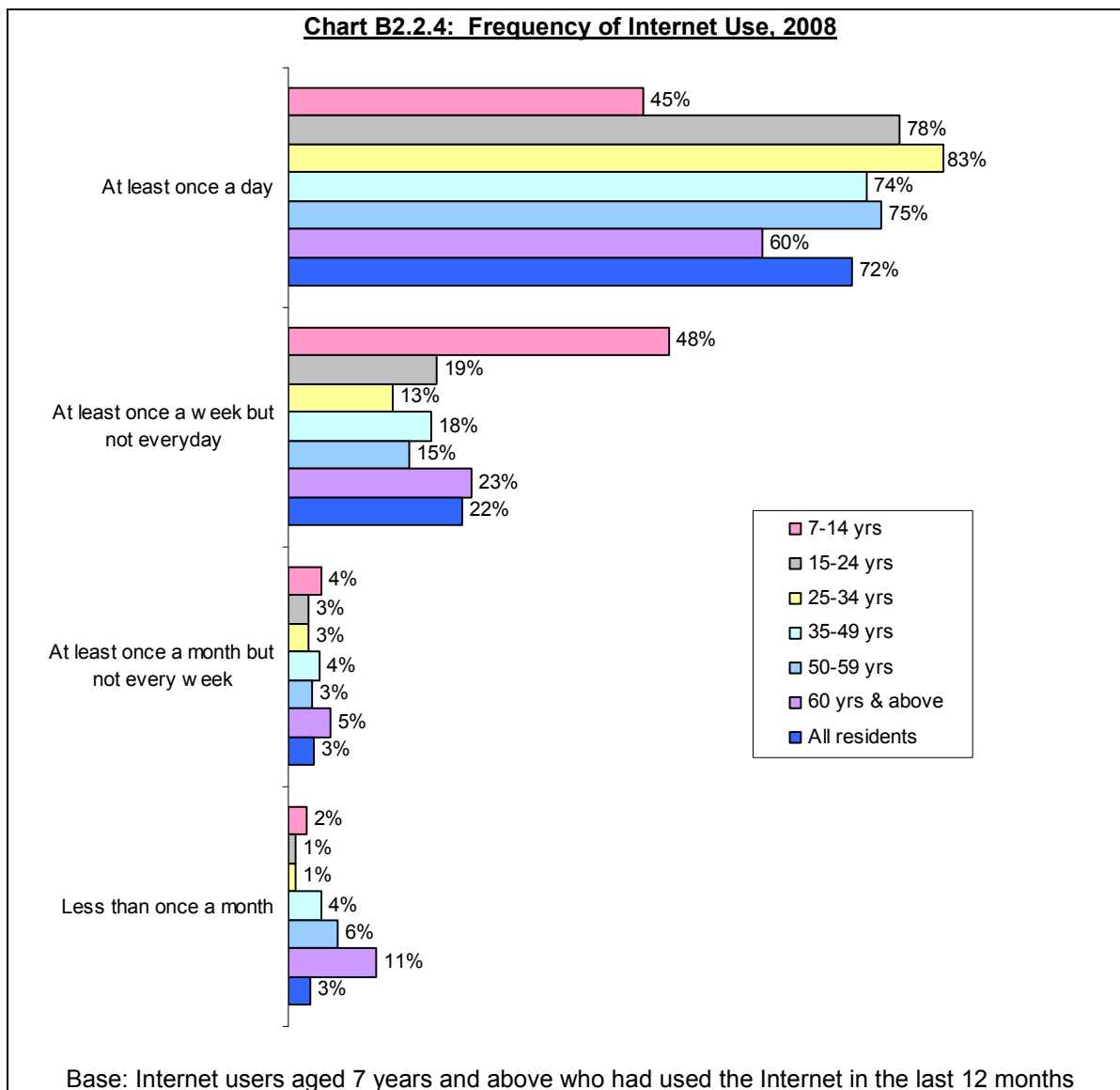
c. Internet users by age group

Chart B2.2.2 shows that 69% of residents aged seven years and above used the Internet in the last 12 months (defined as Internet users). The proportion of Internet users was the highest in age groups “7-14 years” (96%) and “15-24 years” (98%) (Chart B2.2.3).



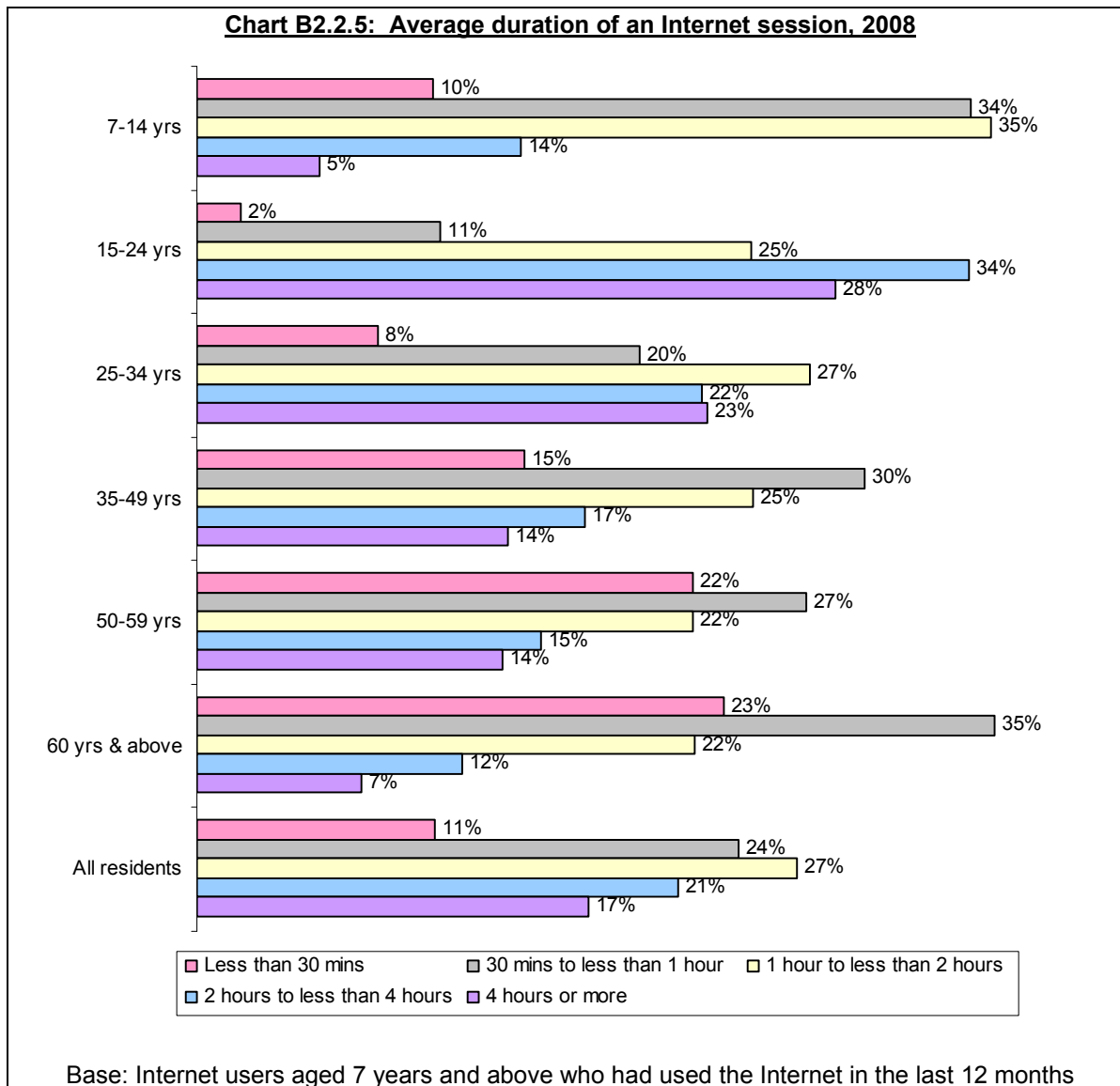
d. Frequency of Internet Use

Except for the youngest age group (“7-14 years”), at least 60% of residents in each of the other age groups used the Internet at least once a day in 2008 (Chart B2.2.4). Amongst residents aged “7-14 years”, more of them used the Internet at least once a week but not everyday (48%).



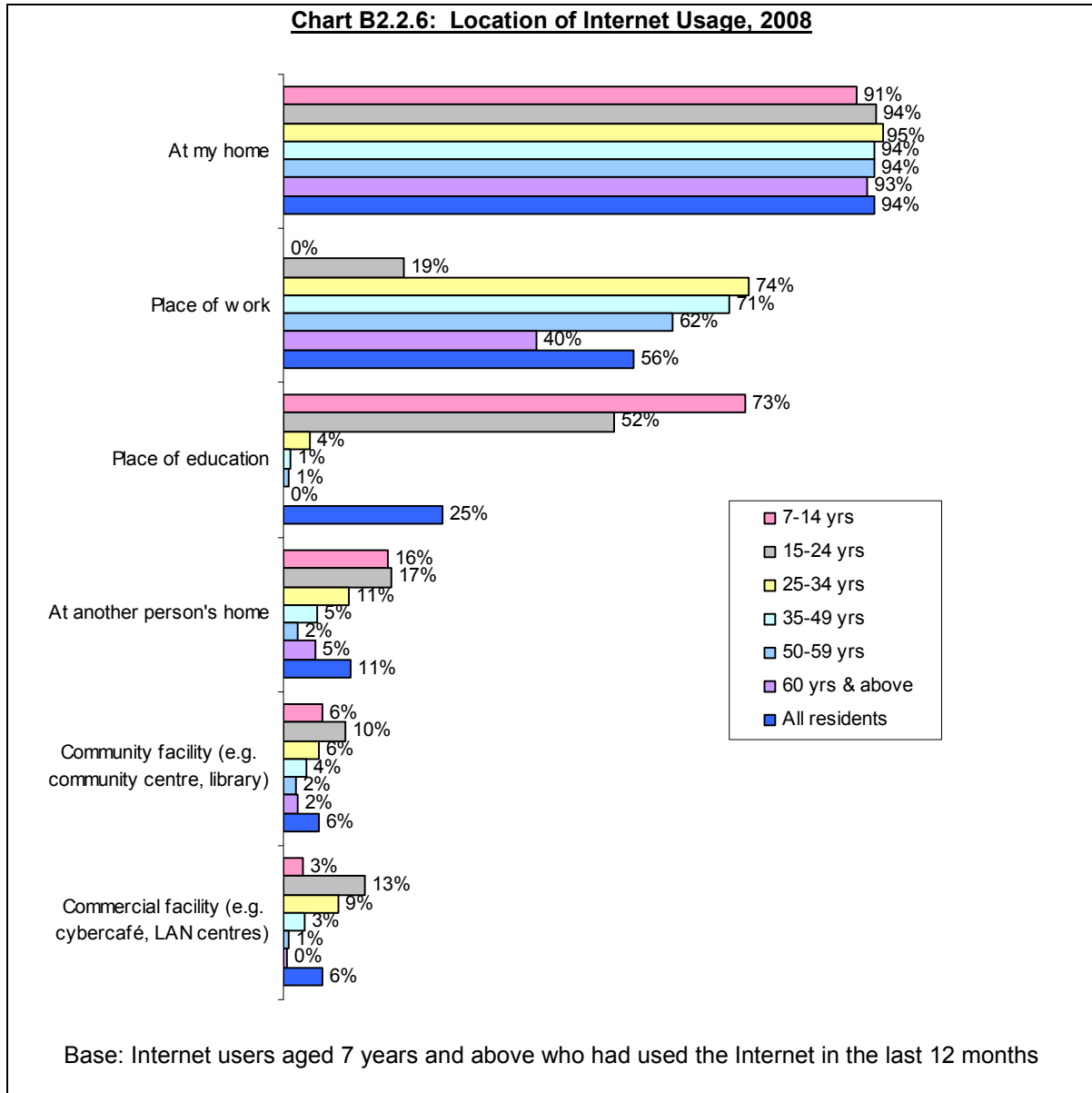
e. Duration of Internet Use

About one in two Internet users (51%) spent an average of 30 minutes to 2 hours on the Internet per Internet session followed by 38% who spent more than 2 hours on each Internet session (Chart B2.2.5).



f. Location of Internet Use

Home and place of work were the two most common places to access to the Internet (Chart B2.2.6).



B3. INTERNET APPLICATIONS AND SERVICES

a. *Primary Internet activities*⁵

Table B3.1.1 shows the different primary Internet activities engaged in by Internet users in the last 12 months. The most common Internet activity engaged in was the sending or receiving of emails followed by general web browsing.

Table B3.1.1: Primary Internet Activities Engaged by Internet Users, 2008

Primary Internet activity	7-14 yrs	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	All residents
<i>For getting information</i>	9%	36%	54%	52%	55%	52%	42%
Other information or general Web browsing	8%	23%	27%	25%	30%	26%	22%
About goods or services	1%	15%	27%	27%	29%	27%	20%
From government organisations/public authorities (from websites or via email)	0%	3%	8%	9%	9%	13%	6%
Related to health or health services	0%	1%	3%	4%	5%	11%	3%
About job opportunities	0%	4%	7%	3%	1%	0%	3%
<i>For communicating</i>	39%	80%	82%	72%	69%	64%	70%
Sending or receiving emails	25%	62%	75%	68%	70%	65%	61%
Instant messaging	14%	35%	22%	11%	8%	3%	19%
Social networks (e.g. MySpace, Friendster, WhoLivesNearYou)	11%	30%	19%	4%	3%	2%	14%
Blogging - Reading blogs that are created by others	5%	13%	6%	1%	1%	2%	6%
Chat rooms	8%	10%	7%	2%	0%	1%	6%
Telephoning over the Internet (VoIP)	0%	2%	0%	1%	2%	3%	1%
Peer-to-Peer (e.g. Yahoo!, Napster, RealNetworks)	1%	9%	8%	4%	3%	3%	5%
<i>For creating content</i>	8%	20%	12%	8%	4%	6%	11%
Creating / maintaining own blogs	5%	9%	3%	2%	1%	0%	4%
Sharing of own photos (e.g. Flickr, Snapfish)	0%	2%	2%	1%	0%	1%	1%
Forum discussion / Posting of feedback, advice (e.g. product reviews)	0%	1%	1%	1%	0%	2%	1%
Creating / maintaining own website	1%	1%	1%	1%	1%	0%	1%
Broadcasting of self-produced videos (e.g. Youtube, Google Video)	3%	10%	8%	5%	2%	3%	6%
Publishing of own writing / articles (e.g. Wikipedia, Fanfiction.net)	0%	0%	0%	0%	1%	0%	0%
Sharing of self-created music	0%	1%	1%	0%	0%	0%	0%

⁵ A primary Internet activity refers to an activity that is engaged in during all or most of the Internet sessions.

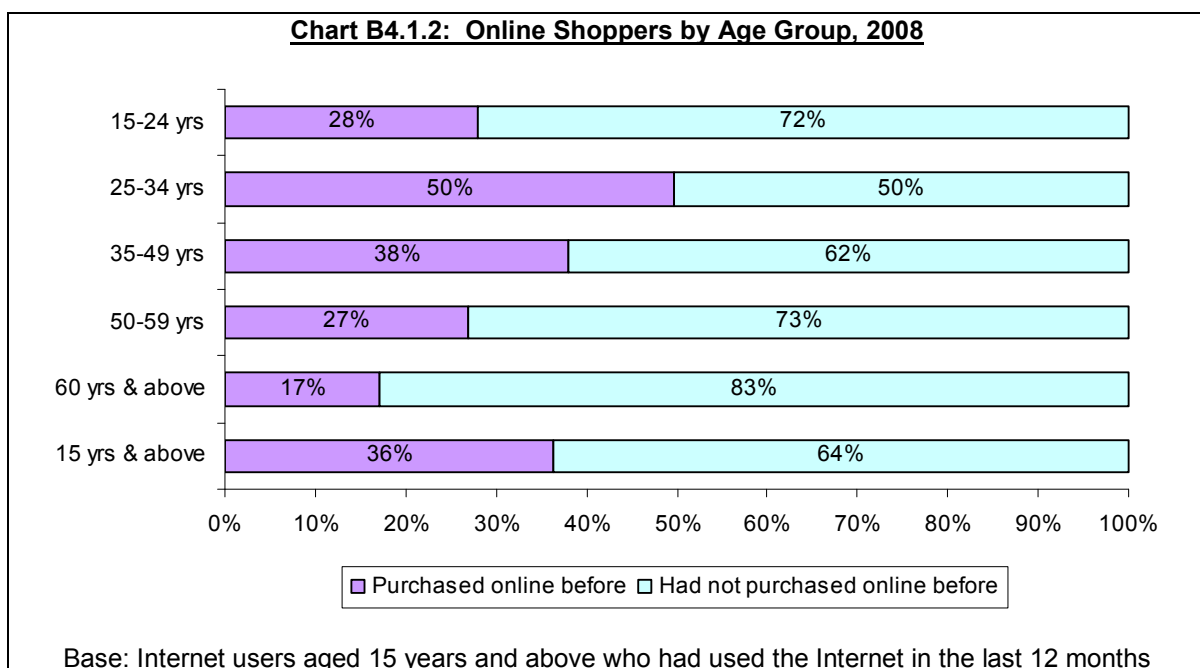
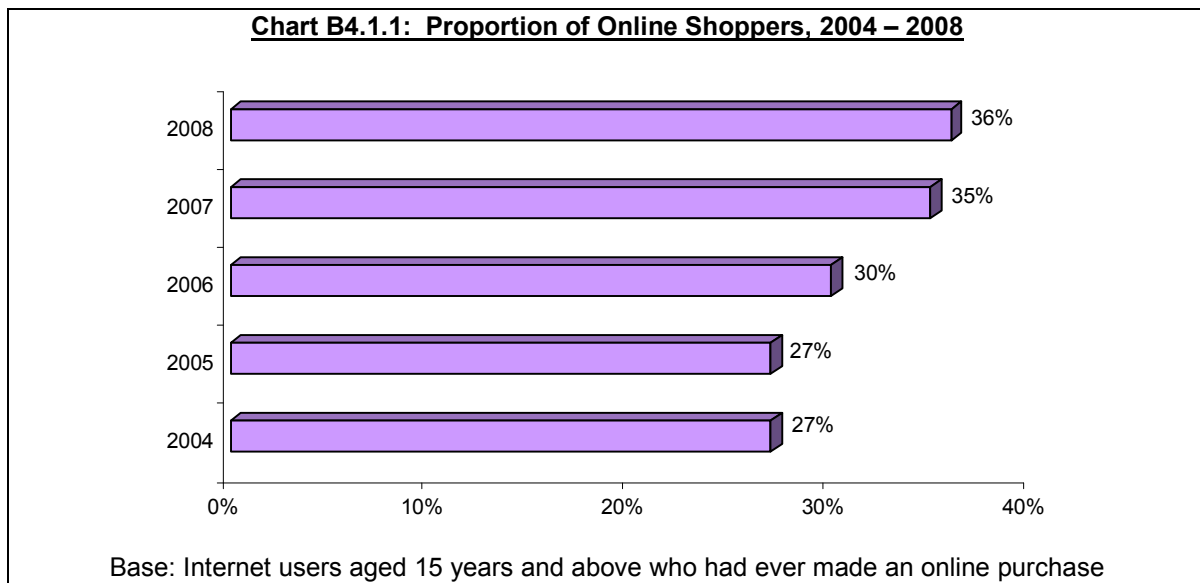
Primary Internet activity	7-14 yrs	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	All residents
For online banking	0%	7%	23%	21%	24%	20%	15%
Checking account information	0%	3%	20%	18%	20%	12%	13%
Payment of bills	0%	6%	11%	12%	11%	16%	8%
Transferring of funds to other bank accounts	0%	3%	11%	10%	10%	6%	7%
For purchasing or ordering goods or services	0%	2%	2%	2%	3%	1%	2%
For dealing with government organisations / public authorities	0%	2%	11%	10%	10%	9%	7%
Making online payments	0%	0%	5%	3%	2%	6%	2%
Downloading or requesting forms	0%	2%	6%	6%	7%	4%	4%
Completing or lodging forms online (e.g. income tax filing)	0%	1%	3%	5%	5%	3%	3%
For leisure activities	58%	45%	34%	32%	25%	30%	39%
Downloading or listening to online music	10%	14%	6%	3%	2%	2%	7%
Reading online newspapers	1%	7%	19%	20%	15%	21%	13%
Interactive online gaming	29%	19%	6%	3%	2%	1%	11%
Playing or downloading computer or video games	26%	16%	6%	3%	3%	2%	10%
Downloading or watching movies, short films or images	4%	15%	7%	4%	4%	2%	7%
Reading online magazines	0%	3%	6%	5%	5%	3%	4%
Listening to Web radio	1%	2%	1%	1%	1%	0%	1%
Watching Web television	1%	2%	1%	1%	1%	2%	1%
Downloading or uploading other media (e.g. digital photographs)	0%	2%	1%	1%	1%	0%	1%
Reading electronic books	0%	1%	1%	1%	1%	0%	1%
For education or learning activities	30%	18%	6%	6%	2%	0%	12%
For remote access	26%	20%	27%	22%	17%	17%	23%
Access documents/applications/collaborative tools from the office server (for work)	N.A.	4%	25%	22%	17%	17%	17%
Access documents/applications/collaborative tools from the school server (for school work)	26%	16%	2%	1%	0%	0%	9%
For other activities	1%	6%	7%	6%	8%	3%	6%
Downloading software, patches or upgrades	1%	5%	6%	6%	8%	3%	5%
Applying for jobs / Uploading of resumes	0%	2%	3%	1%	0%	0%	1%

Base: Internet users aged 7 years and above who had used the Internet in the last 12 months

B4. ONLINE SHOPPING

a. Online shoppers by age group

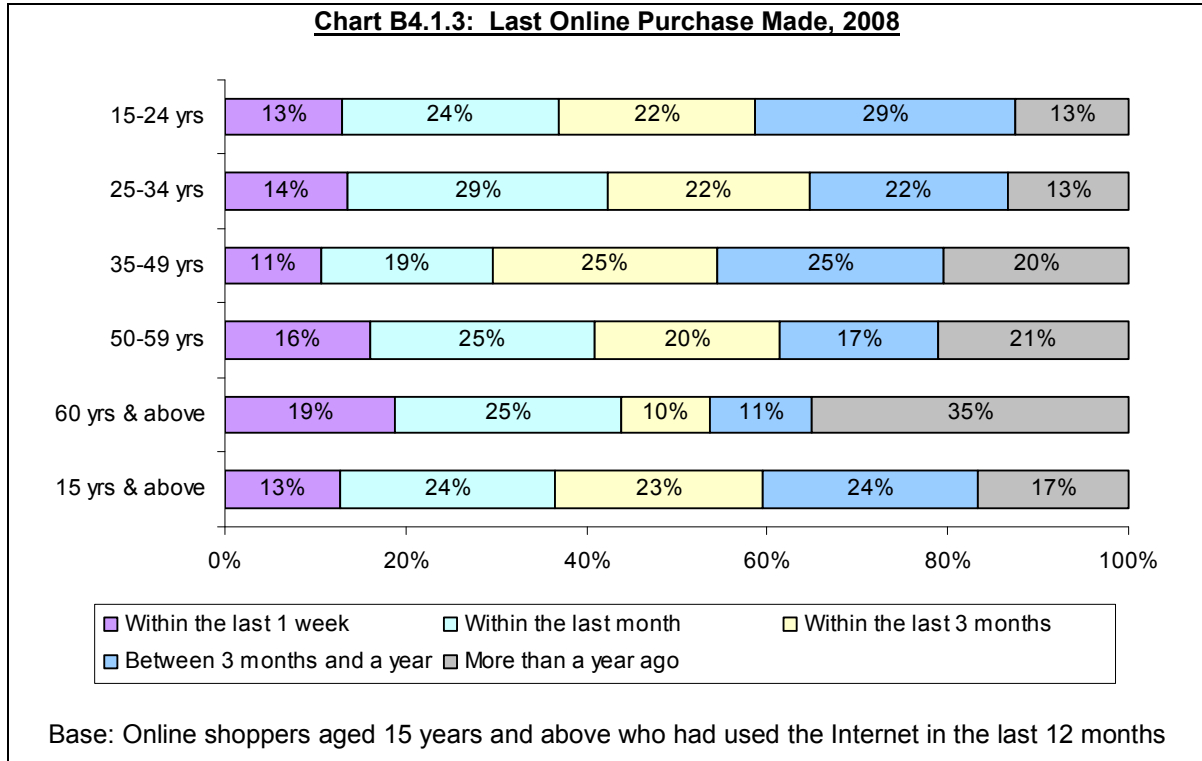
The proportion of online shoppers⁶ increased slightly to 36% in 2008 (Chart B4.1.1). Half of the Internet users aged 25-34 years had made an online purchase before, the highest proportion compared to the other age groups (Chart B4.1.2).



⁶ An online shopper is a resident who had bought or ordered goods or services over the Internet before.

b. Last online purchase made

13% of online shoppers made purchases online in the last one week while 24% had done so in the last month (Chart B4.1.3).



c. Items purchased online in the last 12 months

The two most popular items bought online for private purposes in the last 12 months were travel products (38%) and clothing, footwear, sporting goods or accessories (33%) (Table B4.1.1).

Table B4.1.1: Goods or Services Purchased over the internet, 2008

Items	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	15 yrs & above
Travel products	18%	39%	48%	35%	67%	38%
Clothing, footwear, sporting goods or accessories	56%	36%	21%	12%	0%	33%
Ticket for entertainment event	29%	33%	33%	24%	4%	31%
Books, Magazines, newspaper (in physical form)	7%	11%	15%	12%	7%	11%
Books, Magazines, newspaper (in digital form)	4%	5%	11%	5%	9%	7%
Computer software (in digital form)	4%	5%	6%	13%	20%	6%
Computer equipment or parts	4%	4%	6%	9%	43%	5%
Food or groceries	3%	7%	5%	3%	6%	5%
IT and telecomm services	4%	5%	5%	7%	16%	5%
Others	2%	6%	5%	8%	0%	5%
Financial products	1%	3%	5%	3%	22%	4%
Music products (in physical form)	7%	2%	4%	1%	0%	4%
Computer or video games (in digital form)	3%	1%	3%	4%	0%	3%
Photographic, telecommunication or optical equipment	4%	3%	3%	2%	0%	3%
Booking(s) for sports facility	2%	1%	1%	3%	0%	2%
Computer or video games (in physical form)	3%	1%	2%	0%	0%	2%
Movies, short films or images (in digital form)	1%	2%	2%	3%	0%	2%
Movies, short films or images (in physical form)	2%	2%	3%	0%	0%	2%
Music products (in digital form)	2%	1%	3%	2%	9%	2%
Health related / facial products	1%	2%	3%	6%	0%	2%
Computer software (in physical form)	2%	1%	0%	3%	14%	1%
Electronic products	1%	1%	2%	0%	0%	1%
Hampers / flowers	0%	1%	1%	3%	0%	1%

Base: Online shoppers aged 15 years and above who had made at least one online purchase in the last 12 months

d. Payment methods for online purchases

Most of the online shoppers (78%) made payment for their goods or services purchased online via credit cards (Table B4.1.2).

Table B4.1.2: Payment Methods for Goods or Services Purchased Online, 2008

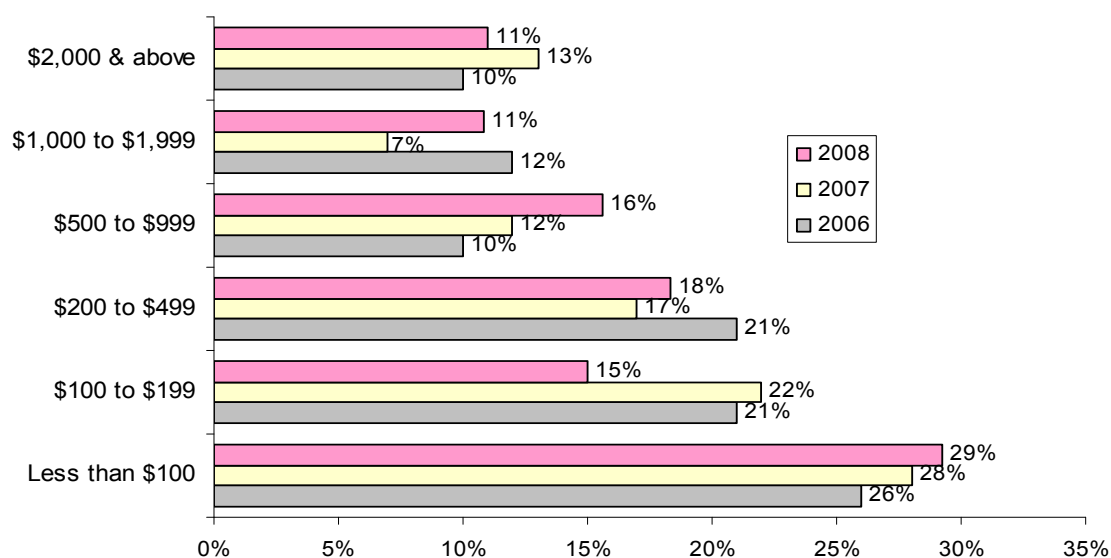
Payment Method	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	15 yrs & above
Credit cards	46%	83%	92%	88%	79%	78%
Direct debit / pay using bank account	41%	13%	5%	7%	15%	16%
eNETS virtual account / PayPal	11%	10%	7%	4%	20%	9%
Cash on delivery	12%	8%	4%	7%	9%	7%
Payment using mobile phone or via the telecommunication bills	0%	0%	0%	2%	0%	0%

Base: Online shoppers aged 15 years and above who had made at least one online purchase in the last 12 months

e. Value of online purchases

A higher proportion of online shoppers spent between \$200 and \$1,999 for their online purchases in 2008 compared to 2007 (Chart B4.1.4).

Chart B4.1.4: Value of Online Purchases, 2006 – 2008



Base: Online shoppers aged 15 years and above who had made an online purchase in the last 12 months

f. Main reason for not shopping online

The most commonly cited reason for not shopping online was “Prefer to shop in person or deal personally with a service provider” (31%) followed by “Lack of interest” (29%) (Table B4.1.3).

Table B4.1.3: Main Reasons for Not Shopping Online, 2008

Main reasons	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	15 yrs & above
Prefer to shop in person or deal personally with a service provider	26%	31%	34%	32%	34%	31%
Lack of interest	28%	28%	28%	33%	31%	29%
Privacy concerns	9%	11%	13%	9%	16%	11%
Security concerns	10%	13%	11%	8%	1%	10%
Trust concerns	11%	9%	8%	11%	10%	10%
Lack of confidence, knowledge or skills	4%	3%	3%	6%	5%	4%
Lack of means to make online payments	9%	3%	2%	1%	1%	4%
Inconvenient payment methods	2%	1%	0%	0%	1%	1%

Base: Internet users aged 15 years and above who had never made an online purchase

B5. USAGE OF PORTABLE INFOCOMM EQUIPMENT

a. *Portable infocomm equipment used*

More residents are using portable equipment with notable increase in the use of laptops/notebooks and mobile phones in 2008 (Chart B5.1.1). Chart B5.1.2 presents the usage by age group.

Chart B5.1.1: Portable Equipment Used, 2007 – 2008

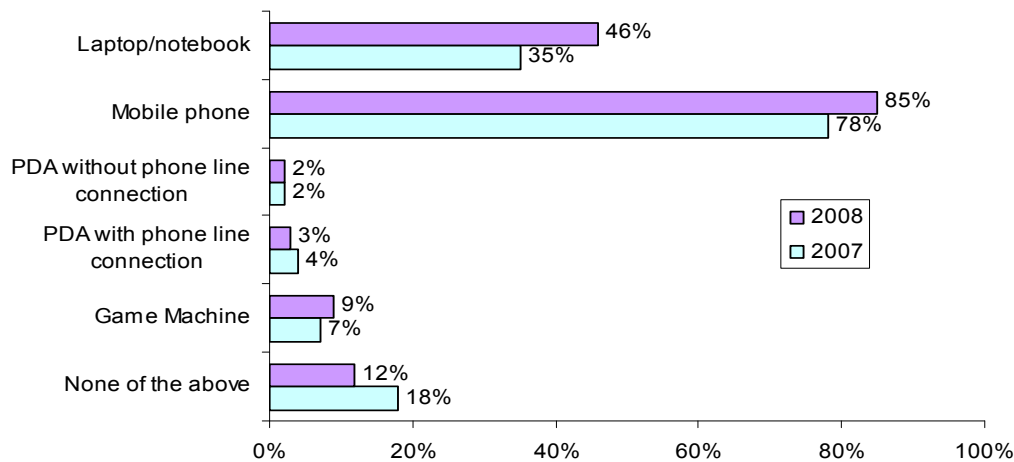
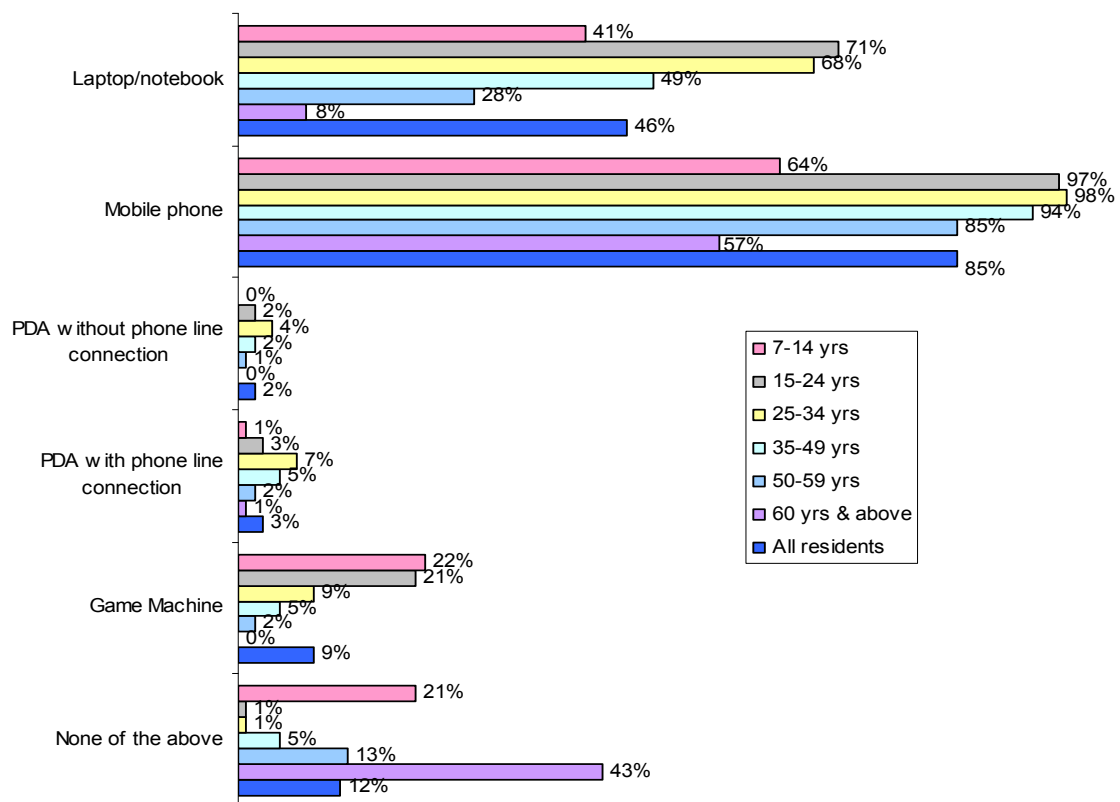


Chart B5.1.2: Portable Equipment Used by Age Group, 2008

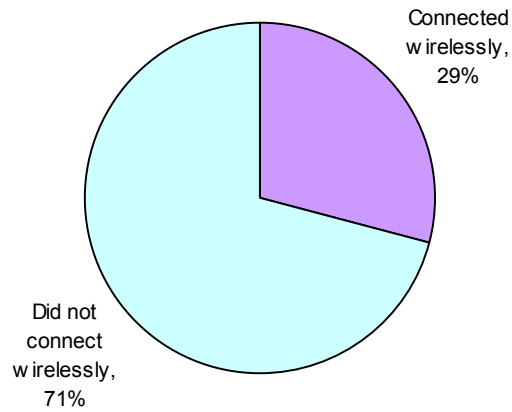


Base: Residents aged 7 years and above

b. Wireless connection on portable infocomm equipment

Amongst residents who had used any portable infocomm equipment in 2008, 29% of them connected to the Internet wirelessly using their portable equipment (Chart B5.1.3).

Chart B5.1.3: Portable Equipment Used to Connect Wirelessly, 2008



Base: Residents aged 7 and above who had used any portable equipment in the last 12 months

c. Activities engaged in on portable equipment

“Sending or receiving SMS” was the most common activity engaged in on portable infocomm equipment (Table B5.1.1).

Table B5.1.1: Activities Engaged in on Portable Infocomm Equipment, 2008

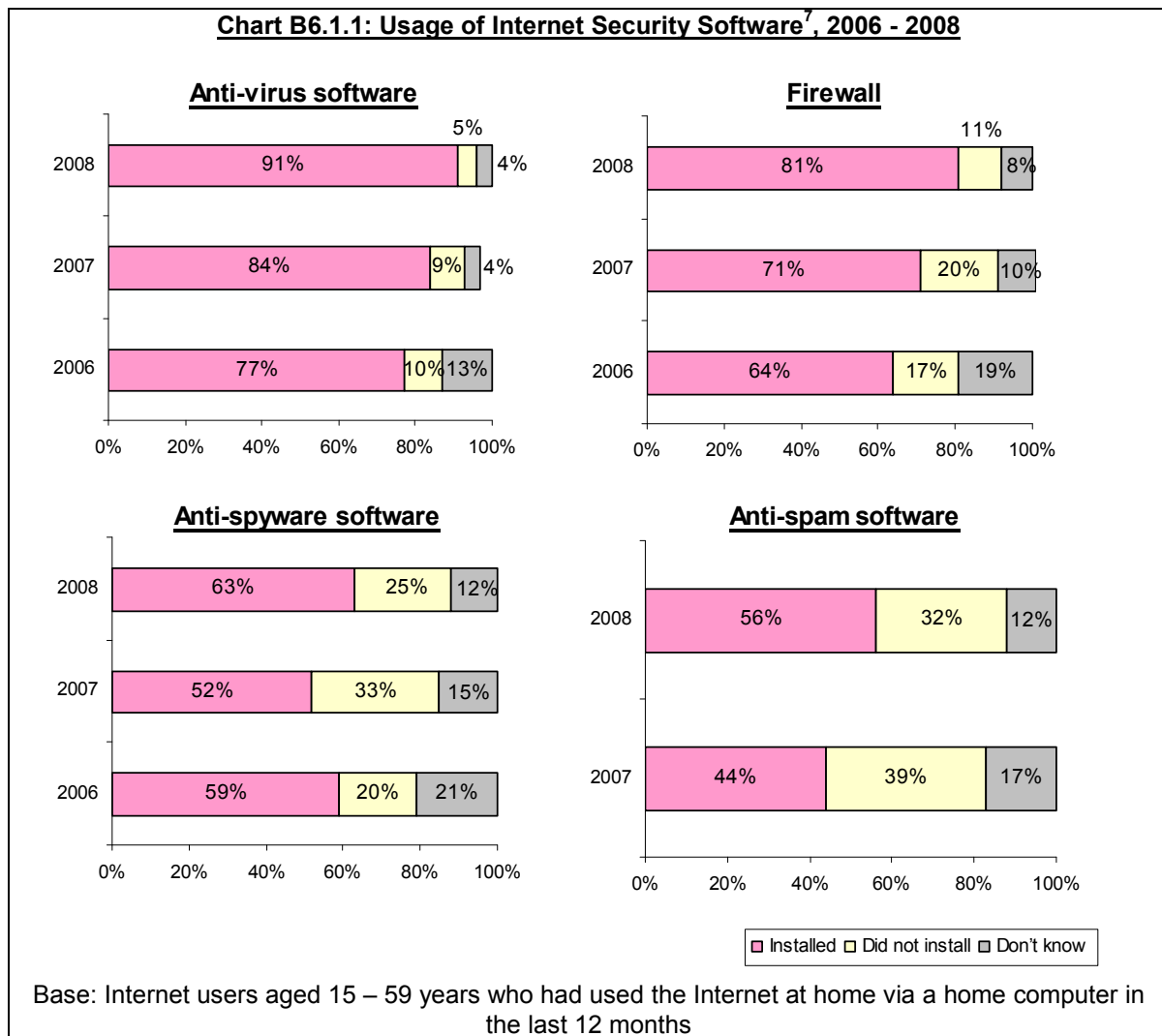
Activity	7-14 yrs	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	All residents
Sending or receiving SMS	69%	98%	96%	88%	65%	40%	82%
Email	22%	56%	58%	44%	27%	13%	41%
Web browsing	2%	22%	29%	24%	14%	6%	19%
Playing or downloading computer or video games	55%	37%	16%	8%	4%	0%	19%
Instant messaging	11%	37%	23%	13%	5%	3%	17%
Social networks (e.g. MySpace, Friendster, WhoLivesNearYou)	13%	33%	20%	6%	1%	0%	13%
Reading online newspapers	3%	11%	17%	16%	8%	5%	12%
Mobile banking	0%	5%	17%	14%	8%	3%	10%
Downloading or listening to online music	10%	22%	10%	5%	2%	1%	9%
Paying for goods or services	0%	7%	18%	11%	6%	3%	9%
Online Government services	0%	3%	11%	13%	6%	7%	8%
Downloading or watching movies, short films or images	6%	16%	9%	3%	2%	0%	6%
Blogging - Reading blogs created by others	5%	17%	8%	2%	1%	1%	6%
Peer-to-Peer (e.g. Yahoo!, Napster, RealNetworks)	2%	12%	10%	6%	2%	1%	6%
Reading online magazines	2%	3%	6%	5%	2%	1%	4%
Chat rooms	4%	12%	5%	2%	1%	0%	4%
Sending or receiving digital photograph(s)	3%	6%	5%	3%	1%	1%	4%
Sending or receiving MMS	2%	5%	5%	3%	1%	1%	3%
Creating / maintaining own blogs	3%	7%	4%	1%	0%	0%	3%
VoIP (e.g. Skype)	0%	5%	5%	3%	2%	1%	3%
Listening to Web radio	2%	5%	3%	1%	1%	0%	2%
Downloading or uploading other media (e.g. digital photographs)	1%	5%	2%	1%	1%	0%	2%
Watching Web television	2%	4%	2%	1%	0%	0%	2%
Forum discussion / Posting of feedback, advice (e.g. product reviews)	0%	4%	2%	1%	0%	0%	2%
Downloading ringtones, mobile games	2%	2%	1%	0%	0%	0%	1%
Reading electronic books	1%	2%	2%	1%	0%	0%	1%

Base: Residents aged 7 and above who had used any portable equipment in the last 12 months

B6. HOME INTERNET SECURITY

a. Usage of Internet security software at home

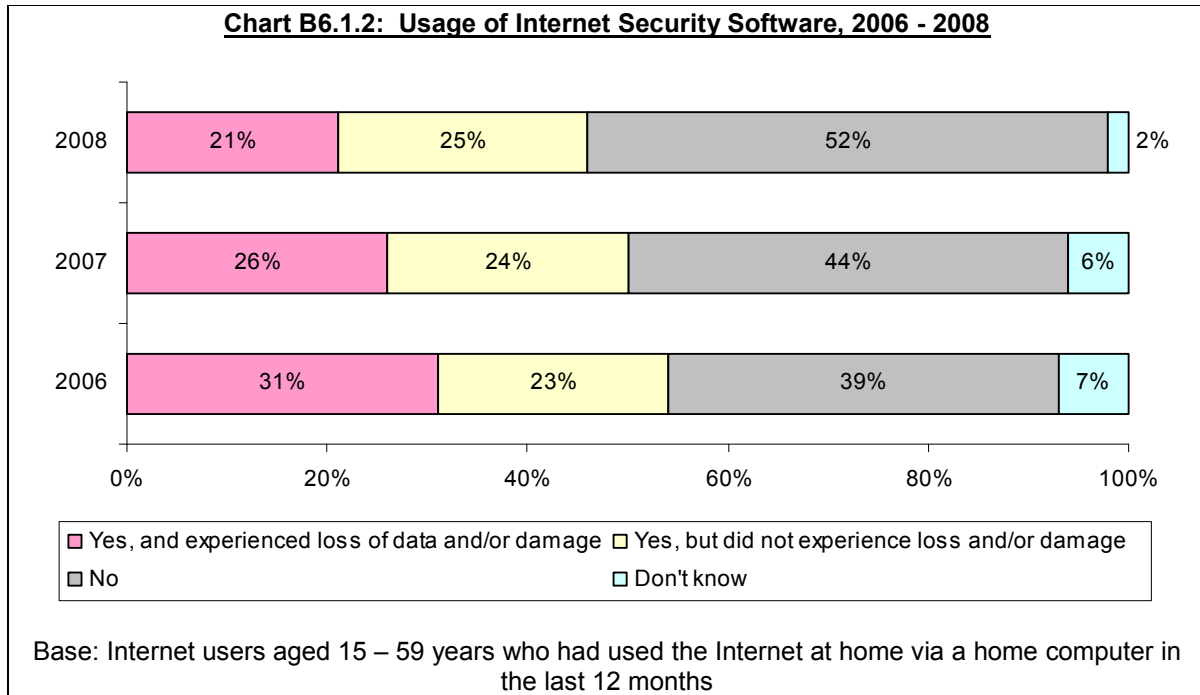
Chart B6.1.1 shows an increase in the usage of Internet security software (firewall, anti-virus, anti-spyware and anti-spam software) in 2008 compared to the previous two years.



⁷ The question on usage of anti-spam software was not included in the 2006 survey.

b. Experience of virus attacks

In tandem with the increased use of Internet security software, Internet users at home were less susceptible to virus attacks; 52% of home Internet users did not experience virus attacks compared to 44% a year ago (Chart B6.1.2).



ANNEX A: GLOSSARY OF TERMS AND DEFINITION

Terms	Definition
ADSL	Asymmetric Digital Subscriber Line (ADSL), a form of DSL, a data communications technology that enables faster data transmission over copper telephone lines than a conventional modem can provide.
Blogging	A blog is an online diary is a personal diary or journal that is published on the world wide web on a personal website or a diary hosting website. Blogging is the act of writing or reading one's blog.
Broadband	Internet connection speeds equal to, or greater than <u>256</u> kbps (kilobits per second).
Cable modem	A modem designed to operate over <u>cable TV</u> lines and enables Internet access.
Chat room	A chat room or chatroom is an online site in which people can chat in real time.
Computer	"Computer" includes desktops and laptops unless otherwise stated.
Computer access at home	Computer access at home refers to access to home computer owned by household and/or computer owned by employer but brought home by family member for computer access at home.
Computer ownership	Computer ownership refers to home computer owned by household.
Computer user	Computer user is a user who had used the computer at any location in the last 12 months.
Dial-up	Dial-up access is a form of data access (mainly used for Internet access) in which the client uses a modem to connect a computer to a telephone line and dials into an Internet service provider's (ISP) node to establish a modem-to-modem link, which is then routed to the Internet.
Forum	An Internet forum is a facility on the World Wide Web for holding discussions, or the web application software used to provide the facility. A forum is essentially a website composed of a number of member-written threads. Each thread entails a discussion or conversation in the form of a series of member-written posts. These threads remain saved on the forum website for future reading indefinitely or until deletion by a moderator.
Household	Household refers to a group of two or more persons living together in the same house and sharing common food or other arrangements for essential living. It also includes a person living alone or a person living with others but having his own food arrangements. Although persons may be living in the same house, they may not be members of the same household.
Instant Messaging	A popular use of the Internet in which Internet users send messages to each other in real time. Examples of instant messaging services include MSN Messenger, Yahoo! Messenger, etc.
Internet-enabled mobile phone	Mobile phones that can be used to connect to the Internet and browse the World Wide Web.
Internet User	Internet user is a user who had used the Internet at any location in the last 12 months.
ISDN	Integrated Services Digital Network (ISDN), an international communications standard for sending voice, video, and data over digital telephone lines or normal telephone wires. This standard has been largely superseded by DSL technology.
Narrowband	Internet connection speeds of lower than <u>256</u> kbps (kilobits per second).
PDA	Personal Digital Assistant (PDA) is a handheld device that combines computing, telephone/fax, Internet and networking features. A typical PDA can function as a cellular phone, fax sender, Web browser and personal organizer.

Terms	Definition
Peer-to-peer	A peer-to-peer (or P2P) computer network is a network that relies primarily on the computing power and bandwidth of the participants in the network rather than concentrating it in a relatively low number of servers. P2P networks are typically used for connecting nodes via largely ad hoc connections.
Private housing	Private housing refers to landed properties, private condominiums and apartments.
Portable	The term means mobility i.e. equipment that can be brought along with the individuals while they are on the move.
Public housing	Public housing refers to HDB flats.
Residents	Refer to Singapore citizens and permanent residents.
School-going children	School-going children refer to current students who are enrolled between primary education and pre-university/junior college education level.
Social networks	In Internet social networks, an initial set of founders sends out messages inviting members of their own personal networks to join the site. New members repeat the process, growing the total number of members and links in the network. Sites then offer features such as automatic address book updates, viewable profiles, the ability to form new links through "introduction services," and other forms of online social connections.
Skype	Skype is a proprietary peer-to-peer Internet telephony (VoIP) network. It competes against existing open VoIP protocols such as SIP, IAX, and H.323.
VoIP	Voice over Internet Protocol (VoIP), also called IP Telephony, Internet telephony, Broadband telephony, Broadband Phone and Voice over Broadband, is the routing of voice conversations over the Internet or through any other IP-based network.
Web TV	A web TV is a specially-adapted television set designed to allow internet connection, or more commonly, a set-top box (i.e. cable decoder) which connects to a standard TV for the same purpose. The typical setup includes a web browser, cord or wireless (i.e. bluetooth) keyboard and connection to the Internet (i.e. using modem, cable and so on).
Web Radio	Web radio (or Internet radio) is a broadcasting service transmitted via the Internet. Not every web "radio station" has a corresponding traditional radio station. Many web radio stations are completely independent from traditional ("terrestrial") radio stations and broadcast only on the Internet.
Wireless Hotspots	Wireless Hotspots are locations with public wireless access points where one can connect your mobile computers (such as a laptop or a PDA) to the Internet, using standard WLAN (Wi-Fi) technology.