

ANNUAL SURVEY ON INFOCOMM USAGE IN HOUSEHOLDS AND BY INDIVIDUALS FOR 2009



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Introduction

The 2009 Annual Survey on Infocomm Usage in Households and by Individuals (“Survey”) is the 14th in its series conducted by IDA since the 1990s.

Survey Objectives

The objective of the Survey is to assess the extent of infocomm adoption and usage in Singapore resident households¹ and residents².

Methodology

Data was collected from 5,000 resident households and 5,000 residents via face-to-face interviews conducted from October 2009 to April 2010. 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 Singapore Citizens and Permanent Residents.

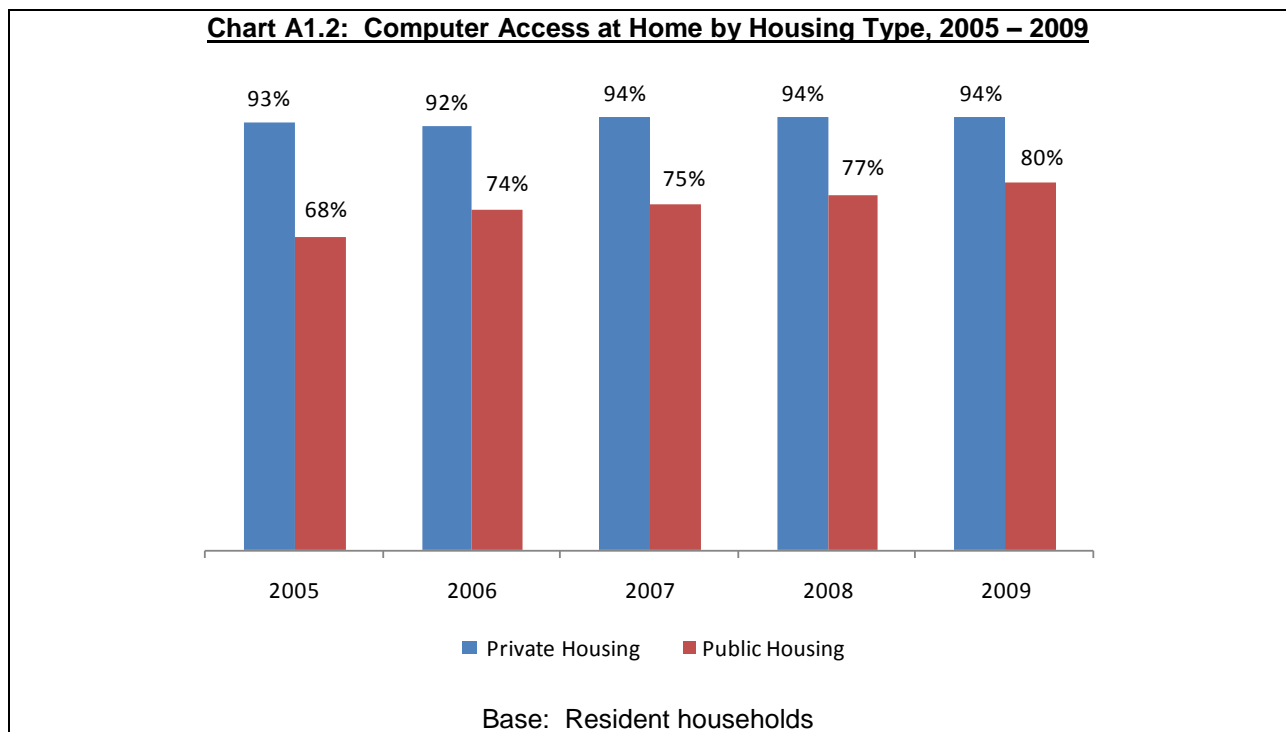
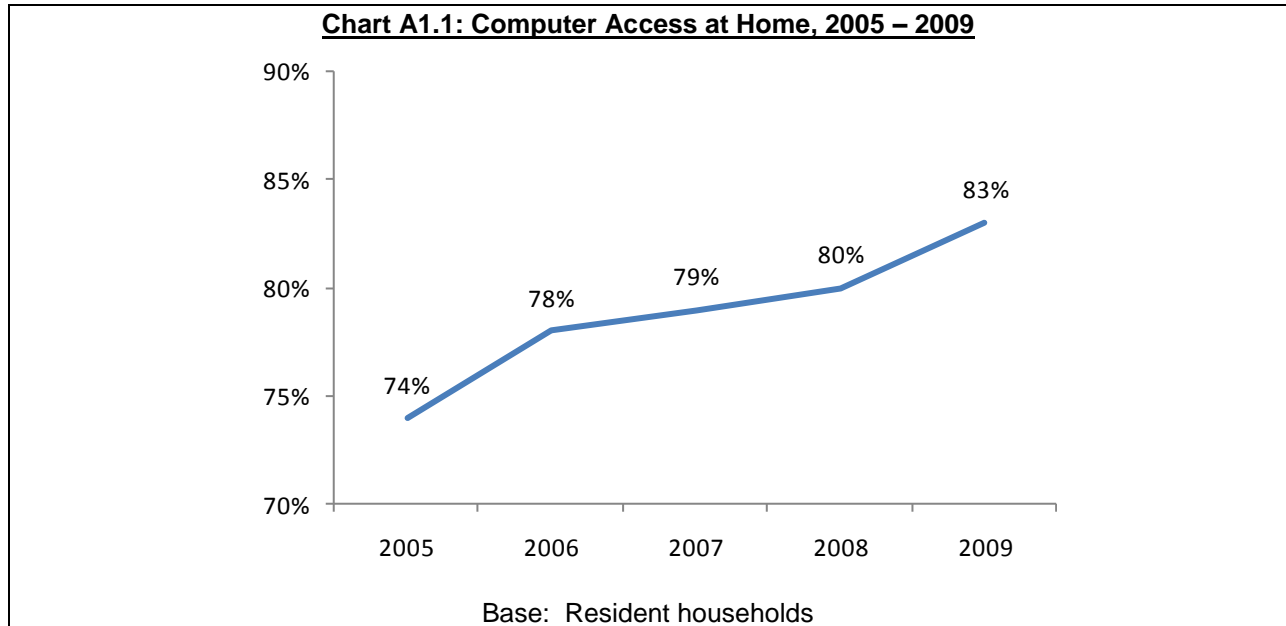
PART A:
INFOCOMM ACCESS IN HOUSEHOLDS

A1. COMPUTER ACCESS WITHIN HOUSEHOLDS

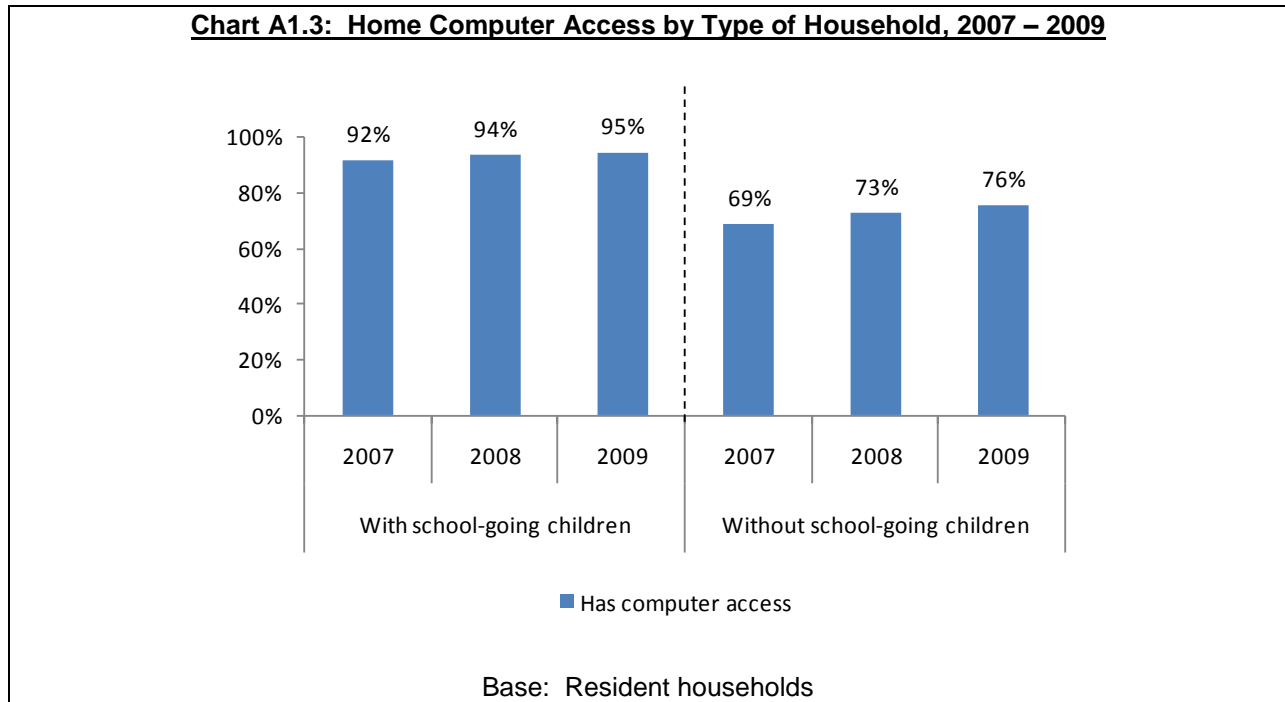
A1.1 Home Computer Access

Access to at least one computer at home

In 2009, about 83% of resident households had access to at least one computer at home (Chart A1.1). Home computer access remained higher for households in private housing than for households in public housing (Chart A1.2).



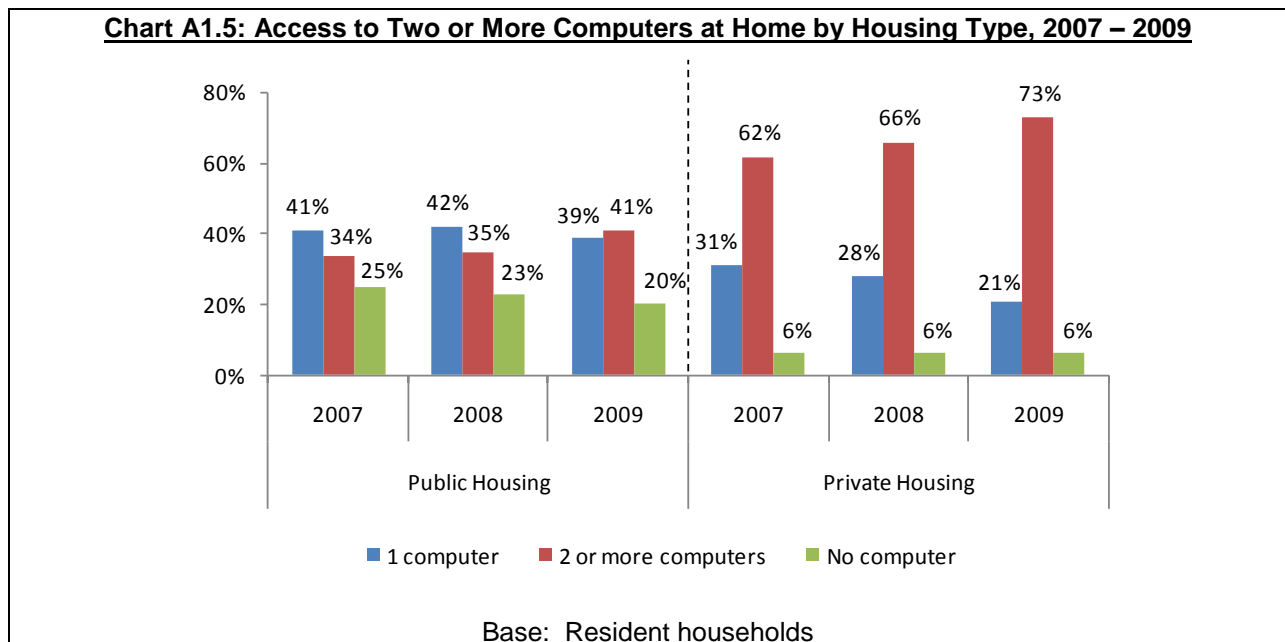
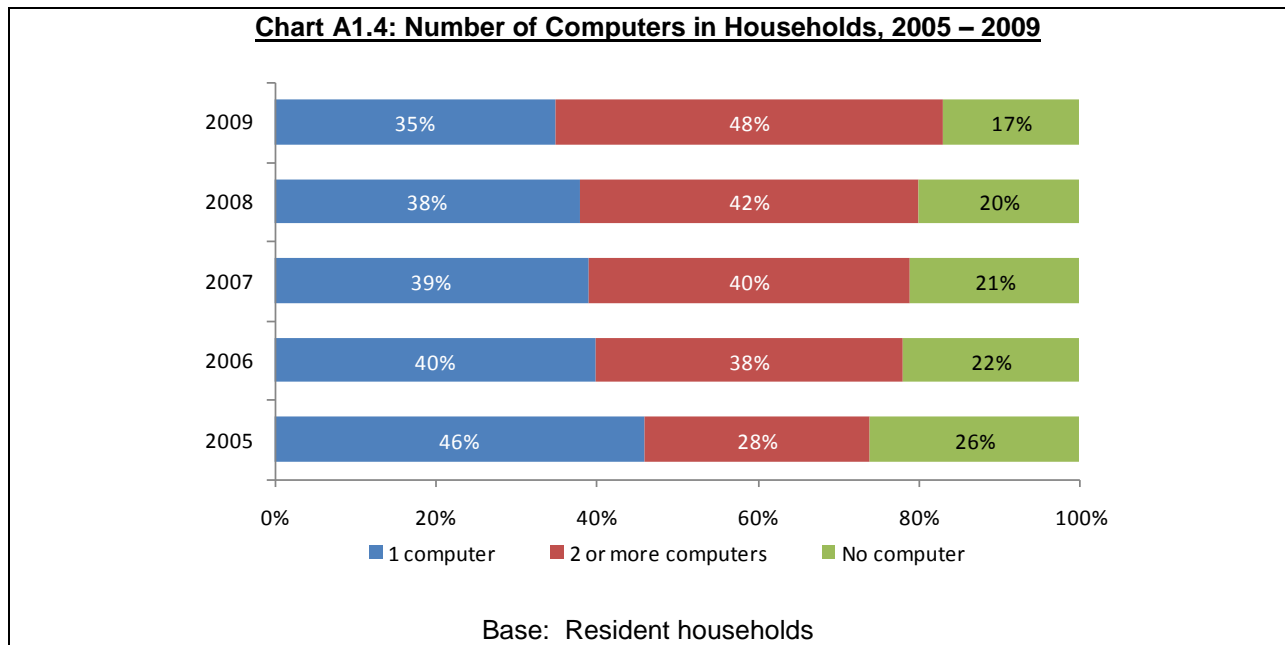
Amongst households with school-going children, 95% had computer access at home (Chart A1.3).



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

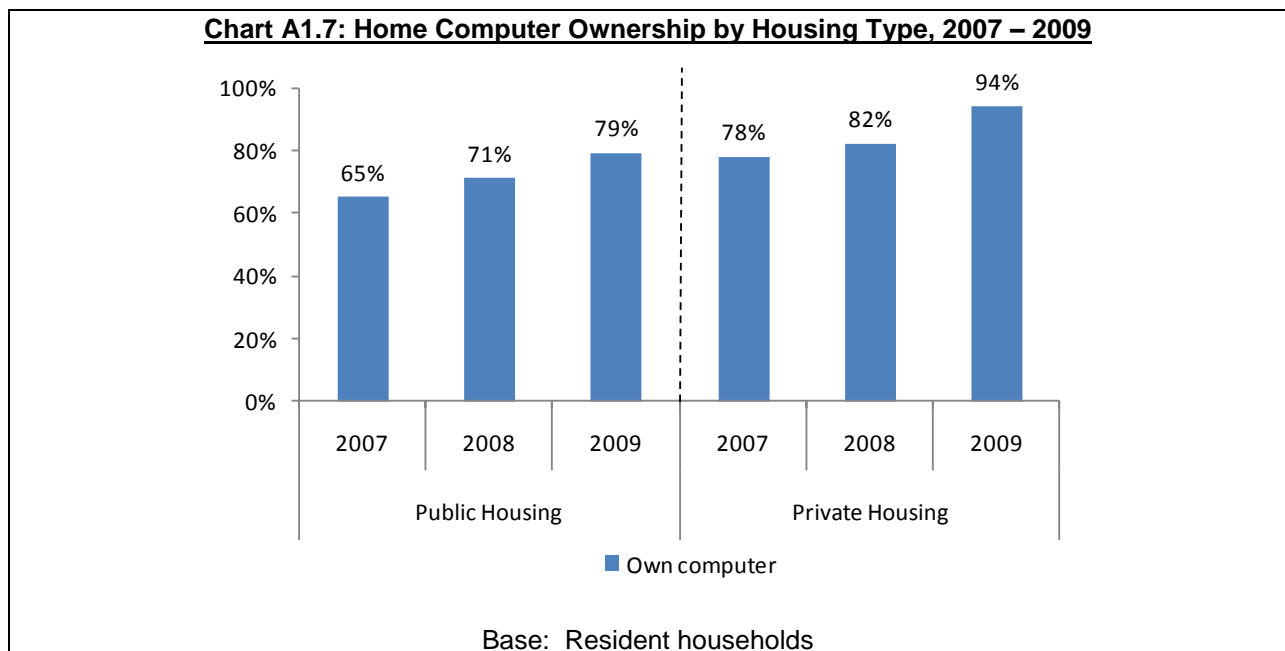
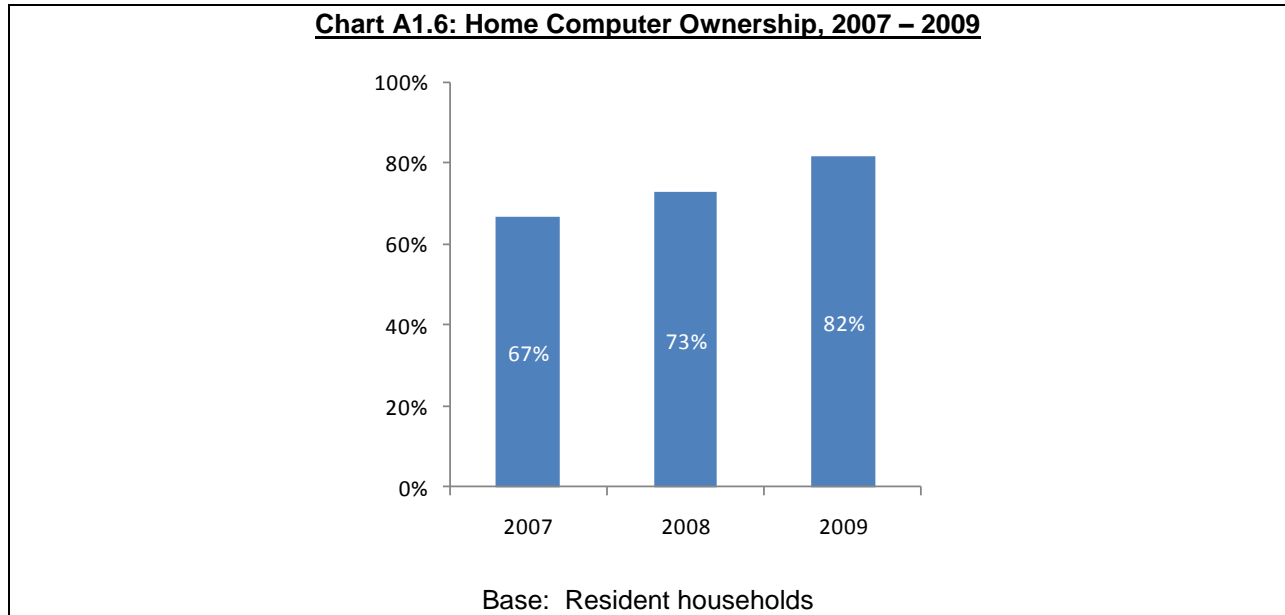
Access to two or more computers at home

An increasing proportion of households have access to two or more computers at home ([Chart A1.4](#)); this is more prevalent in households in private housing than in households in public housing ([Chart A1.5](#)).



A1.3 Home Computer Ownership

About 82% of households owned at least one computer at home in 2009 ([Chart A1.6](#)). Similar to the trend for computer access, a larger proportion of households in private housing owned at least one computer as compared to households in public housing ([Chart A1.7](#)).



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

The top two reasons listed by households for not having access to a computer at home remained “No need to use” and “Lack of skills” (Table A1.1).

Table A1.1: Main Reason for Not Having Access to a Computer at Home, 2005 – 2009

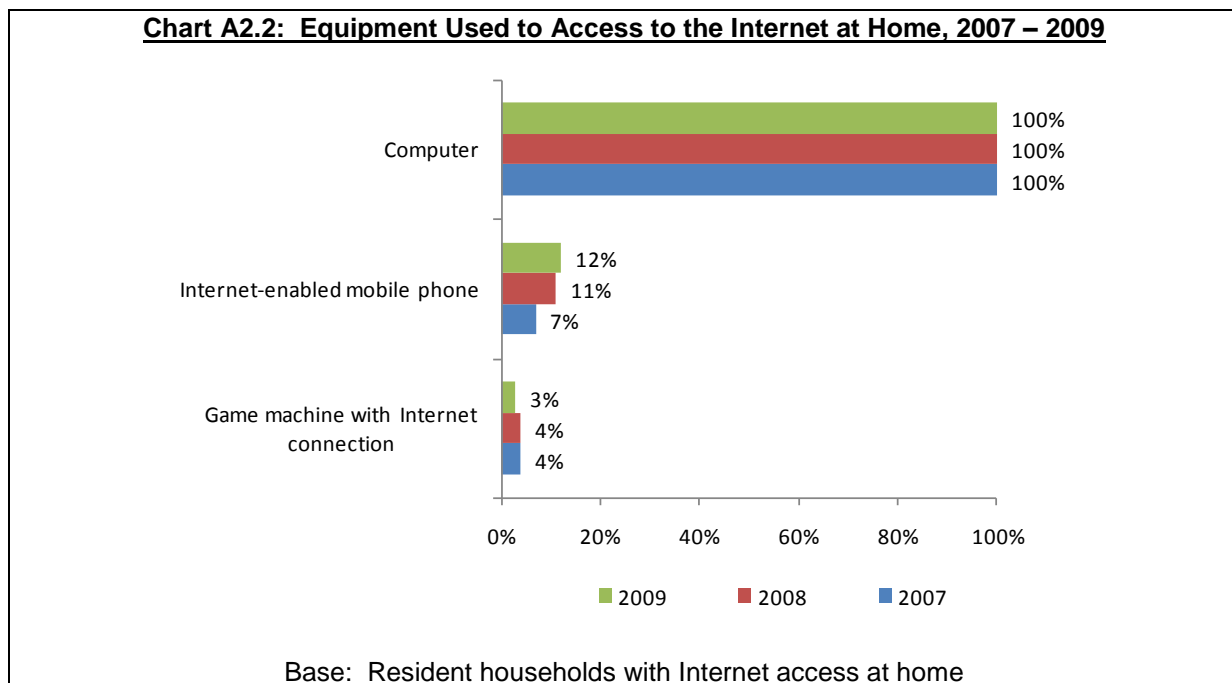
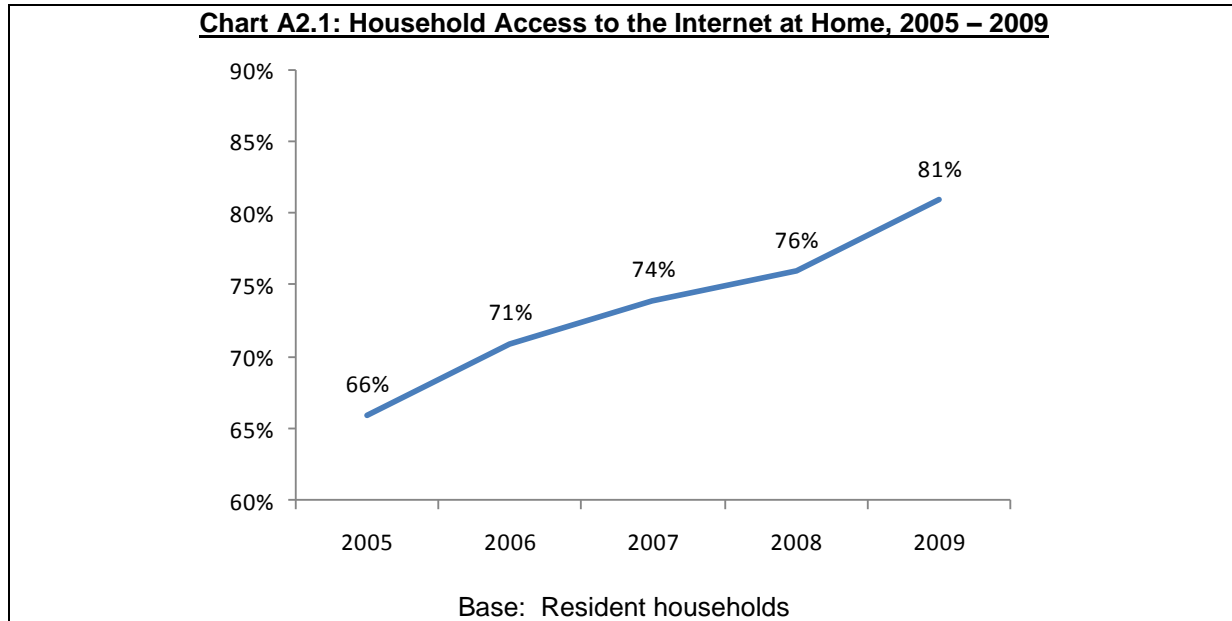
No.	Main Reason	2005	2006	2007	2008	2009
1	No need to use	35%	43%	46%	38%	39%
2	Lack of skills	32%	20%	29%	32%	32%
3	Old age is a barrier to learn computer skills	12%	8%	7%	14%	14%
4	Too costly to purchase a computer	15%	17%	11%	13%	13%
5	Children are too young	6%	4%	2%	3%	2%

Base: Resident households with no access to a computer at home

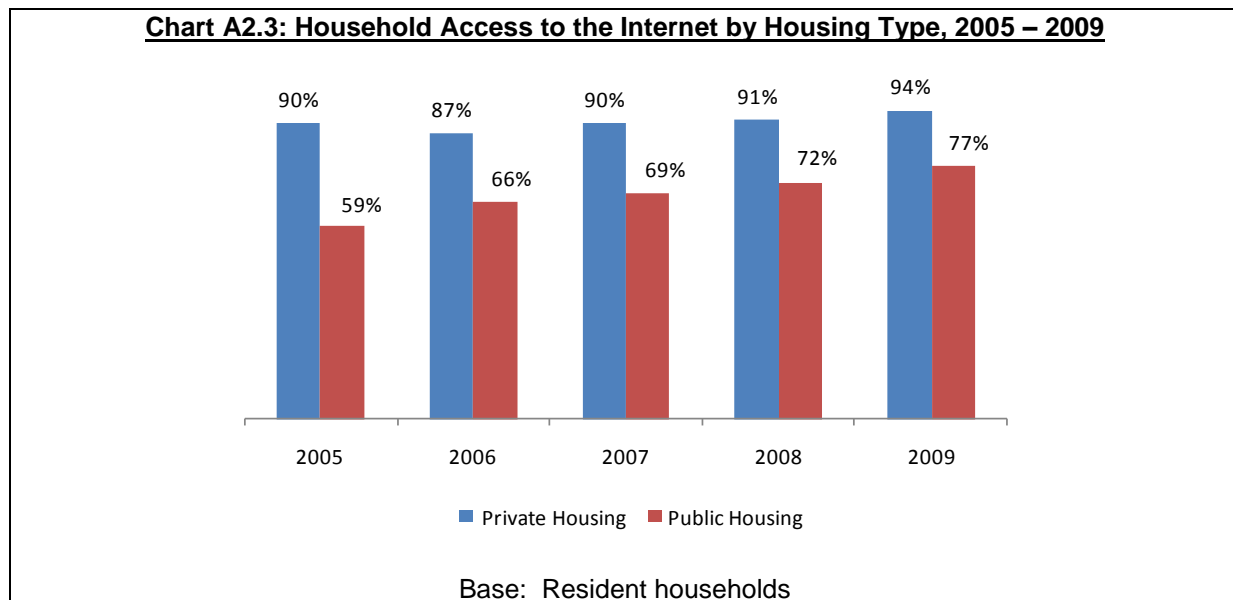
A2. INTERNET ACCESS WITHIN HOUSEHOLDS

A2.1 Internet Access at Home

In 2009, about 81% of households had Internet access at home ([Chart A2.1](#)) and all accessed the Internet using the computer ([Chart A2.2](#)).



Mirroring the trend for computer access, home Internet access for households in private housing was higher than that for households in public housing (Chart A2.3).



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

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

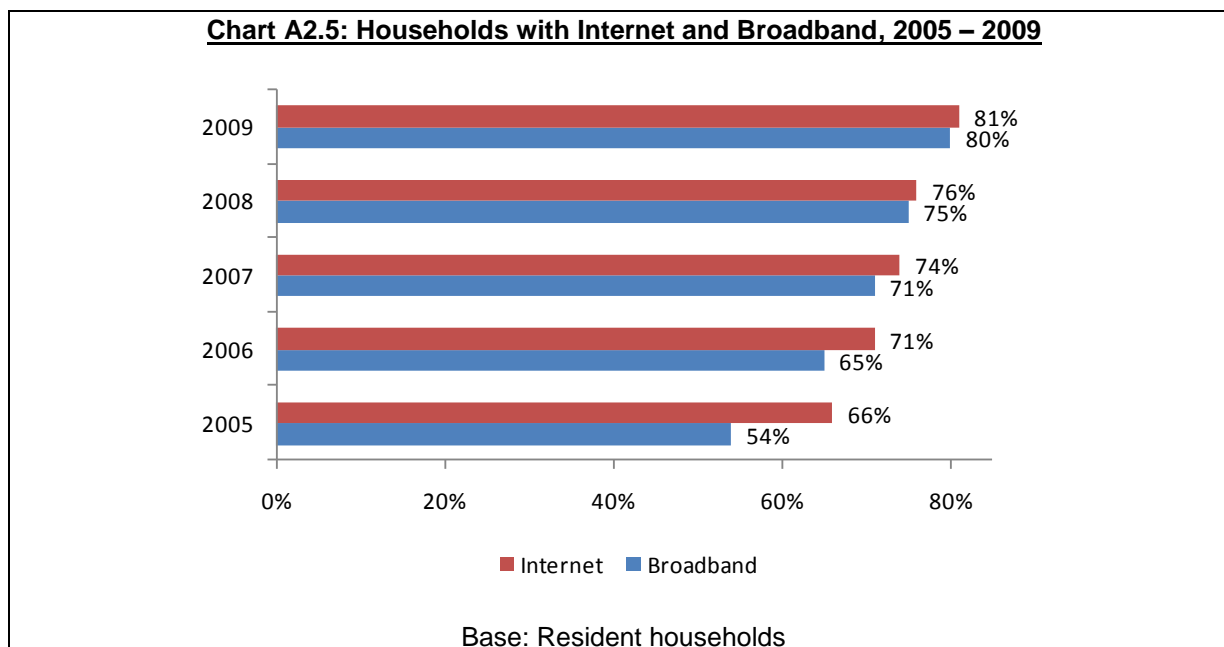
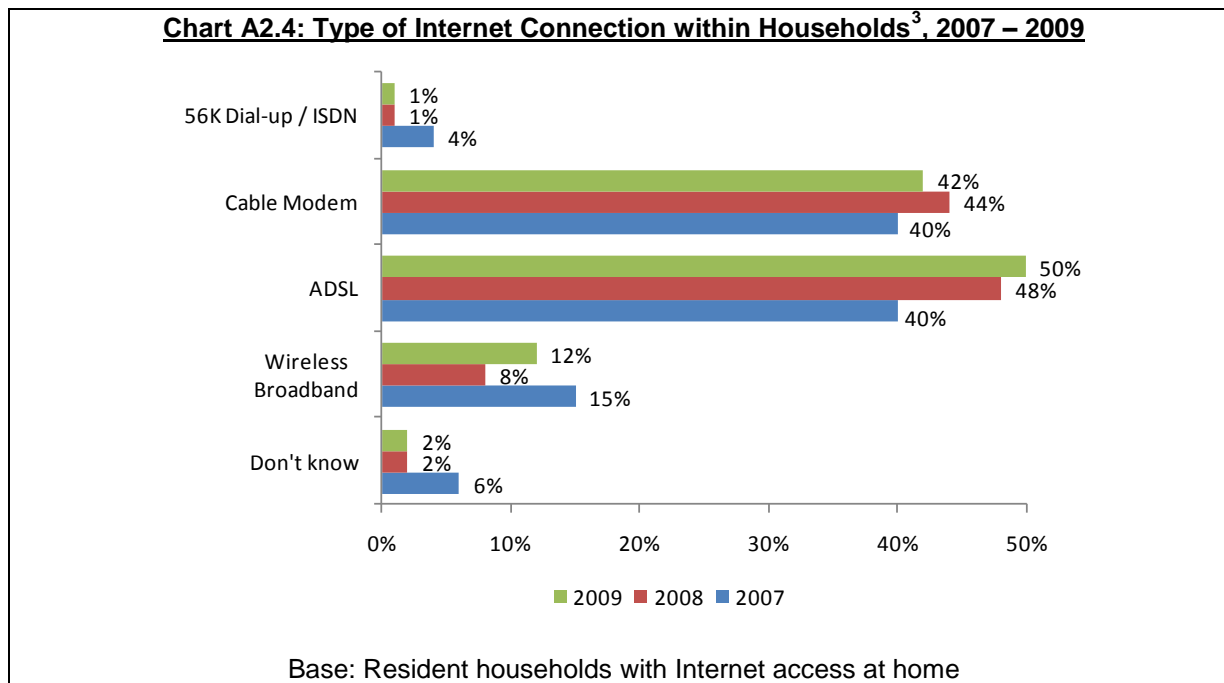
Table A2.1: Main Reason for Not Having Internet Access at Home, 2005 – 2009

No.	Main Reason	2005	2006	2007	2008	2009
1	Lack of interest/No need to use	27%	43%	55%	50%	53%
2	Lack of knowledge/skills/confidence	6%	18%	11%	23%	23%
3	Have access to Internet elsewhere	17%	7%	9%	13%	9%
4	Costly equipment costs	-	14%	8%	8%	8%
5	Subscription to the Internet is too costly	29%	4%	3%	4%	5%

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

A2.3 Internet Connection within Households

Amongst households with access to the Internet at home, most of them connected to the Internet via a broadband connection (Chart A2.4). It could also be seen that the gap between households with Internet and households with broadband is narrowing (Chart A2.5).



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. Please also note that some households may have more than one type of broadband connection at home.

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 A2.2).

Table A2.2: Main Reason for Not Subscribing to Broadband Access Service, 2007 – 2009

No.	Main reason for not subscribing to broadband	2007	2008	2009
1	Low usage of the Internet at home	44%	30%	33%
2	Subscription to broadband access service is too costly	14%	15%	27%
3	Have access to broadband access service elsewhere	15%	27%	21%
4	Cost of upgrading equipment	7%	4%	9%
5	Dial-up is fast enough / No need to use broadband	11%	22%	7%

Base: Resident households with only narrowband access at home

PART B:

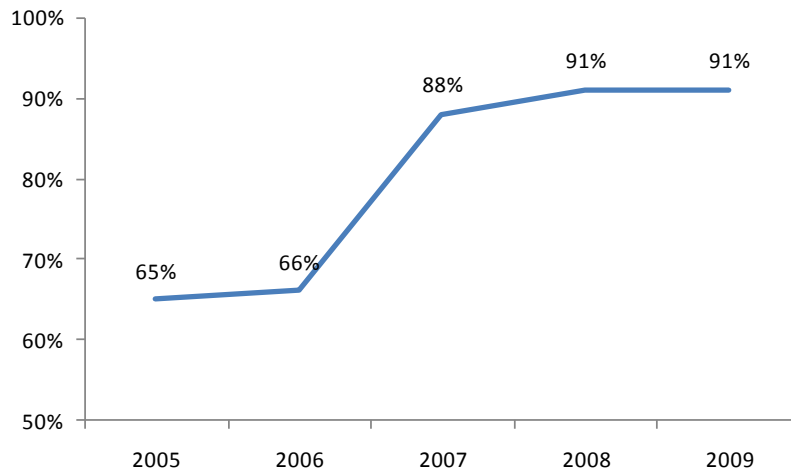
**INFOCOMM ADOPTION AND USAGE BY
INDIVIDUALS**

B1. COMPUTER ACCESS AND USAGE BY INDIVIDUALS

B1.1 Computer Access

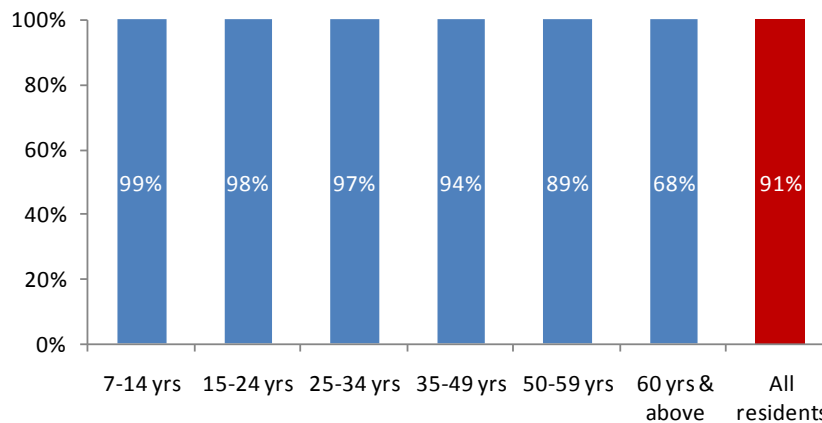
About 9 in 10 residents had access to computers in the past 3 years (Chart B1.1). In 2009, almost all residents in the age group “7-14” years had access to a computer at any location (Chart B1.2).

Chart B1.1: Access to a Computer at Any Location, 2005 – 2009



Base: For 2005–2007, residents aged 15 years and above; for 2008 and after, residents aged 7 years and above

Chart B1.2: Access to a Computer at Any Location by Age Group, 2009

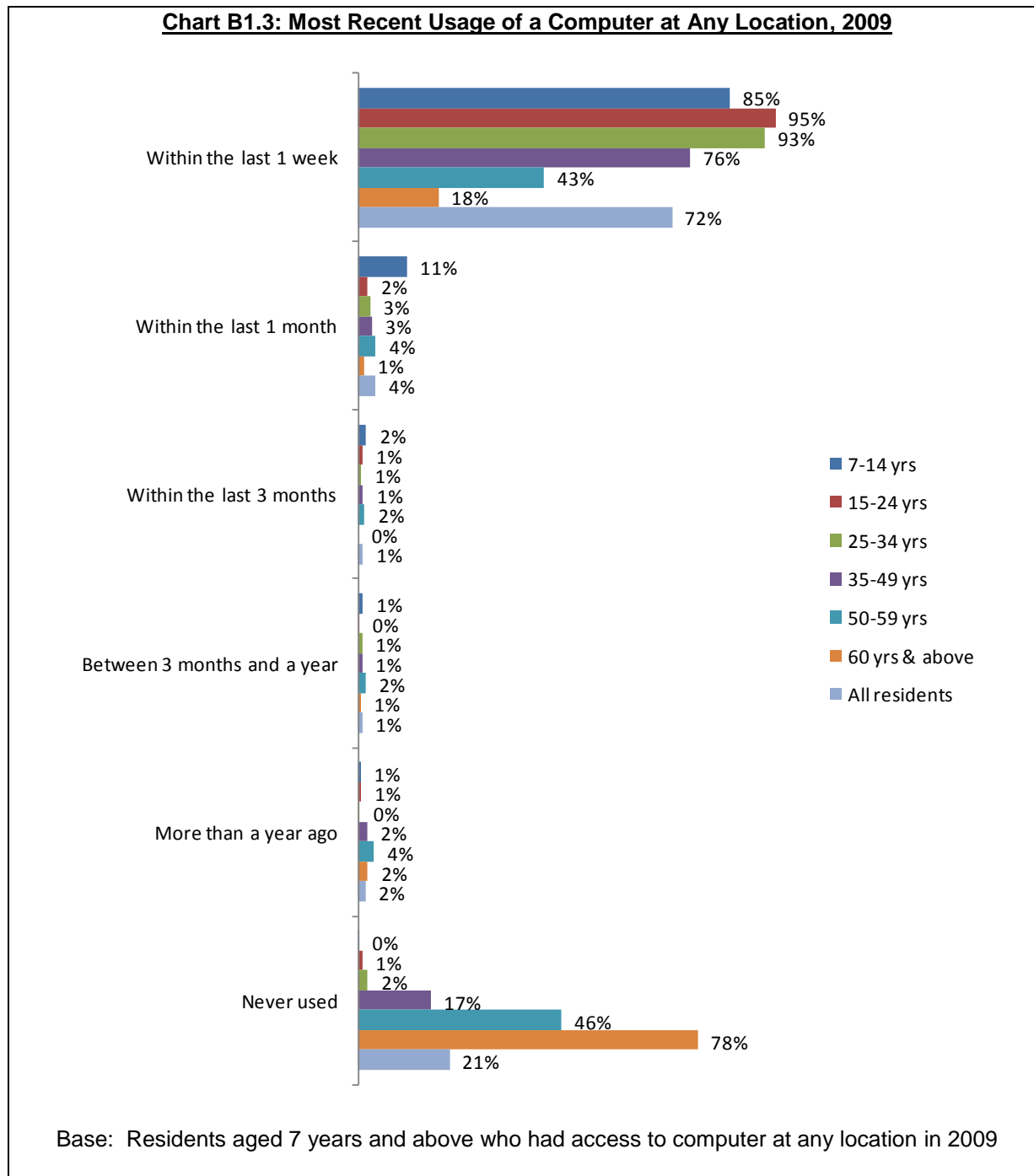


Base: Residents aged 7 years and above

B1.2 Computer Usage

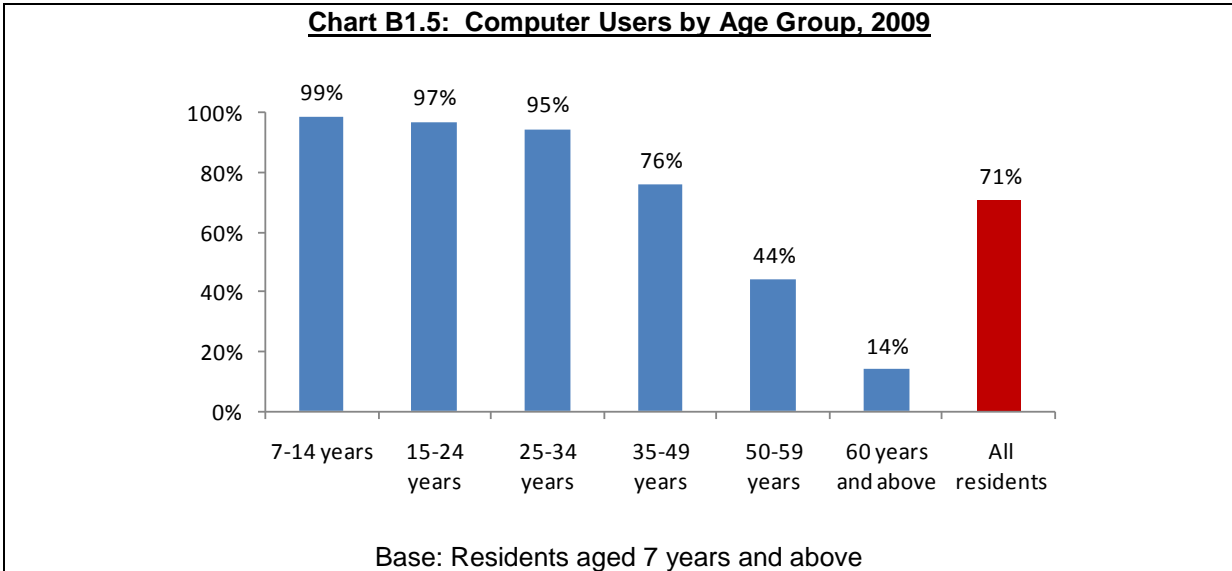
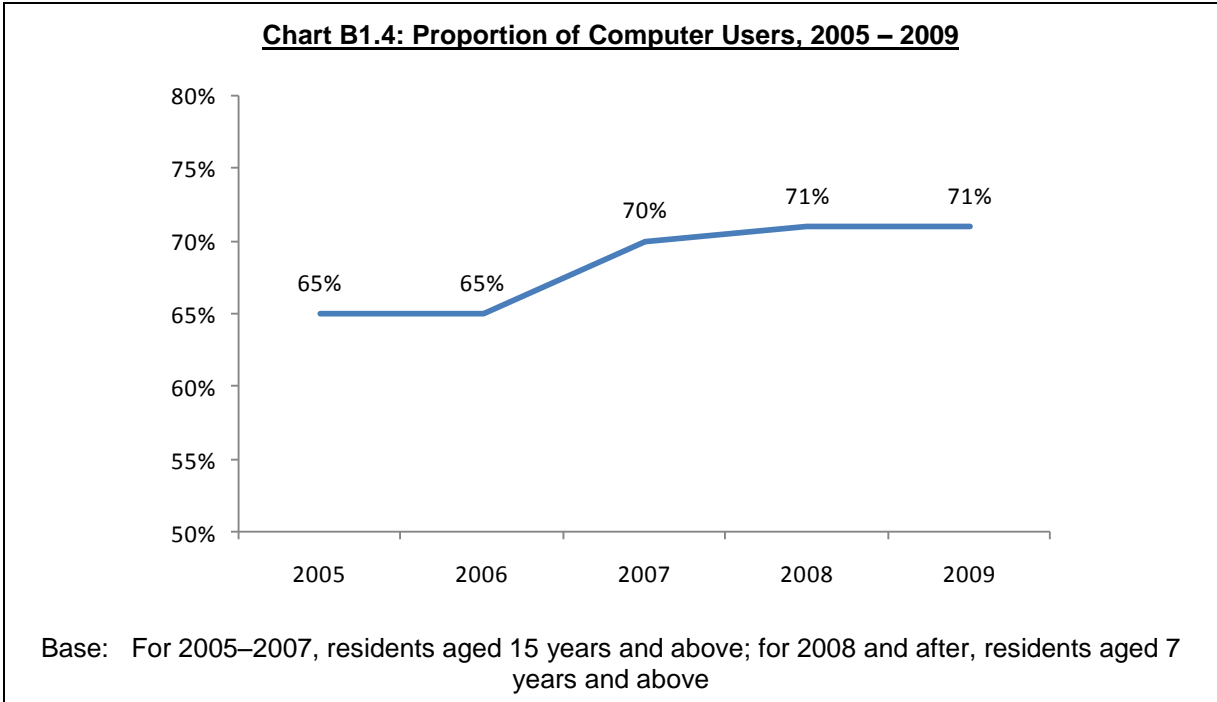
Most recent usage of a computer at any location

72% of residents who had access to a computer at any location used the computer within the last one week (Chart B1.3). 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.



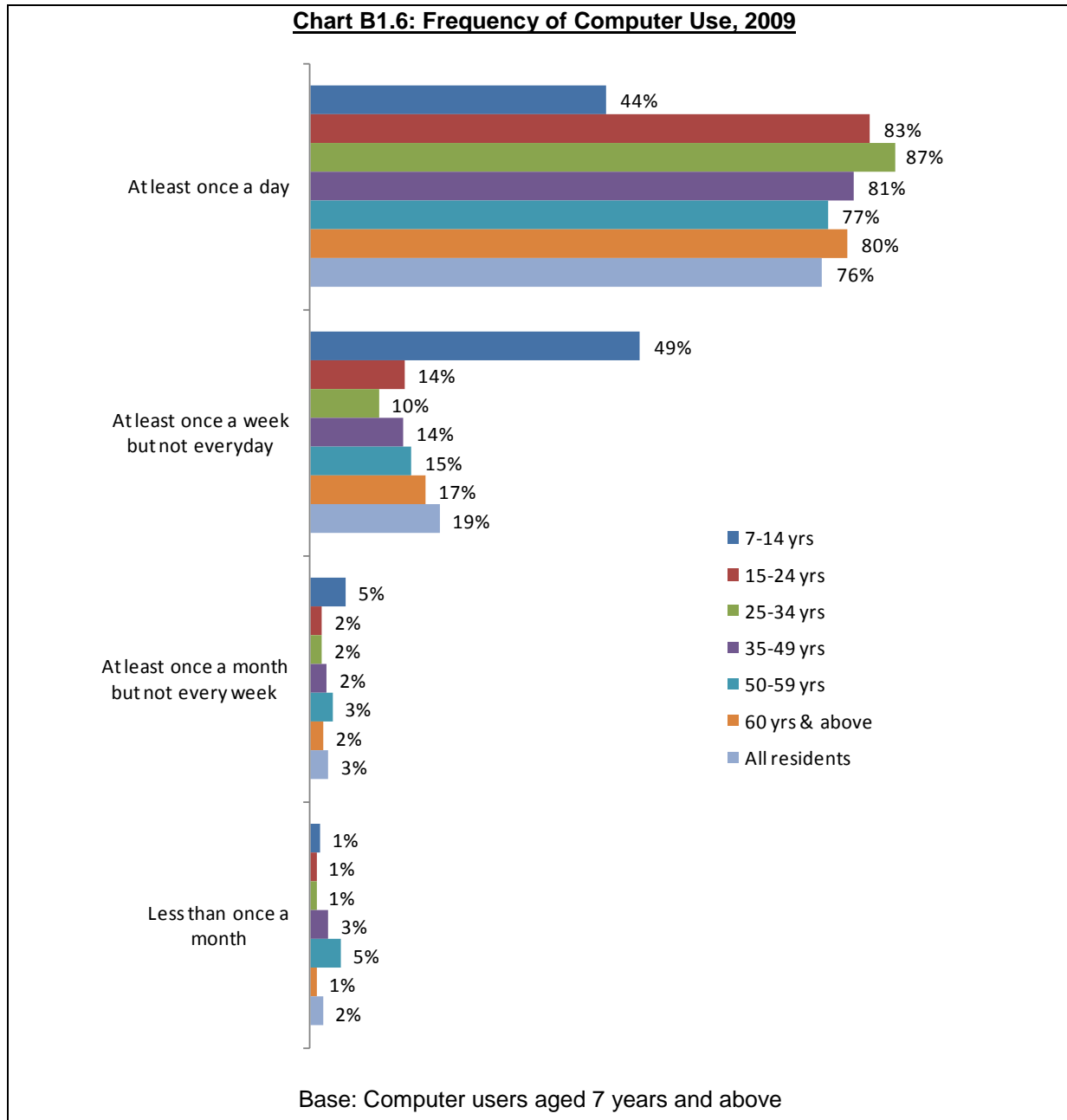
Computer Users by Age Group

Chart B1.4 shows that amongst residents aged seven years and above, 71% of them used the computer in 2009 (defined as computer users). Within the different age groups, the proportion of computer users was higher in the younger age groups (Chart B1.5).



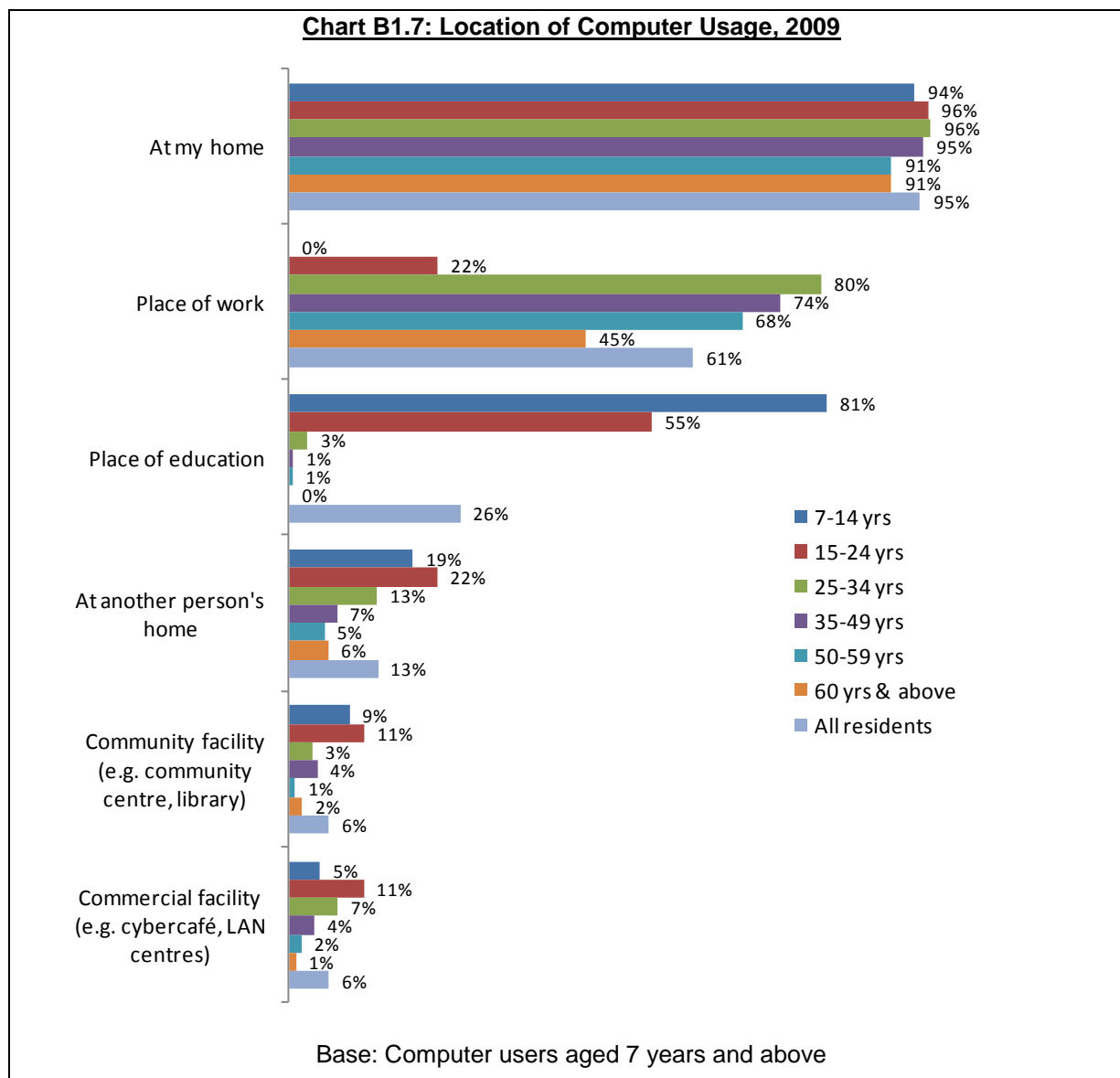
Frequency of Computer Use

In 2009, the youngest age group of “7-14” years used the computer less frequently than those aged 15 years and above (Chart B1.6). Overall, about 76% of computer users used the computer at least once a day.



Location of Computer Use

Computer usage was largely at home (95%) followed by place of work for residents aged 25 years and above, and place of education for residents below the age of 25 years (Chart B1.7).

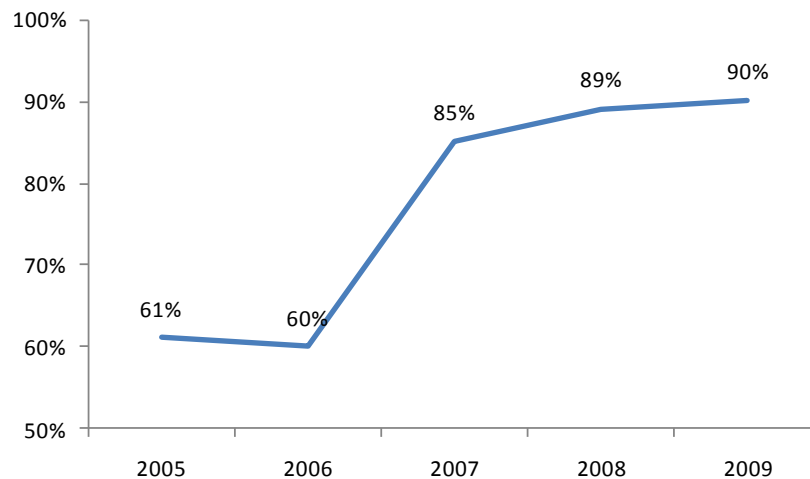


B2. INTERNET ACCESS AND USAGE BY INDIVIDUALS

B2.1 Internet Access

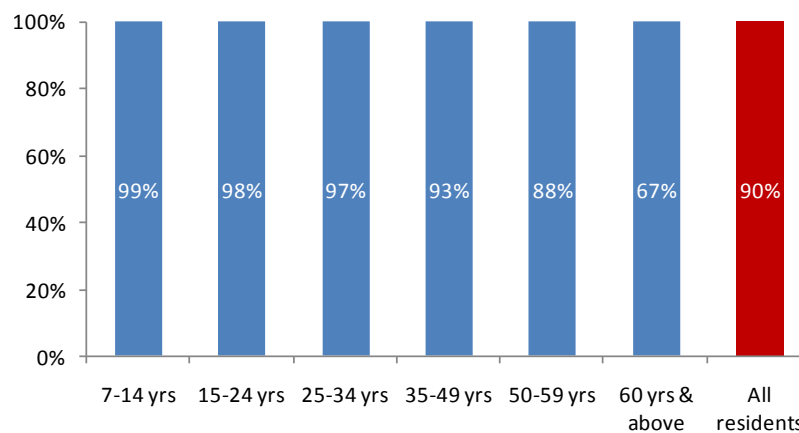
Internet access among residents reached 90% in 2009 (Chart B2.1), and almost all residents in the age group of “7-14” years had access to the Internet at any location (Chart B2.2).

Chart B2.1: Access to Internet at Any Location, 2005 – 2009



Base: For 2005–2007, residents aged 15 years and above; for 2008 and after, residents aged 7 years and above

Chart B2.2: Access to Internet at Any Location by Age Group, 2009



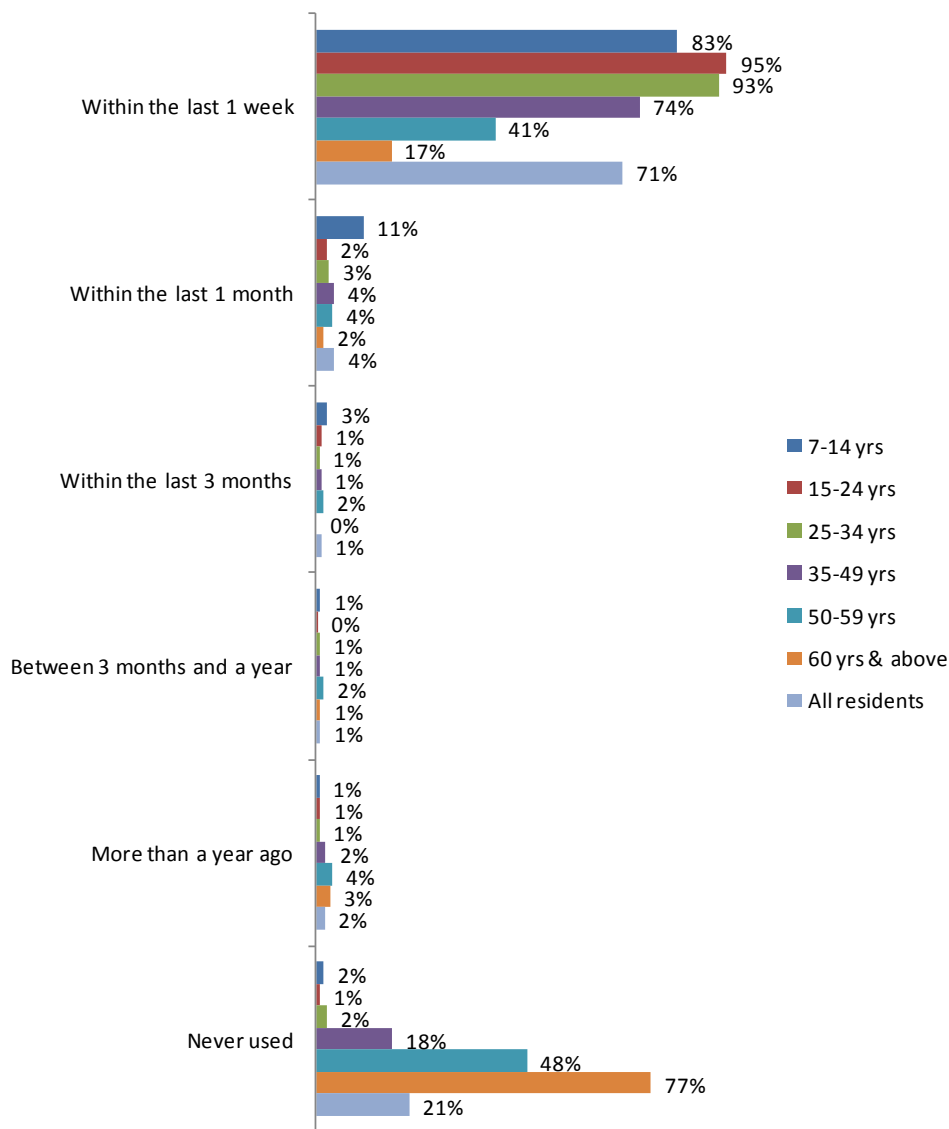
Base: Residents aged 7 years and above

B2.2 Internet Usage

Most recent usage of the Internet at any location

Amongst residents with access to the Internet at any location via any type of access equipment, 71% had used the Internet within the last one week (Chart B2.3). Even with access to the Internet, 77% of residents aged 60 years and above, and almost half (48%) of the residents in age group “50-59 years” had not used the Internet before.

Chart B2.3: Most Recent Usage of the Internet at Any Location, 2009



Base: Residents aged 7 years and above who had access to the Internet at any location in 2009

Main reason for not using the Internet

Table B2.1 shows the main reasons cited by non-Internet users for not using the Internet before. While costs of equipment or subscriptions became less cited as a main barrier to using the Internet, the two most commonly cited reasons remain as “Lack of knowledge, skills or confidence” and “Not interested / No need to use”.

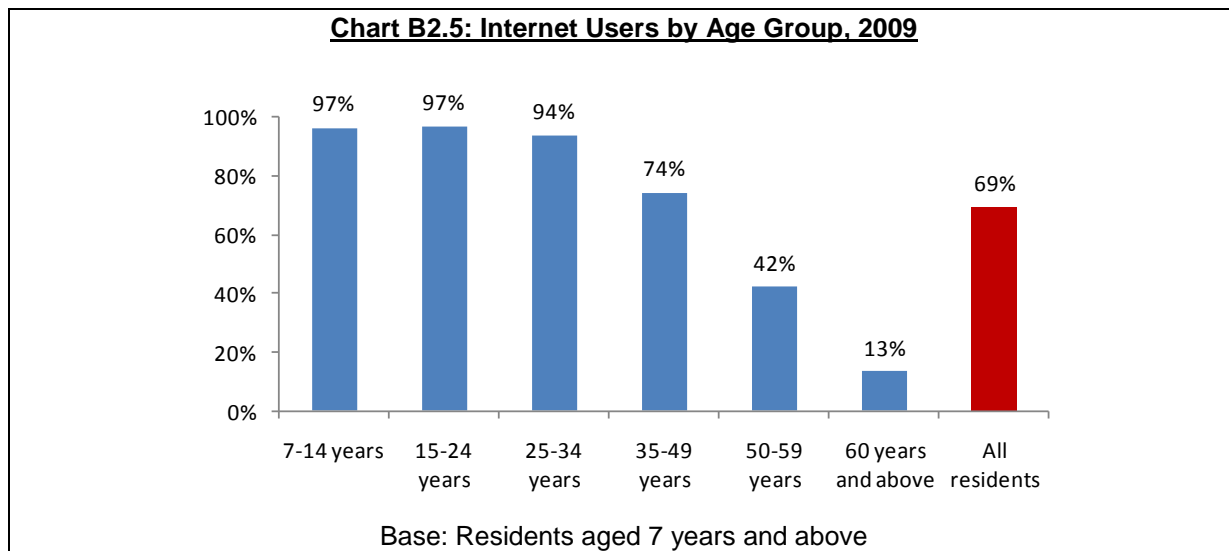
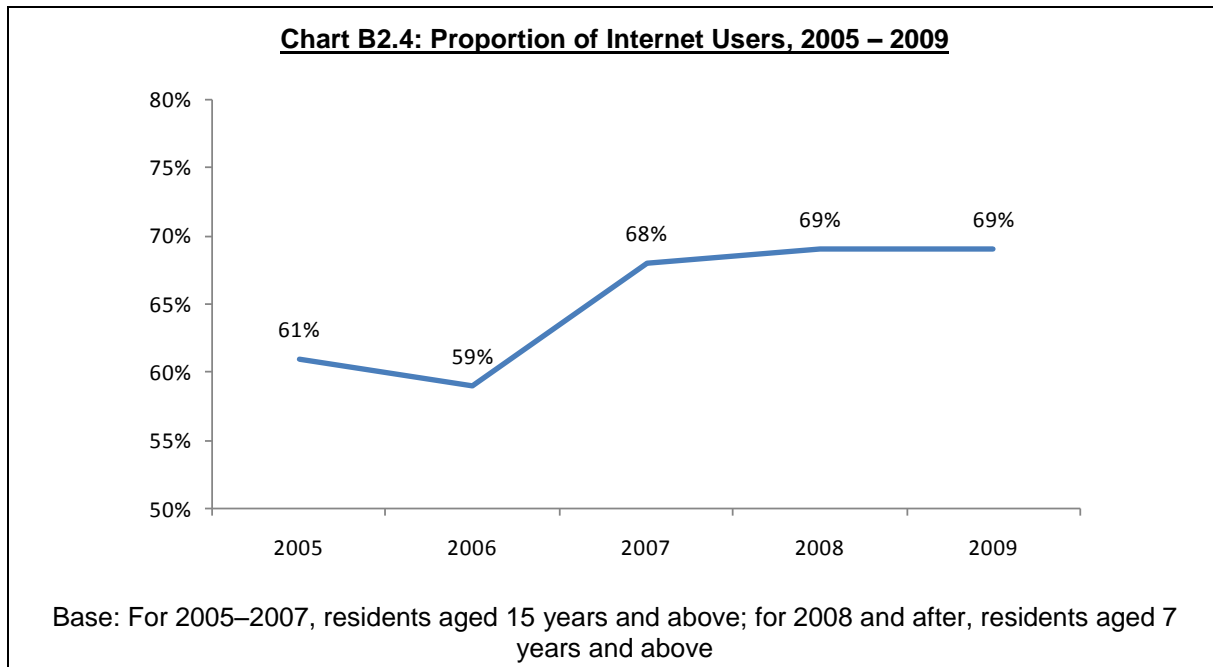
Table B2.1: Main Reason for Not Using the Internet, 2007 – 2009

No.	Main reason for not using the Internet	2007	2008	2009
1.	Lack of knowledge, skills or confidence	28%	52%	51%
2.	Not interested / No need to use	60%	45%	47%
3.	Equipment costs are too high	5%	1%	0%
4.	Access subscription too costly	1%	1%	0%
5.	Concern about exposure to inappropriate or harmful content	0%	1%	0%

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

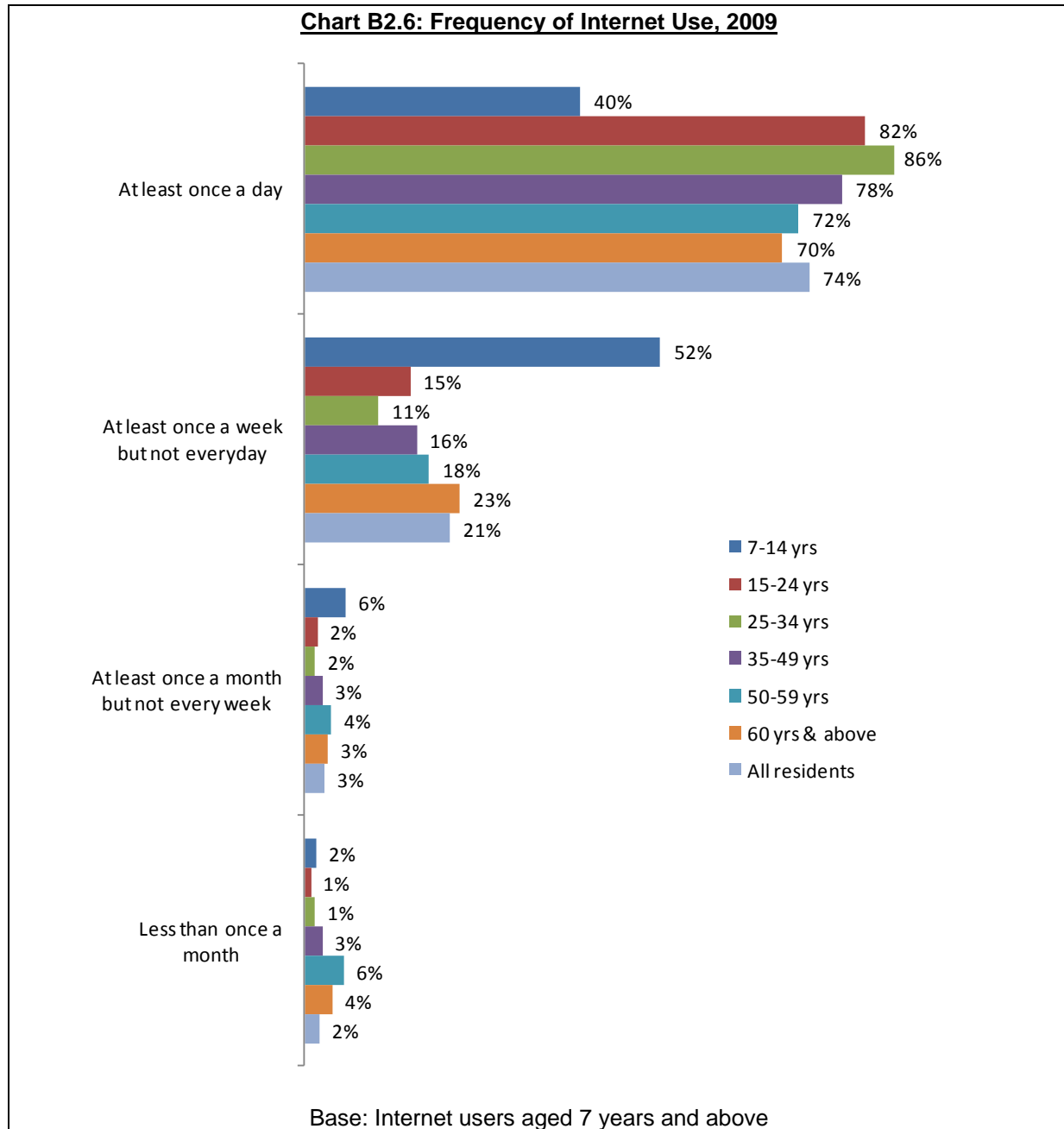
Internet users by age group

Chart B2.4 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” and “15-24 years” (Chart B2.5).



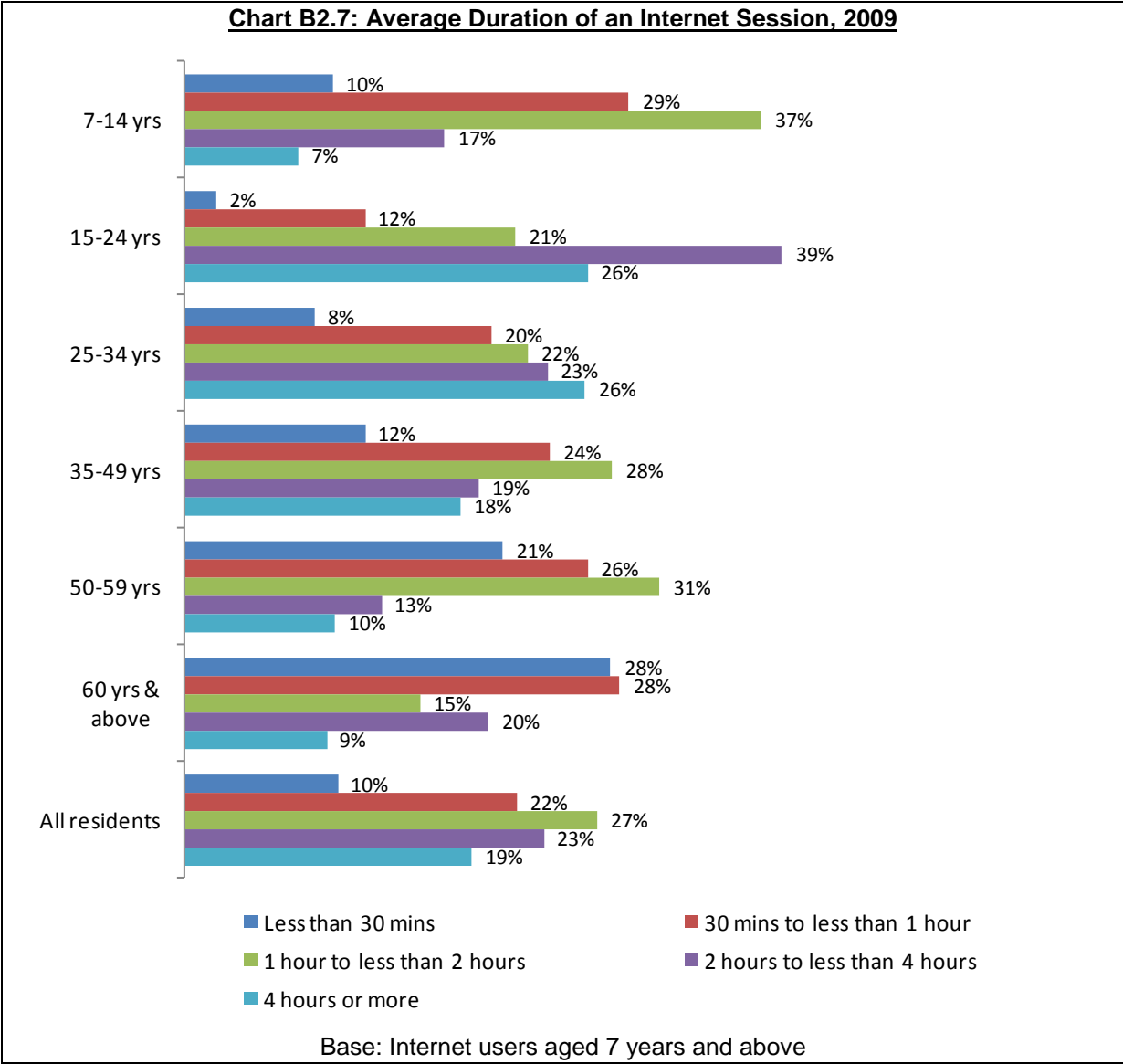
Frequency of Internet Use

Except for the youngest age group (“7-14 years”), at least 70% of residents in each of the other age groups used the Internet at least once a day in 2009 (Chart B2.6). Amongst residents aged “7-14 years”, more of them used the Internet at least once a week but not everyday (52%).



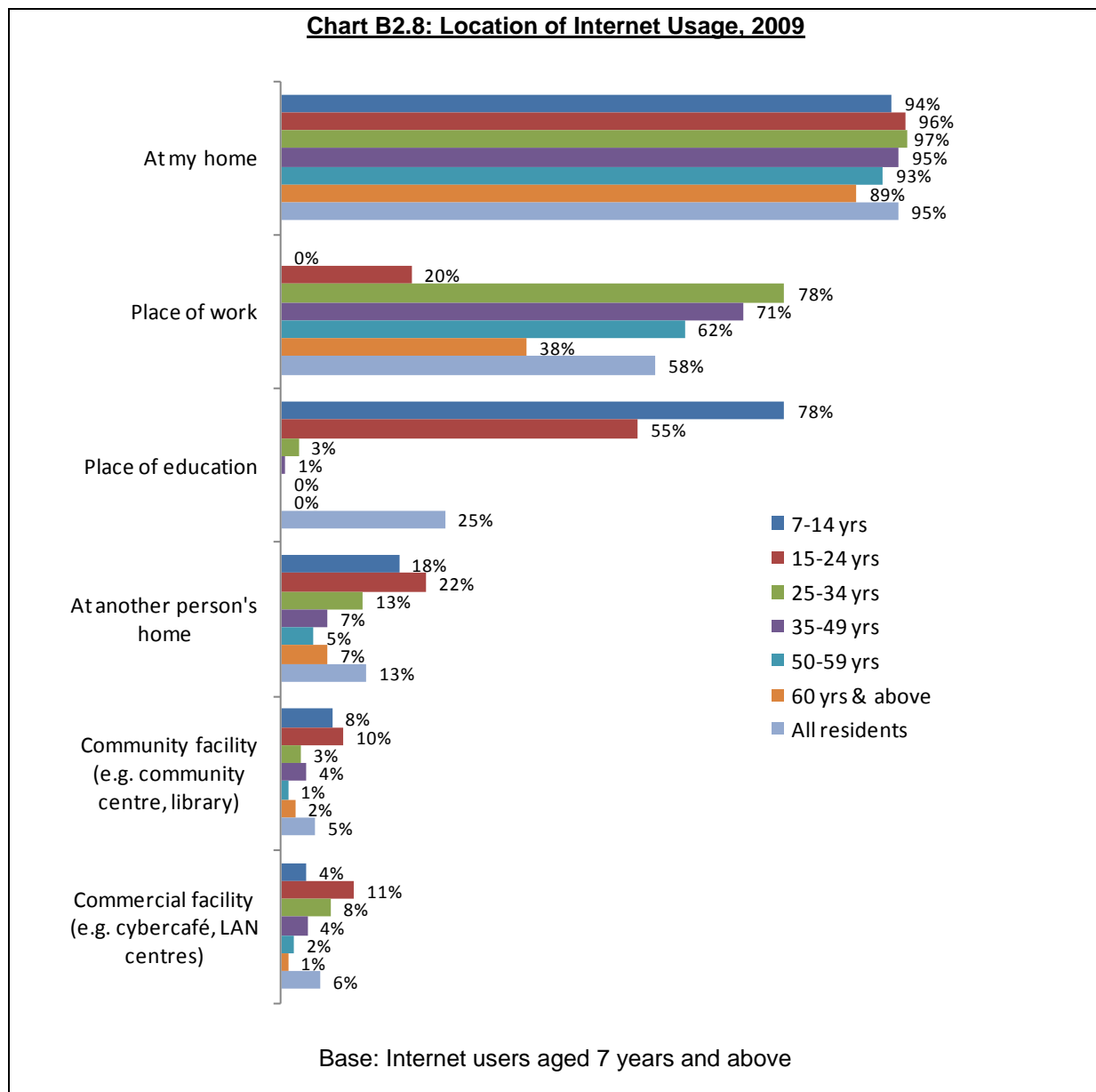
Duration of Internet Use

About one in two Internet users (49%) spent an average of 30 minutes to 2 hours on the Internet per Internet session followed by 42% who spent more than 2 hours on each Internet session (Chart B2.7).



Location of Internet Use

Home and place of work were the two most common places to access to the Internet (Chart B2.8).



B3. INTERNET APPLICATIONS AND SERVICES

Primary Internet activities⁴

Table B3.1 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 social networks.

Table B3.1: Primary Internet Activities Engaged by Internet Users, 2009

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%	26%	45%	49%	55%	49%	37%
Other information or general Web browsing	7%	20%	28%	30%	39%	29%	24%
About goods or services	1%	11%	22%	24%	29%	24%	18%
From government organisations/public authorities (from websites or via email)	1%	2%	6%	9%	9%	7%	5%
About job opportunities	0%	3%	7%	3%	1%	1%	3%
Related to health or health services	0%	1%	3%	3%	6%	7%	3%
<i>For communicating</i>	45%	82%	81%	72%	72%	65%	72%
Sending or receiving emails	17%	52%	68%	66%	69%	64%	56%
Social networks (e.g. MySpace, Friendster, WhoLivesNearYou)	31%	54%	35%	17%	7%	6%	30%
Instant messaging	11%	31%	20%	11%	12%	9%	17%
Peer-to-Peer (e.g. Yahoo!, Napster, RealNetworks)	3%	9%	9%	5%	2%	0%	6%
Blogging - Reading blogs that are created by others	3%	8%	6%	3%	1%	0%	4%
Chat rooms	4%	6%	6%	1%	1%	0%	4%
Telephoning over the Internet (VoIP)	0%	3%	3%	2%	3%	4%	2%
<i>For creating content</i>	8%	18%	14%	8%	3%	1%	11%
Broadcasting of self-produced videos (e.g. Youtube, Google Video)	5%	10%	9%	6%	1%	1%	7%
Creating / maintaining own blogs	3%	6%	2%	1%	1%	0%	3%
Sharing of own photos (e.g. Flickr, Snapfish)	0%	3%	2%	2%	0%	0%	2%
Forum discussion / Posting of feedback, advice (e.g. product reviews)	0%	2%	2%	1%	0%	0%	1%
Creating / maintaining own website	1%	1%	1%	1%	1%	0%	1%
Publishing of own writing / articles (e.g. Wikipedia, Fanfiction.net)	0%	1%	1%	1%	0%	0%	0%
Sharing of self-created music	0%	0%	0%	0%	0%	0%	0%

⁴ A primary Internet activity refers to an activity that is engaged in during all or most of the Internet sessions.

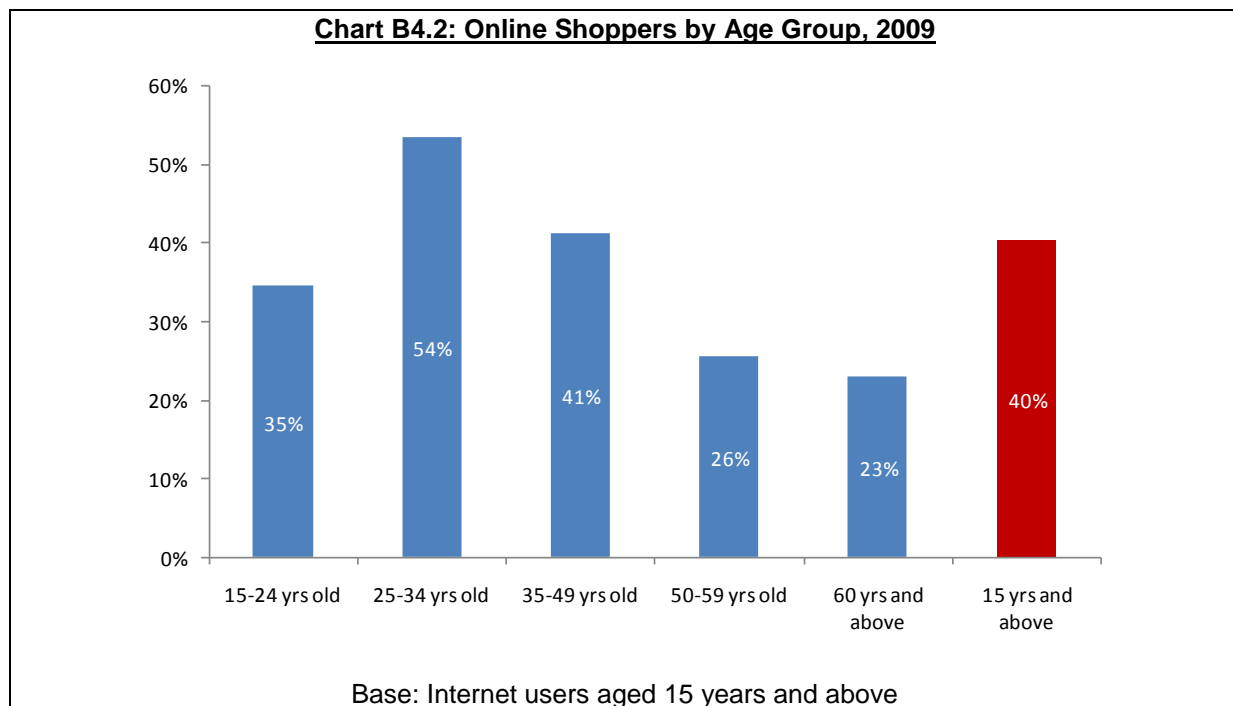
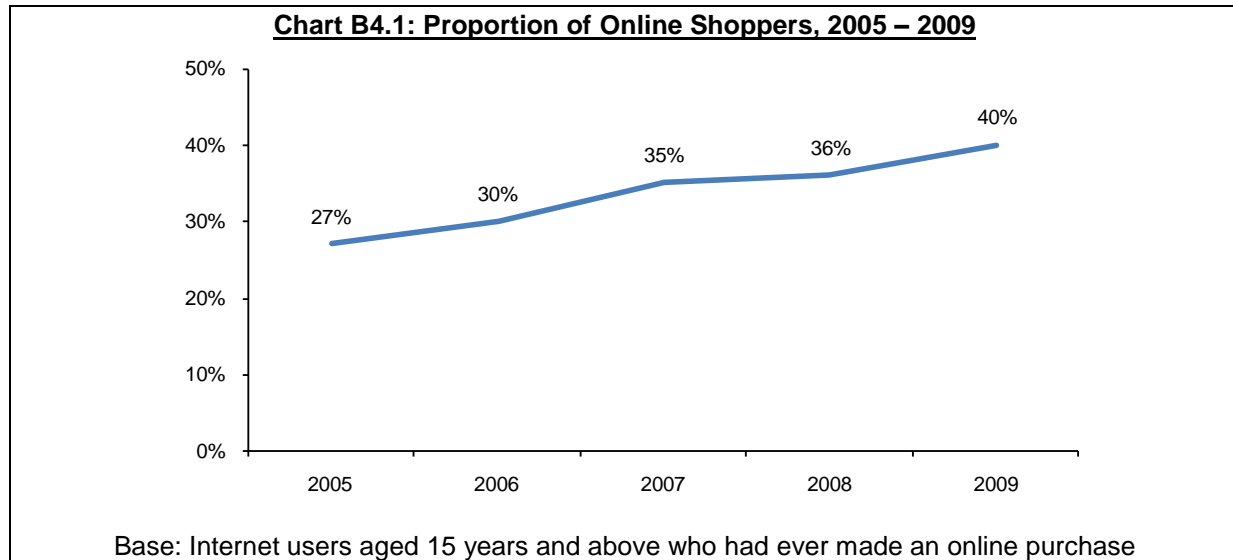
Primary Internet activity	7-14 yrs	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	All residents
For online banking	0%	4%	20%	22%	19%	11%	13%
Checking account information	0%	3%	17%	20%	18%	10%	12%
Transferring of funds to other bank accounts	0%	2%	15%	17%	16%	11%	10%
Payment of bills	0%	2%	12%	17%	17%	11%	10%
For purchasing or ordering goods or services	0%	2%	4%	3%	3%	3%	3%
For dealing with government organisations / public authorities	0%	2%	8%	11%	12%	8%	7%
Completing or lodging forms online (e.g. income tax filing)	0%	0%	4%	8%	9%	6%	4%
Making online payments	0%	1%	5%	7%	7%	3%	4%
Downloading or requesting forms	0%	1%	5%	5%	7%	4%	4%
For leisure activities	60%	45%	35%	31%	24%	33%	39%
Playing or downloading computer or video games	34%	18%	8%	6%	3%	3%	13%
Reading online newspapers	1%	8%	17%	17%	15%	24%	13%
Interactive online gaming	25%	13%	6%	3%	5%	0%	9%
Downloading or watching movies, short films or images	8%	15%	8%	6%	3%	5%	8%
Downloading or listening to online music	10%	16%	7%	3%	1%	2%	8%
Reading online magazines	1%	3%	5%	3%	5%	3%	3%
Reading electronic books	0%	1%	3%	2%	3%	1%	2%
Downloading or uploading other media (e.g. digital photographs)	0%	3%	2%	1%	0%	1%	1%
Watching Web television	1%	2%	1%	1%	1%	0%	1%
Listening to Web radio	0%	2%	1%	1%	0%	0%	1%
For education or learning activities	32%	21%	5%	5%	1%	1%	12%
For remote access documents/applications/collaborative tools from the school server (for school work)	22%	16%	2%	2%	0%	0%	8%
For other activities	1%	5%	8%	6%	5%	5%	5%
Downloading software, patches or upgrades	1%	4%	7%	6%	5%	5%	5%
Applying for jobs / Uploading of resumes	0%	1%	2%	0%	0%	0%	1%

Base: Internet users aged 7 years and above

B4. ONLINE SHOPPING

Online shoppers by age group

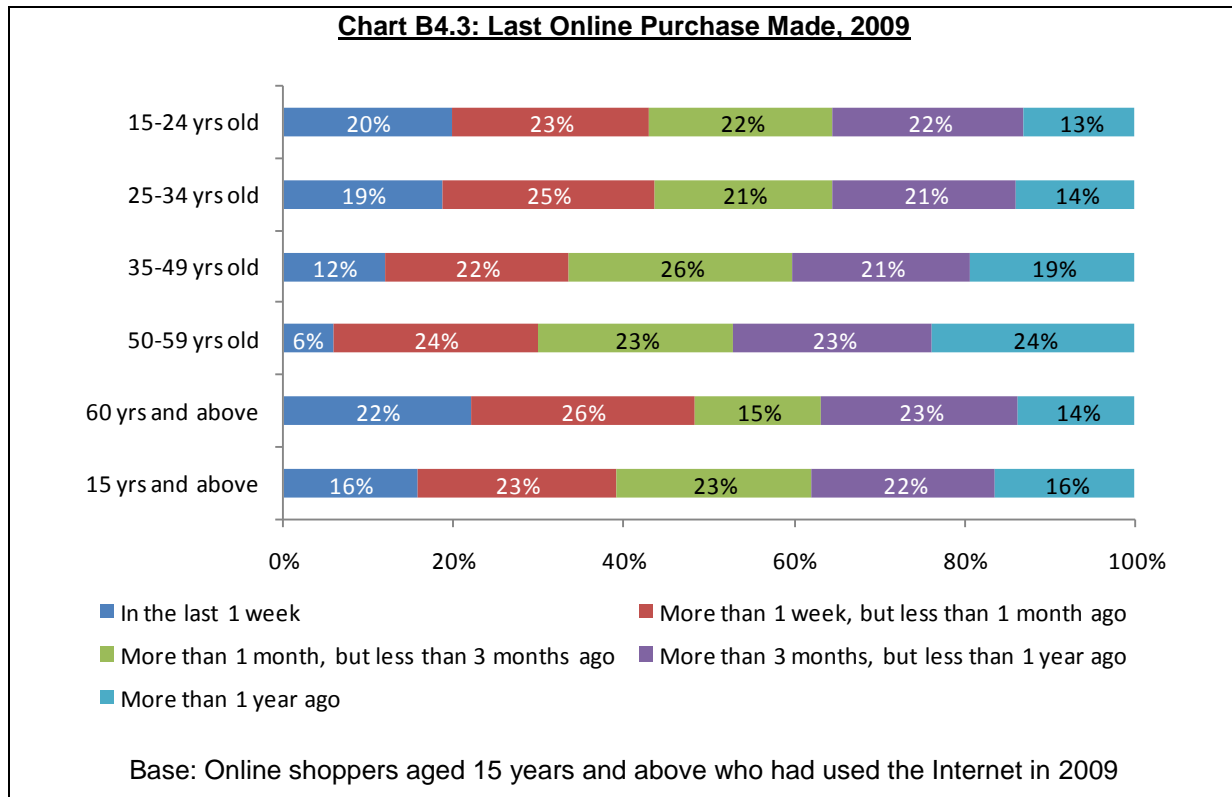
The proportion of online shoppers⁵ increased to 40% in 2009 ([Chart B4.1](#)). 54% of Internet users aged 25-34 years had made an online purchase before, the highest proportion compared to the other age groups ([Chart B4.2](#)).



⁵ An online shopper is a resident aged 15 years and above who had bought or ordered goods or services over the Internet before.

Last online purchase made

16% of online shoppers made purchases online in the last one week while 23% had done so in the last month (Chart B4.3).



Items purchased online in the last 12 months

The three most popular items bought online for private purposes in 2009 were travel products (40%), clothing, footwear, sporting goods or accessories (39%) and ticket for entertainment event (34%) (Table B4.1).

Table B4.1: Goods or Services Purchased over the Internet, 2009

Items	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	15 yrs & above
Travel products	13%	43%	53%	57%	29%	40%
Clothing, footwear, sporting goods or accessories	64%	39%	26%	16%	16%	39%
Ticket for entertainment event	32%	37%	32%	35%	15%	34%
Books, Magazines, newspaper (in physical form)	6%	12%	12%	8%	22%	11%
Food or groceries	3%	5%	10%	6%	6%	6%
Computer software (in digital form)	3%	9%	6%	4%	5%	6%
IT and telecomm services	4%	8%	5%	8%	13%	6%
Computer equipment or parts	4%	5%	6%	12%	17%	6%
Financial products	0%	7%	6%	6%	33%	6%
Books, magazines, newspaper (in digital form)	5%	3%	6%	6%	11%	5%
Movies, short films or images (in digital form)	5%	4%	4%	3%	5%	4%
Music products (in digital form)	8%	5%	1%	0%	0%	4%
Music products (in physical form)	7%	2%	4%	0%	0%	3%
Computer or video games (in digital form)	6%	2%	2%	3%	0%	3%
Photographic, telecommunication or optical equipment	4%	4%	2%	0%	0%	3%
Booking(s) for sports facility	2%	2%	3%	0%	5%	2%
Movies, short films or images (in physical form)	2%	3%	1%	3%	0%	2%
Computer or video games (in physical form)	3%	2%	2%	1%	0%	2%
Skincare products / cosmetics	3%	2%	1%	1%	0%	2%
Computer software (in physical form)	1%	2%	1%	5%	0%	2%
Electronic products	2%	1%	1%	1%	0%	1%
Health related / facial products	1%	0%	2%	0%	6%	1%
Booking / paying for service	1%	1%	1%	1%	2%	1%
Children / baby products	1%	1%	1%	0%	0%	1%
Collectables	2%	0%	1%	5%	0%	1%
Home decor / accessories	0%	1%	1%	1%	0%	1%
Car accessories	2%	0%	0%	0%	0%	1%

Base: Online shoppers aged 15 years and above who had made at least one online purchase in 2009

Payment methods for online purchases

About 8 in 10 online shoppers made payment for their goods or services purchased online via credit cards (Table B4.2).

Table B4.2: Payment Methods for Goods or Services Purchased Online, 2009

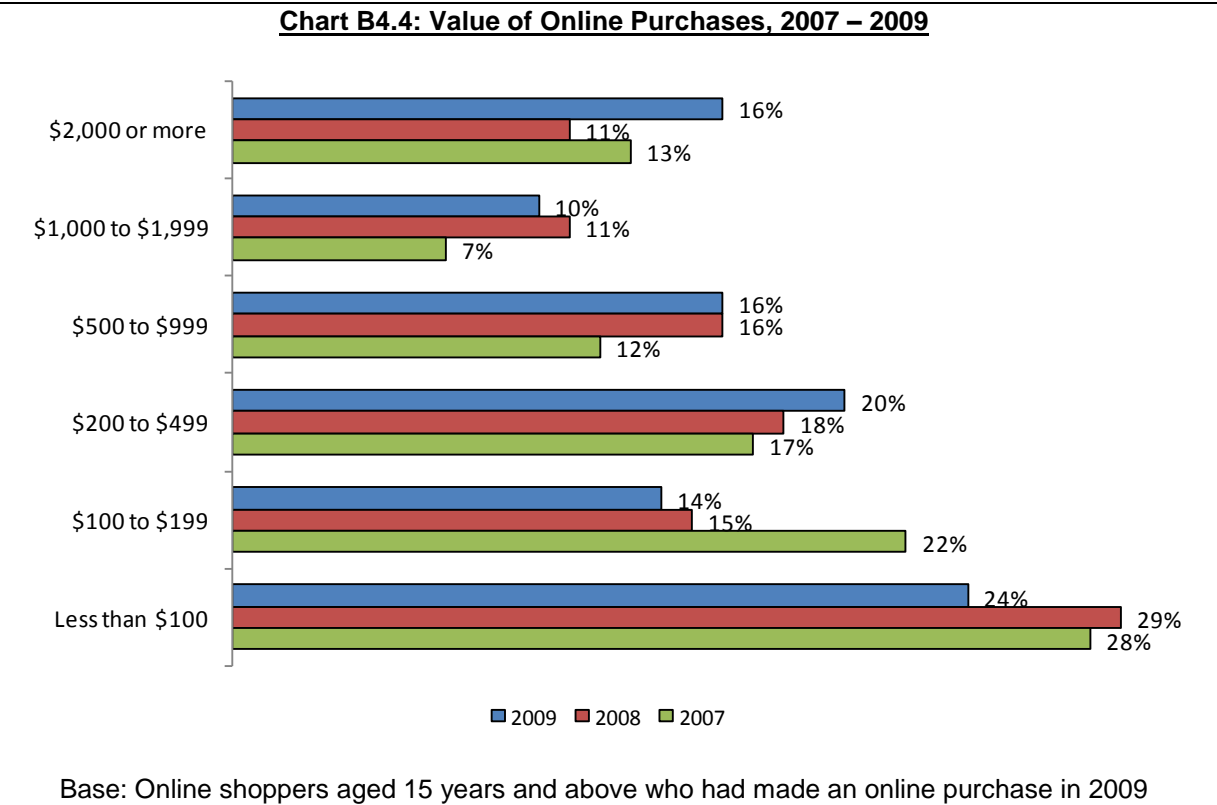
Payment Method	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	15 yrs & above
Credit cards	48%	86%	94%	91%	80%	80%
Direct debit / pay using bank account	41%	15%	5%	4%	18%	17%
eNETS virtual account / PayPal	13%	11%	10%	4%	5%	10%
Cash on delivery	14%	7%	6%	7%	19%	8%
Payment using mobile phone or via the telecommunication bills	1%	0%	1%	0%	5%	1%

Base: Online shoppers aged 15 years and above who had made at least one online purchase in 2009

Value of online purchases

A larger proportion of online shoppers spent \$2,000 or more on their online purchases as compared to 2008 (Chart B4.4).

Chart B4.4: Value of Online Purchases, 2007 – 2009



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” (33%) followed by “Lack of interest” (25%) (Table B4.3).

Table B4.3: Main Reason for Not Shopping Online, 2009

Main reason	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	27%	39%	33%	35%	36%	33%
Lack of interest	24%	19%	28%	29%	32%	25%
Trust concerns	15%	11%	14%	12%	7%	13%
Privacy concerns	7%	11%	10%	10%	11%	9%
Security concerns	9%	9%	8%	7%	8%	8%
Lack of means to make online payments	10%	3%	1%	1%	2%	4%
Lack of confidence, knowledge or skills	4%	3%	4%	6%	5%	4%
Inconvenient payment methods	3%	2%	1%	0%	0%	2%

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

B5. USAGE OF PORTABLE INFOCOMM EQUIPMENT

B5.1 Types of Portable Infocomm Equipment

More residents are using portable equipment with an increase in the use of laptops/notebooks and mobile phones in 2009 (Chart B5.1). Chart B5.2 presents the usage by age group.

Chart B5.1: Portable Equipment Used, 2007 – 2009

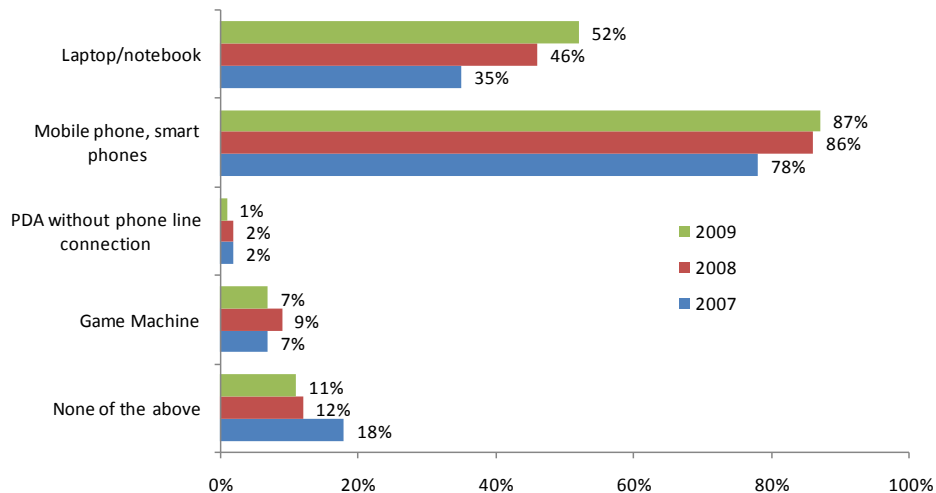
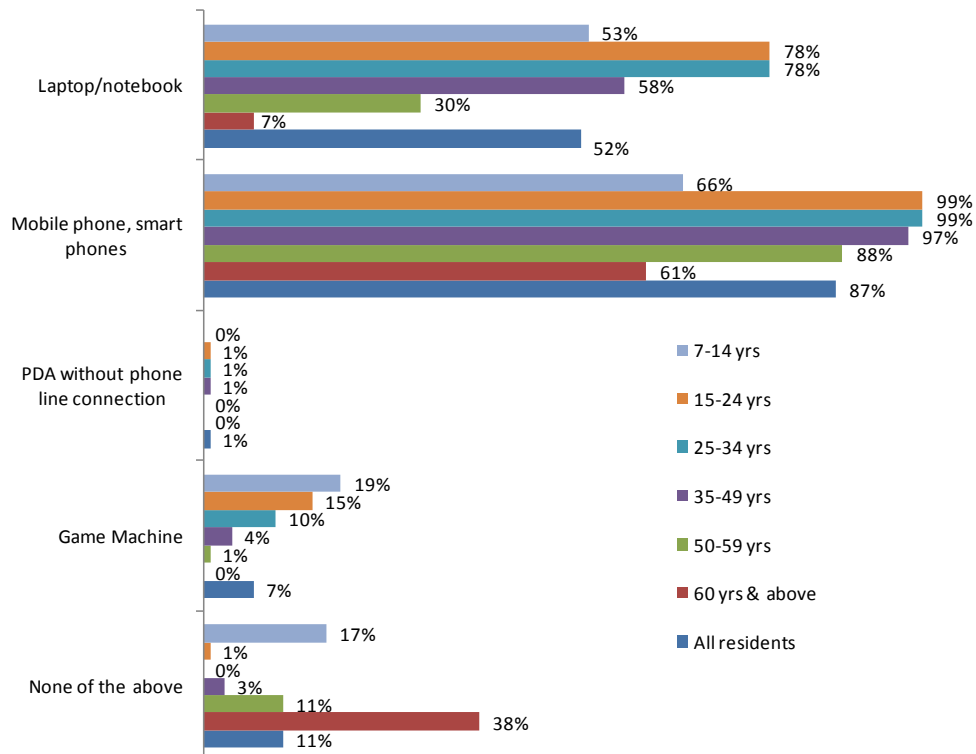


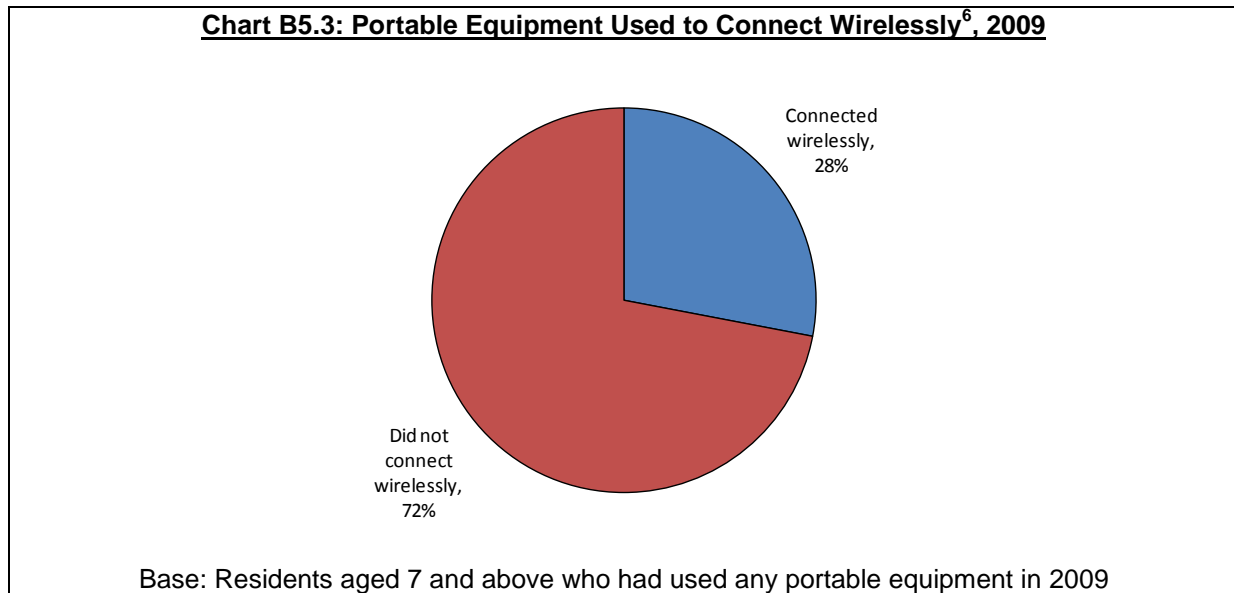
Chart B5.2: Portable Equipment Used by Age Group, 2009



Base: Residents aged 7 years and above

Wireless connection on portable infocomm equipment

Amongst residents who had used any portable infocomm equipment in 2009, 28% of them connected to the Internet wirelessly using their portable equipment (Chart B5.3).



⁶ Wireless connection excludes connection through a wireless router. It includes connection via WiFi hotspots, 3G, GSM/GPRS and wireless broadband (e.g. WiMax, 3.5G/HSDPA).

Activities engaged in on portable equipment

“Sending or receiving SMS” was the most common activity engaged in on portable infocomm equipment (Table B5.1).

Table B5.1: Activities Engaged in on Portable Infocomm Equipment, 2009

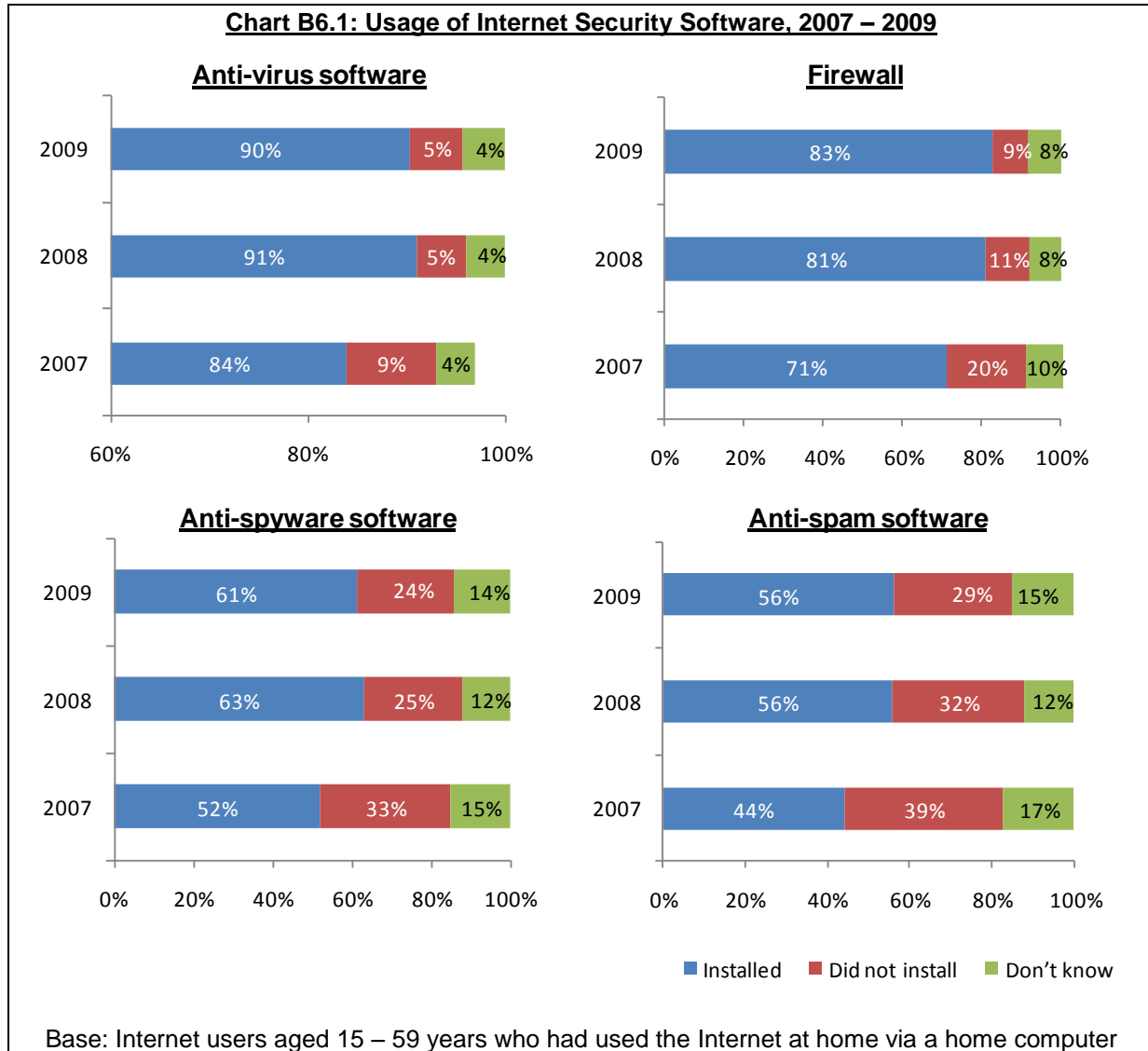
Activity	7-14 yrs	15-24 yrs	25-34 yrs	35-49 yrs	50-59 yrs	60 yrs & above	All residents
Sending or receiving SMS	69%	98%	97%	87%	62%	32%	79%
Email	23%	57%	64%	46%	27%	8%	42%
Social networks	28%	53%	42%	17%	6%	1%	25%
Web browsing	5%	27%	35%	28%	20%	6%	23%
Playing or downloading computer or video games	52%	35%	26%	11%	5%	1%	20%
Instant messaging	10%	36%	26%	12%	8%	2%	17%
Paying for goods or services	0%	13%	24%	16%	10%	3%	13%
Downloading or listening to online music	20%	31%	16%	8%	2%	0%	13%
Reading online newspapers	3%	13%	23%	16%	9%	3%	13%
Downloading or watching movies, short films or images	15%	29%	15%	9%	4%	2%	13%
Mobile banking	0%	5%	17%	12%	6%	1%	8%
Blogging - Reading blogs created by others	7%	17%	11%	6%	3%	1%	8%
Online Government services	0%	2%	11%	12%	10%	1%	7%
Sending or receiving digital photograph(s)	7%	9%	8%	4%	2%	5%	6%
Peer-to-Peer (e.g. Yahoo!, Napster, RealNetworks)	2%	9%	9%	5%	2%	0%	5%
Sending or receiving MMS	2%	6%	5%	5%	2%	4%	4%
Chat rooms	6%	7%	7%	1%	1%	0%	4%
Reading online magazines	1%	3%	5%	5%	3%	1%	3%
VoIP (e.g. Skype)	1%	5%	5%	3%	2%	2%	3%
Downloading ringtones, mobile games	4%	6%	3%	2%	1%	1%	3%
Creating / maintaining own blogs	3%	7%	4%	1%	1%	0%	3%
Downloading or uploading other media (e.g. digital photographs)	1%	4%	4%	2%	1%	0%	2%
Reading electronic books	1%	2%	4%	3%	1%	0%	2%
Watching Web television	1%	5%	3%	2%	0%	0%	2%
Education or learning activities	7%	5%	0%	0%	0%	0%	2%
Forum discussion / Posting of feedback, advice (e.g. product reviews)	1%	4%	3%	1%	0%	0%	2%
Listening to Web radio	0%	3%	3%	1%	1%	0%	2%

Base: Residents aged 7 and above who had used any portable equipment in 2009

B6. HOME INTERNET SECURITY

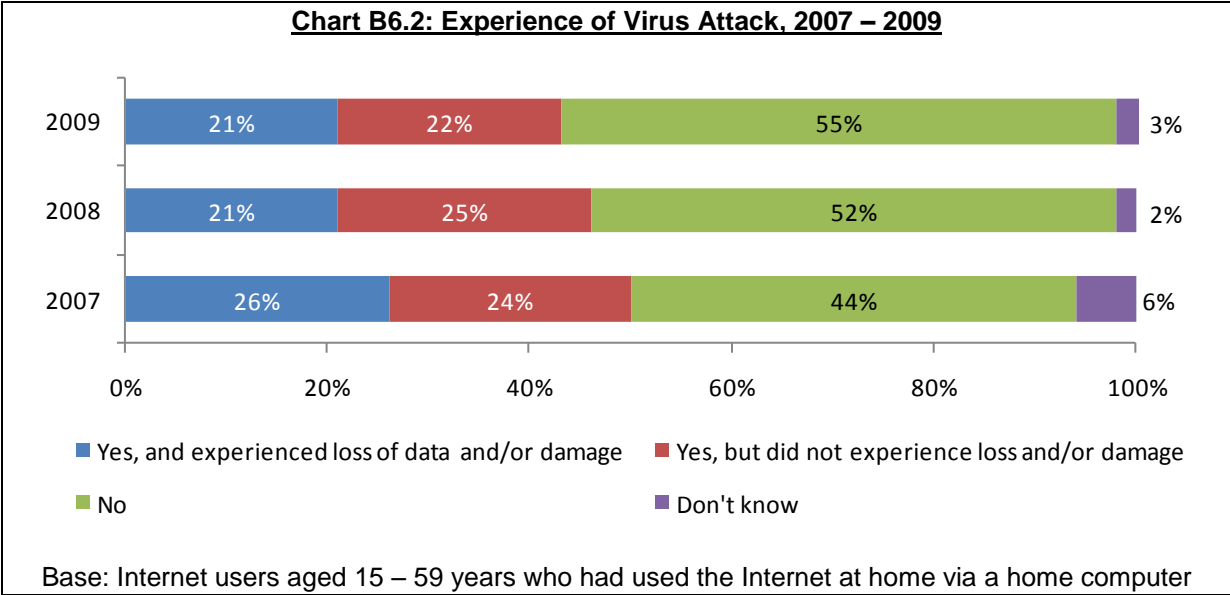
B6.1 Home Internet Security

The usage of Internet security software (firewall, anti-virus, anti-spyware and anti-spam software) remained fairly consistent from 2007 to 2009 (Chart B6.1).



Experience of virus attacks

A higher proportion of home Internet users did not experience virus attacks in 2009 (55%) as compared to 2008 (52%) (Chart B6.2).



Reasons for not using Internet security software

Among users who accessed the Internet at home via a computer and did not install one of the Internet security software (anti-virus, firewall, anti-spyware or anti-spam), about half (51%) cited that they did not think that there was a necessity to do so while 23% did not know that the protection was necessary (Table B6.1).

Table B6.1: Reasons for Not Using Internet Security Software, 2007 – 2009

No.	Reason for not using anti-virus, firewall or anti-spyware software	2007	2008	2009
1.	Don't think that the protection is necessary	40%	55%	51%
2.	Don't know that the protection is necessary	12%	21%	23%
3.	Costs of software or subscription	12%	16%	17%
4.	Lack of knowledge, skills or confidence	9%	11%	14%
5.	Others	6%	0%	0%

Base: Internet users aged 15 – 59 years who had used the Internet at home via a home computer that was not protected by one of the Internet security software (anti-virus, firewall, anti-spyware or anti-spam).

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, laptops and notebooks unless otherwise stated.
Computer access at home	Computer access at home refers to access to functional computers at home regardless of ownership (i.e. they may be owned by the household or employers and used 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.

Terms	Definition
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.
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.
Resident household	A resident household is a household with at least one resident.
Residents	Residents refer to Singapore Citizens and Permanent Residents (PRs).
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.

Terms	Definition
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.