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INTRODUCTION

SURVEY BACKGROUND

The Internet Users Survey (IUS) is a series of purpose-built surveys conducted by the Malaysian Communications and Multimedia Commission (MCMC). Since 2012, it replaced the Household Use of the Internet Use Survey (HUIS) to cater the paradigm shift of Internet use in Malaysia. The strategic intent of the survey is to:

1. estimate the percentage of Internet users in the country;
2. monitor digital divides among users;
3. study the attitude and behaviour of users towards Internet use; and
4. identify the recent trends in Internet use.

The survey findings would gauge the country's standing of Information and Communications Technology (ICT). Thus, it serves as a barometer to relevant stakeholders to carry out enhancement measures.

SURVEY OBJECTIVE AND SCOPES

The Internet Users Survey 2016 (IUS2016) main objective was to collect data for the compilation of descriptive statistics pertaining to access of the Internet by individuals living in Malaysia.

In particular, this survey was accentuated at several areas pertaining to current trends which involve:

1. patterns of getting information among users and non-users;
2. emergence of new online activities;
3. exhaustive use of social networking from frequency to societal issues;

4. adoption of users to access public services via Internet;
5. use and non-use of online financial management; and
6. e-commerce experience from the perspective of consumers.

A preliminary survey was conducted prior to IUS2016 to gather supporting information mainly focusing on general Internet usage covering access places, devices, duration, trust and importance. The findings from this survey are used to complement the prior survey.

The definition of terminologies adopted in this survey are based on international standards and existing frameworks.

METHODOLOGY

The sample population was drawn from the main users of hand phones with Mobile Station International Subscriber Directory Number (MSISDN) identical to randomly generated numbers.

The survey adopted confidence level of 95% and precision of $\pm 2\%$ for Internet users while $\pm 5\%$ for non-users. There was only one stage of sample selection as the survey adopted a simple random sample (SRS) approach. Sampling was done across networks with probability proportional to size of the networks in terms of subscriptions.

The survey was canvassed using a Computer Assisted Telephone Interview system operating out of MCMC CATI Centre in Cyberjaya and the questionnaire was also administered by CATI.

Fieldwork for this survey started on 24 October 2015 and ended on 15 January 2016. The survey reached to a sample of 2,402 Internet users and 385 non-users.

ANALYSIS

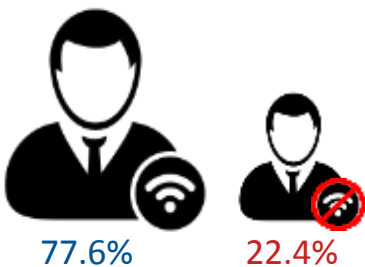
Data quality check was administered throughout the survey fieldwork and upon its completion. Next, basic frequency count was computed to assess the results pattern. Cross-tabulation was imposed between relevant indicators to identify significant relationships that would deduce meaningful inferences pertinent to the objectives.

Important findings are featured in the form of a report complemented by supporting charts and tables for the convenience of fellow readers. Time series analysis was established in demographics and socio-economic tracking whilst the findings on current trends were analysed against evolutions that took place around the world. Information from external sources are included as supplementary data to support any discoveries.

Finally, full results of the survey are appended in the form of percentage tables at the end of the report.

AT A GLANCE

Internet use & non-use



Trends

DEVICES

	Users (own/use)	Non- users
	90.7% / 89.3%	22.1%
	59.2% / 46.0%	15.3%
	58.7% / 15.8%	86.8%
	40.6% / 30.3%	14.0%

ACCESS

87.3% | 85.5%

--access the Internet--

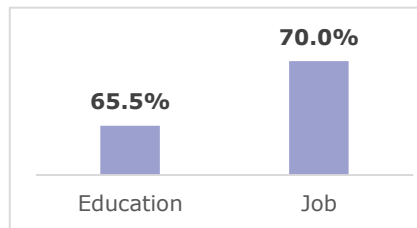
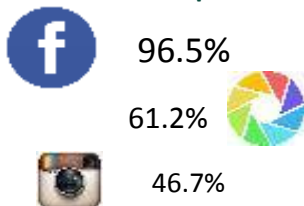
using
mobile
broadband

on-
the-go

ONLINE ACTIVITIES

92.7%	90.1%	80.0%	70.9%	59.0%	36.2%	35.3%
Texting	Seek Info	Social Network	Leisure	e-Gov	e-Bank	e-Shop

Social Media Accounts Ownership



.gov usage



**e-BANKING
non-users want**

- higher security
- simpler portal

DEMOGRAPHICS & SOCIO-ECONOMICS

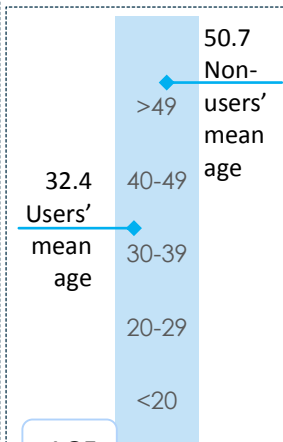


Male users
remained
prevalent among
Internet users



Female users spent
more time online

GENDER



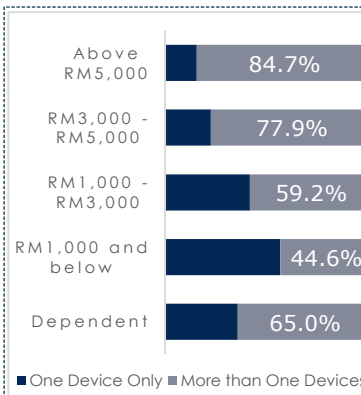
AGE

School-goers
spent longest
average online
hours in a week



20.9
hours

EDUCATION



INCOME

EXECUTIVE SUMMARY

The Internet Users Survey 2016 (IUS2016) interviewed a total of 2,787 respondents (2,402 Internet users and 385 non-users) through Computer Assisted Telephone Interview (CATI) system. The survey sourced on selected key variables vital to the industry. The variables spanned place of access, access device, purpose of Internet access, social networking, online banking, online shopping and others.

The survey draws attention to the following demographics and key variables covered by the data.

- **Older age group reporting a lower rate of Internet use.** The mean age of users (32.4 years old) and non-users (50.7 years old) showed increment compared to 2014 (users: 31.1; non-users: 46.4).
- **Smartphone is the most popular device for people to access the Internet** (89.3%) while the percentage of smartphone ownership among Internet users rose from 74.3% in 2014 to 90.7% in 2015.
- **Mobile broadband is the most preferred choice of Internet access.** In 2015, 87.3% of Internet users used mobile broadband to go online (2013: 64.3%). The on-the-go users grew significantly by 20.4% (2015: 85.5% and 2014:65.1%).
- **OTT communications lead online activities.** 92.7% Internet users used OTT messaging services to communicate and majority (90.4%) of Internet users obtain information via instant messaging.
- **Internet users have an average of four social media accounts.** 80.0% of Internet users have visited social media sites, of those, 96.5%

owned a Facebook account. An Internet user spends average of around four hours per day on social media sites.

- **59.0% of Internet users visited the government official website.** The government official websites were commonly accessed by the public for job (70.0%) and education (65.5%) opportunities.
- **Internet users were prudent over online financial activities** as the adoption of e-banking (36.2%) and online shopping (35.3%) were stationary for the past years. Security issues and their hesitance to learn complex systems were users' concerns. Overall, as many as eight out of ten online shoppers enjoyed the delightful experience and rated highly on the efficacy of e-commerce.
- **The adoption of seamless data transfer via cloud storage** was also identified in a small group of users (12.9%). On top of that, the acceptance of smart home among users was welcoming (45.5%).

The survey reveals that Malaysians are savvy in multitasking with several devices by accessing through various platforms and the Internet is commonly used in administration, communication, business and security. Therefore, responsible parties should play a positive role in increasing the awareness and adoption of new ICT among Malaysians.

MAIN FINDINGS

INTERNET USE AND NON-USE

The percentage of Internet users in 2015 showed a remarkable increase of 11.0 points (2015: 77.6% and 2014: 66.6%) making the online community from two-third to three-fourth of the entire national population. The number of Internet users in 2015 was approximately 24.1 million (or 77.6% of all inhabitants in Malaysia)¹.

Among non-users, 13.2% were ex-users while 86.8% exclusively never used the Internet. The distribution of non-users comprised of 4.4% of pre-teens and teens, 57.0% of adults below 50 years old and the remaining 38.5% were seniors. The mean age of non-users was 50.7 years old, an increase of 4.3 years compared to 2014. This shows that more seniors are using the Internet.

The Internet is often characterised by its capability to provide a wide variety of information to the users. Nevertheless, non-users found that instead of the Internet, they could rely on conventional sources of information such as TV (75.6%), people around them (55.1%), printed media (54.0%), radio (46.0%), etc. The non-users were likely to seek information from only one source (30.1%).

In 2014, respondents ranked the absence of device at sixth place out of ten non-use reasons. However, in 2015 it was found that 97.4% of Internet non-users owned at least one device capable to connect to the Internet. It further justified that the absence of device was not among the top reasons for non-use. Lack of confidence or skills, lack of interest, not enough time, absence of Internet access and cost still prevailed.

¹ For the purpose of the survey, one was considered an Internet user if one accessed the Internet at least once in the past three months.

PROFILING THE INTERNET USERS

The Internet Users Survey 2016 determined an estimation of 24.1 million Internet users in Malaysia in 2015.

Characteristic	User Base	Population Base*	Gap
Nationality and Ethnicity			
Malaysian	92.9	92.1	+0.8
Malay	67.6	55.1	+12.5
Other Bumiputra	12.0	12.0	0.0
Chinese	13.1	23.7	-12.6
Indian	6.7	6.6	+0.1
Others	0.5	0.9	-0.4
Non-Malaysian	7.1	7.9	-0.8
Gender			
Male	59.4	51.3	+8.1
Female	40.6	48.7	-8.1
Broad Age Group			
Pre-teens and Teens (up to 19)	15.5	34.3	-18.8
Adults (20-49)	76.1	47.2	+28.9
Seniors (50 and above)	8.4	18.5	-10.1
Residence			
Urban	62.1	74.3	-12.2
Rural	37.9	25.7	+12.2
States**			
Northern Region	20.2	21.2	-1.0
Central Region	33.6	29.0	+4.6

Southern Region	13.6	14.5	-0.9
East Coast Region	16.4	14.7	+1.7
Eastern Region	16.2	20.6	-4.4
Educational Level***			
Tertiary	35.1	12.8	+22.3
Post-secondary	7.9	6.9	+1.0
Secondary	45.9	52.9	-7.0
Primary	11.0	27.5	-16.5

Table 1: Internet users profile against national population statistics

*source: Population and Housing Census of Malaysia 2010

**Northern Region includes Kedah, Perak, Perlis and Pulau Pinang; Central Region includes Negeri Sembilan, Selangor, W.P. Kuala Lumpur and W.P. Putrajaya; Southern Region includes Johor and Melaka; East Coast Region includes Kelantan, Pahang and Terengganu; Eastern Region includes Sabah, Sarawak and W.P. Labuan

***Individuals who received formal education only

DEMOGRAPHICS

The Internet users were distributed in proportionate to the national population statistics in terms of nationality and states. The distribution of gender, age group and urban-rural dissection, however, showed disparity against the national population statistics.

States

Connectivity is available nationwide with equal opportunity for all inhabitants to access the Internet. The survey recognised that the distribution of Internet users is proportionate to the population distribution across the country as shown in Figure 1.

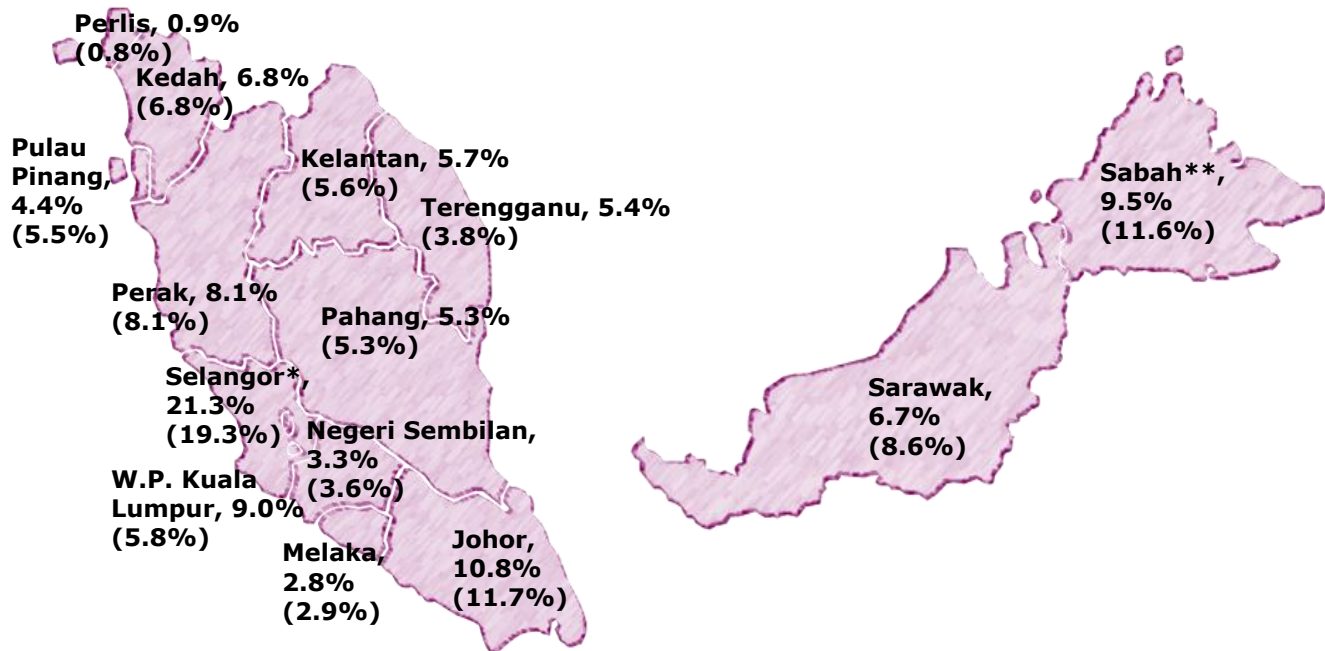


Figure 1: Percentage distribution of Internet users by state of residence compared with national projected population base, in bracket

*includes W.P. Putrajaya; **includes W.P. Labuan

Ethnicity

There were 67.6% Malay respondents followed by 13.1% Chinese. This is reflective of national distribution. The composition of ethnic of Internet users in Malaysia is shown in Figure 2.

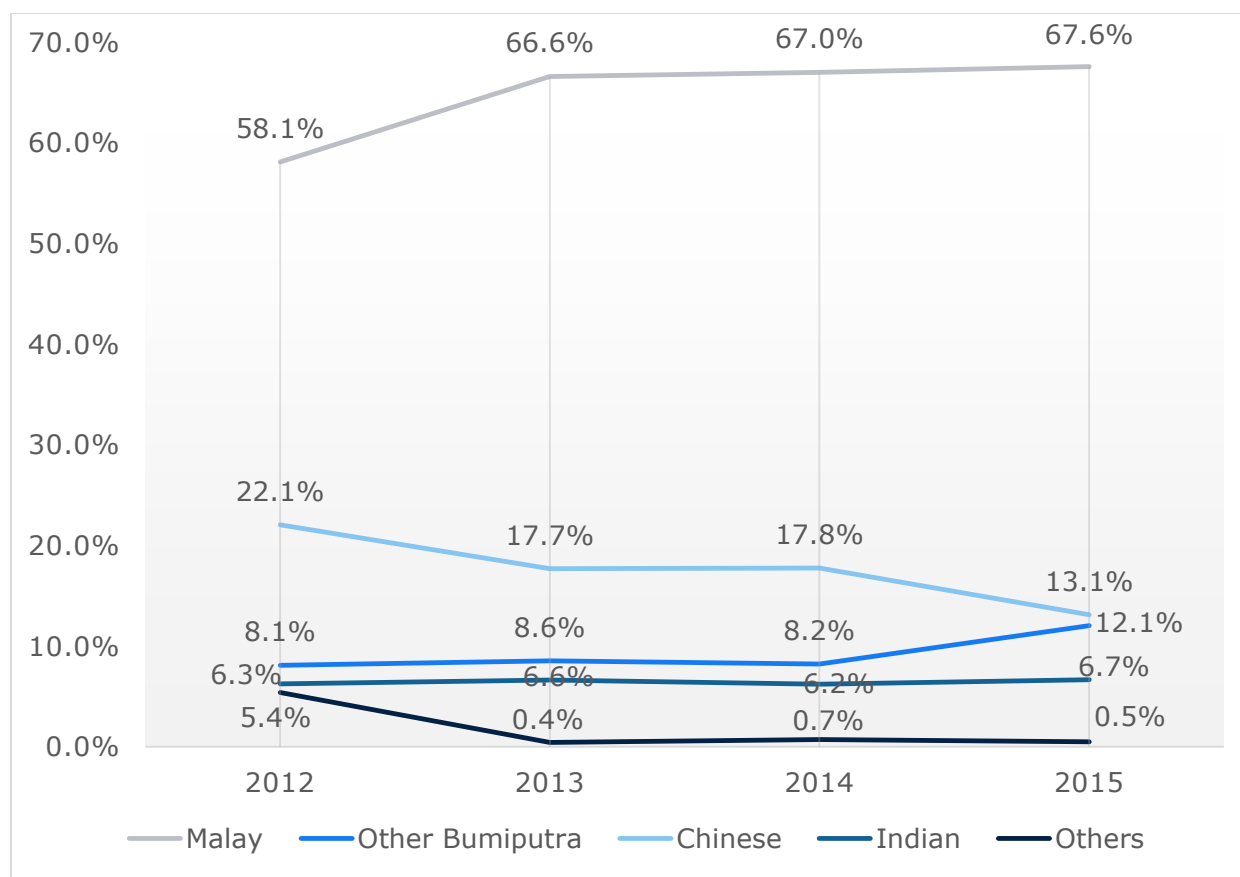


Figure 2: Percentage distribution of Internet users by ethnicity from 2012 to 2015

Gender

Male users remained prevalent among Internet users in 2015. In every five Internet users, there were at least three men (59.4%). It was also revealed that women were slightly more engaged with their Internet in terms of intensity of use.

- Female and male users had almost equal length of Internet experience at 3.8 years and 3.6 years respectively.
- On average, female users accessed the Internet for 19.1 hours weekly while men accessed for 18.6 hours.

- Comparing the places of access by Internet users, more women were accessing the Internet at home while more men were accessing the Internet at place of work.

<i>Place of Access</i>	Female	Male
<i>Home</i>	63.6%	59.1%
<i>Place of Work</i>	41.5%	49.5%

Table 2: Internet users by gender and place of access

In terms of online activities, it was found that women appear to be savvier in getting things done online:

- Compared to the Internet users within the same cohort, there were 44.9% women who shop online compared to only 28.7% men.
- Among women who accessed the Internet, 40.0% said that they performed online banking compared to only 33.4% of men.
- Access to social networking among Internet users showed that women had adoption rate of 81.0% while men 78.4%.
- Women seek for information via the Internet more than men did. It was recorded that 91.4% online women and 89.3% online men accessed the Internet to obtain information.

Age Group

The adoption rate amongst Internet users was decreasing as the range of age ascends. However, the average age of Internet users (32.4 years old) and non-users (50.7 years old) showed increment compared to 2014 data which significantly indicated that higher age group are joining the online community.

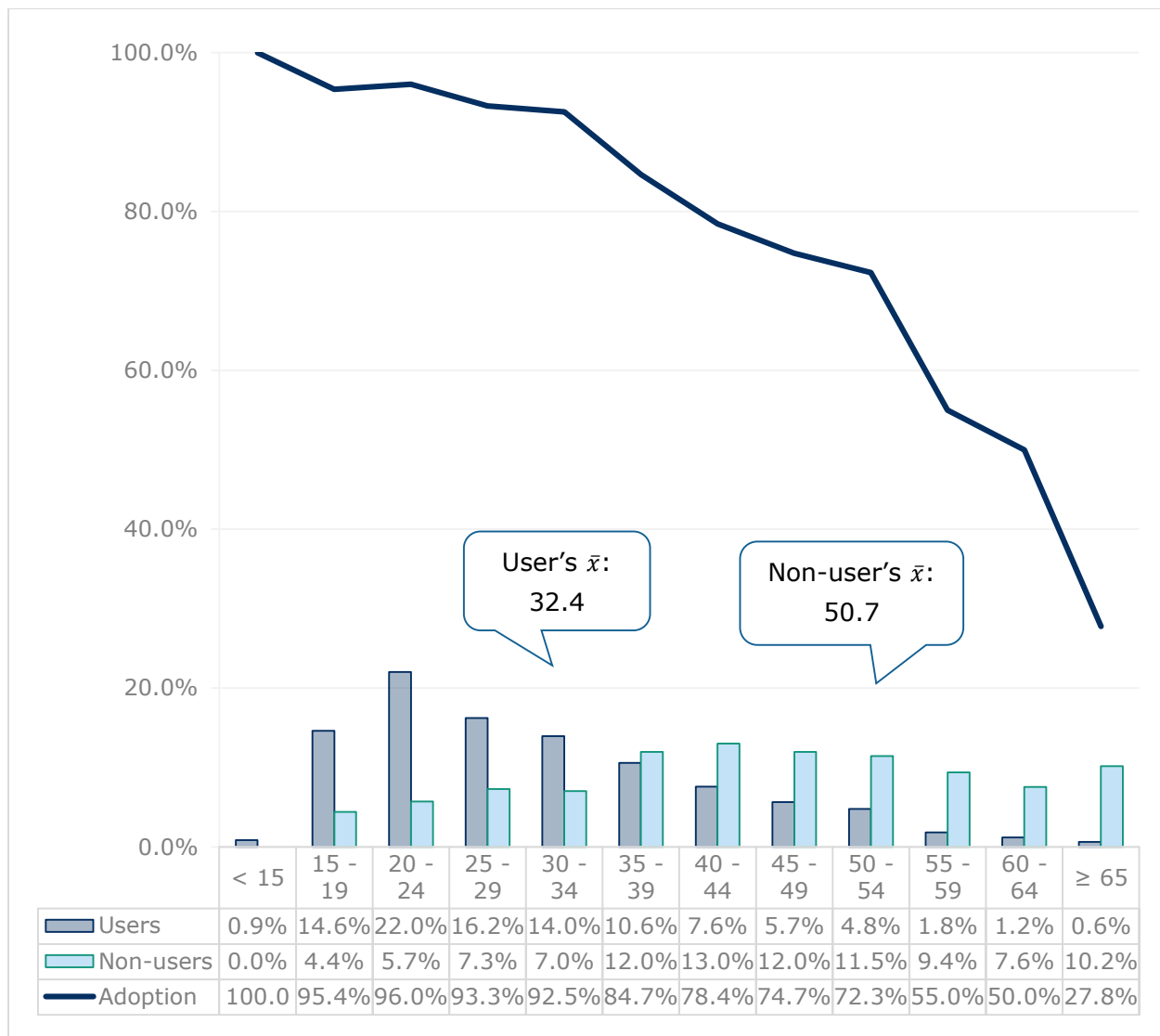


Figure 3: Bar chart – Percentage distribution of Internet users and non-users by age group; Line graph – Adoption rate of Internet users by age group

In terms of Internet experience, 31.9% of Internet users were connected as early as five years old. Comparing to the respective broad age group, the average years of Internet experience for pre-teens and teens (up to 19) was 2.8 years, adults (20-49) at 3.8 years while seniors (50 and above) at 4.1 years.

Urban-rural Dissection

There were 62.1% Internet users who claimed that they were from the urban area while 37.9% said that they were from the rural area. Meanwhile, the DOSM found that the ratio of urban against rural in Malaysia was 74.3:25.7².

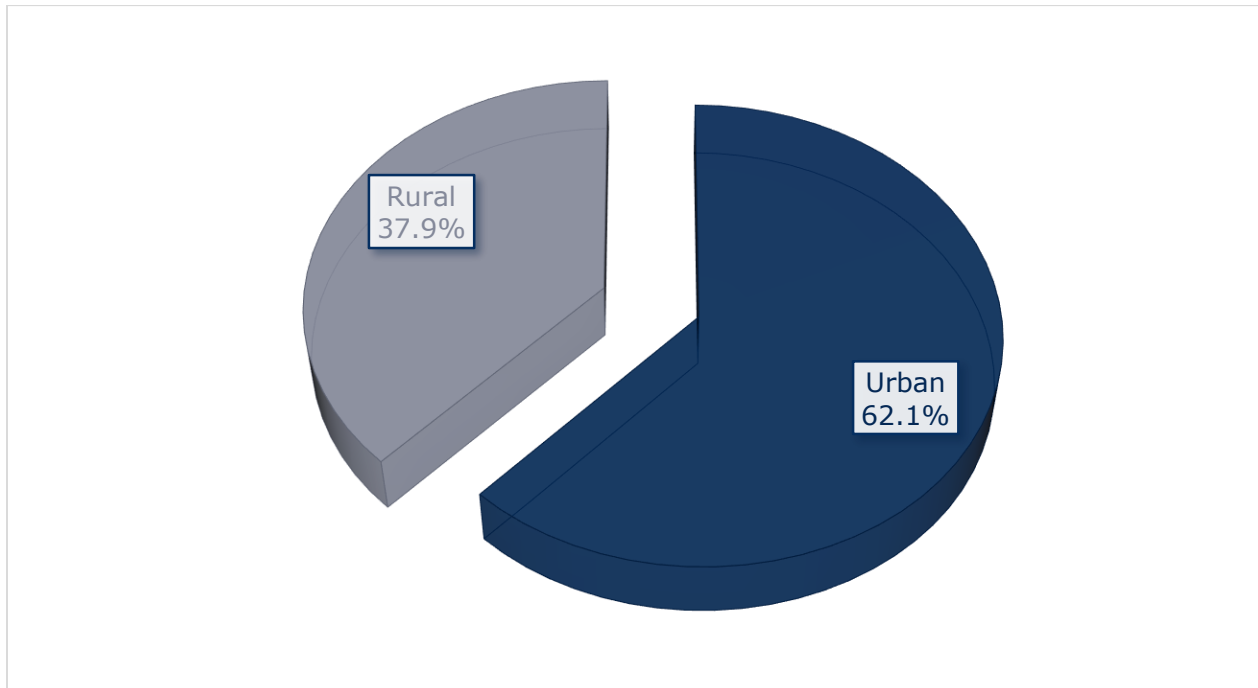


Figure 4: Percentage distribution of Internet users by urban-rural dissection

SOCIO-ECONOMICS

Two key measures of the socio-economics of Internet users were the educational attainment and income disparity. The survey identifies that educated individuals were more likely to use the Internet than those who received lesser formal education while those who earned more were likely to use more than one online devices.

² Mid-year population estimates based on Population and Housing Census of Malaysia 2010

Educational Attainment

Educational attainment appeared to be a significant indicator to access the Internet. In Malaysia, Internet users were largely educated to at least upper secondary level (66.1%). Meanwhile, among 18.9% respondents who were still studying, 60.8% of them were already attending college or university. However, the absence of formal education among 1.0% of respondents did not hinder them from accessing the Internet.

Looking at the average hours spent online, the frequency increased alongside the level of educational attainment among individuals who received formal education. More interestingly, individuals who had never received formal education spent an average of 17.9 hours in a week online, higher than respondents educated up to secondary (16.9 hours) and primary (15.6 hours) levels.

School-goers spent the most time online. On average, a student spent three hours in a day to access the Internet. In addition, 94.7% claimed that they used the Internet for study purposes.

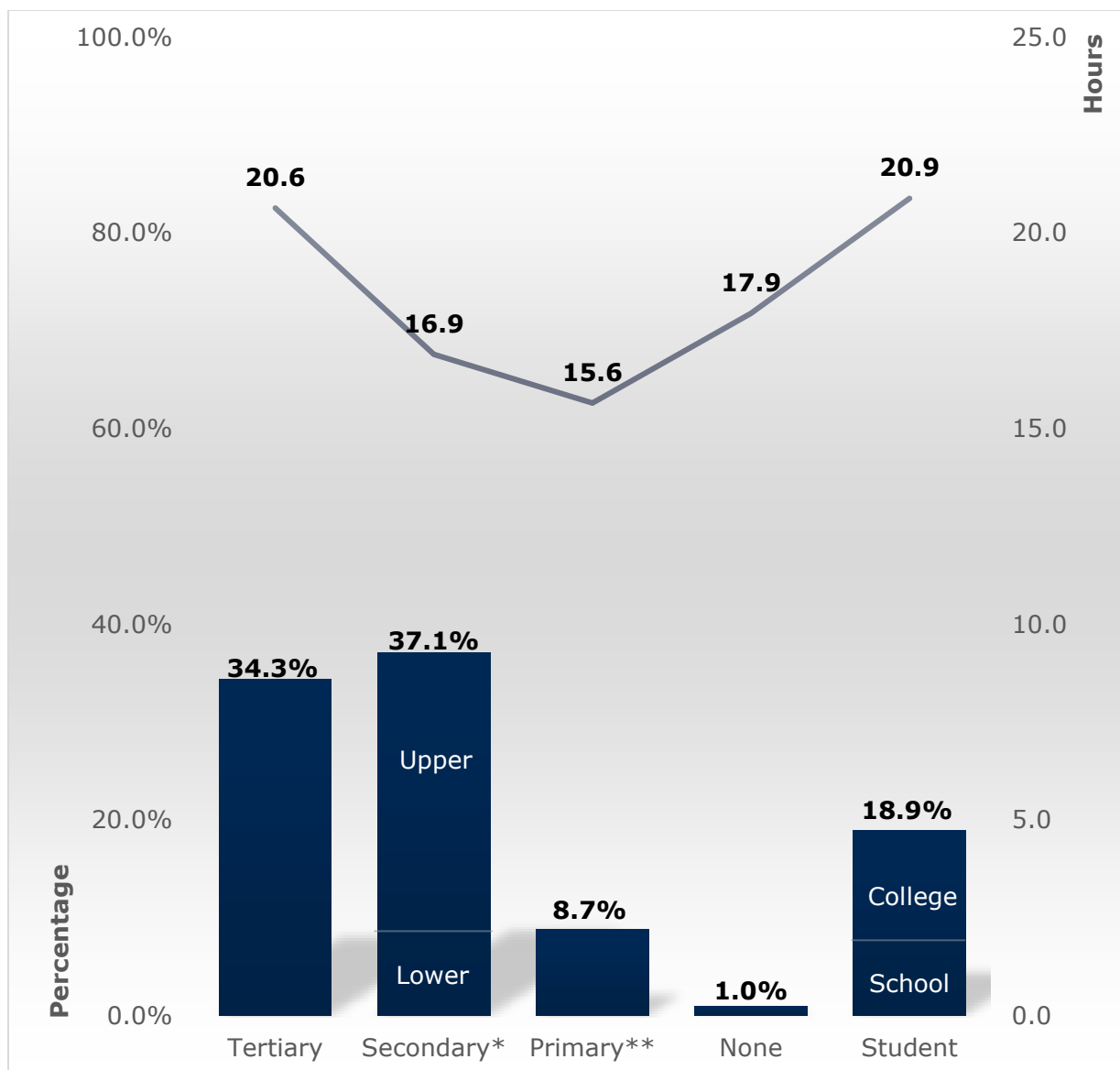


Figure 5: Bar chart – Percentage distribution of Internet users by highest educational attainment; Line graph – Average hours spent in a week by Internet users by educational attainment

*Upper Secondary: SPM/SPVM/Sijil 4 Thanawi/SMA; Lower Secondary: PT3/PMR/UEC-Junior Middle Three

**Primary school level includes respondents with partial lower secondary school attainment

In an effort to bridge the digital divide, MCMC under the National Broadband Initiatives (NBI) has set up 1Malaysia Internet Centre or *Pusat Internet 1Malaysia (PI1M)* where they act as a one-stop technology centre for nearby residents to access the Internet, participate in ICT classes and use the ICT

facilities. These efforts have benefited those in the rural areas, especially students.

Income Disparity

Respondents from all income categories had a fair share of opportunity to go online. There was no significant digital divide in terms of income level. Most Internet users came from the income group of RM1,000 – RM3,000.

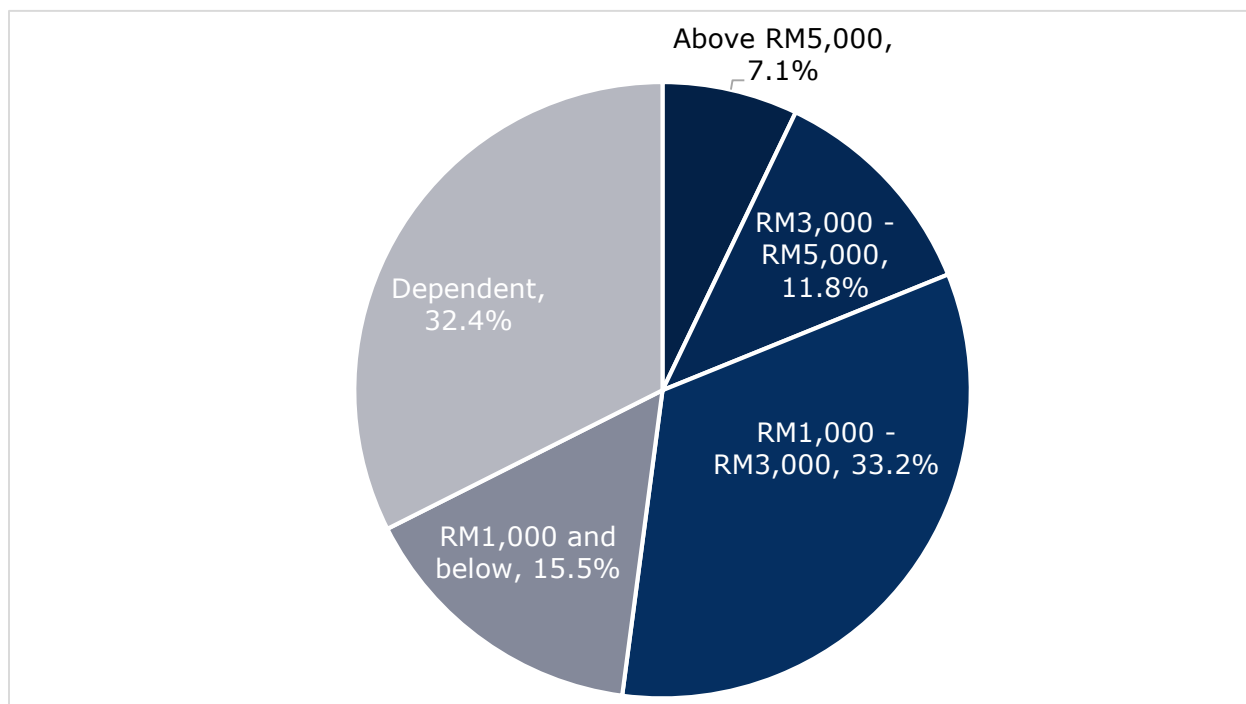


Figure 6: Percentage distribution of Internet users by income group

Additionally, the cost to get connected was not a major contributing factor for non-users of Internet. Amongst the non-use factors identified over the years, cost of connection has been less significant to defer someone from using the Internet.

Cost too high	2012	2013	2014	2015
No	86.7%	80.9%	86.3%	89.0%
Yes	13.3%	19.1%	13.7%	11.0%

Table 3: Percentage of non-users who said that the high cost of Internet connection is one of the reasons they do not go online

However, it was evident that device usage increases with the rise of income bracket. The survey found that Internet users from higher income level tend to access the Internet through multiple devices.

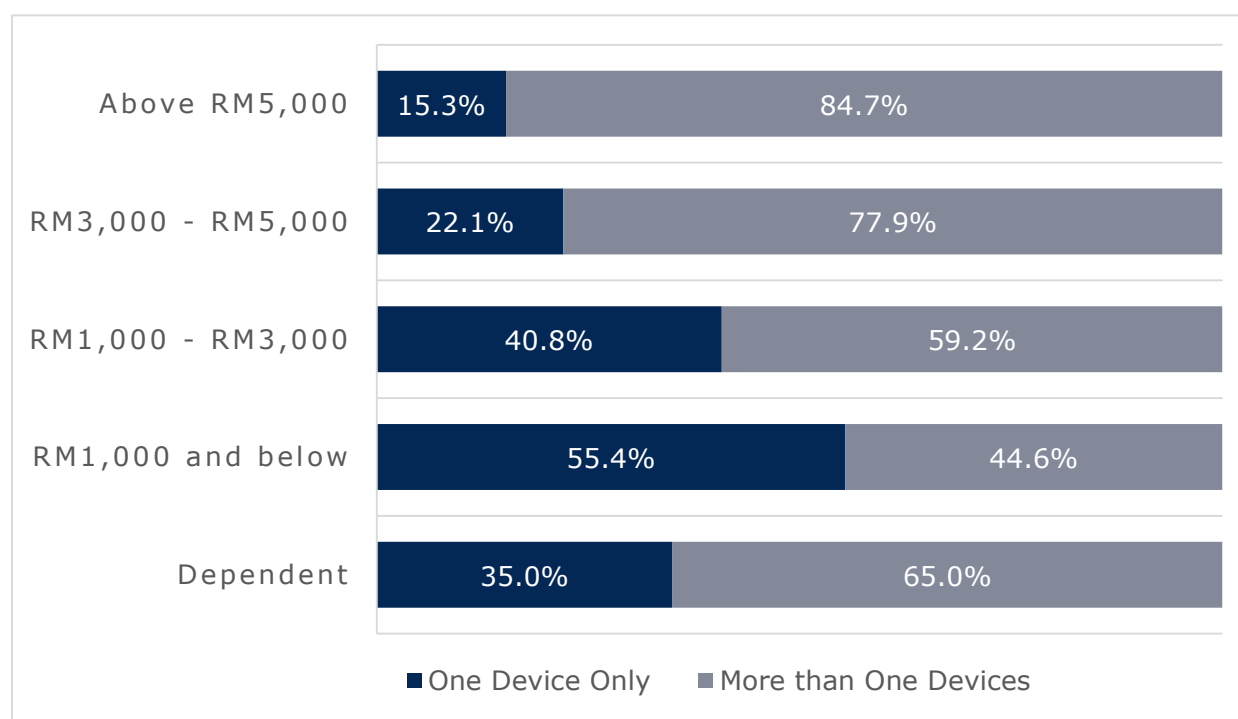


Figure 7: Percentage of Internet users with one or more than one device to access to the Internet by income level

TRENDS

In this section, the technology environment was assessed to identify the emergence of new gadgets and online activities. Focus was also placed on selected online activities such as social networking, Internet banking and government online services.

ICT @ Work

Information technology has changed the way we work. Corporate and education hubs put in efforts to equip existing and future workforce with ICT skills. 38.9% of Internet users said that their profession does not require any ICT skills whilst 43.2% claimed that they required minimum ICT skills (using a computer or software to save, protect, edit, process, transfer and retrieve information). Only 17.9% required proficiency in IT knowledge.

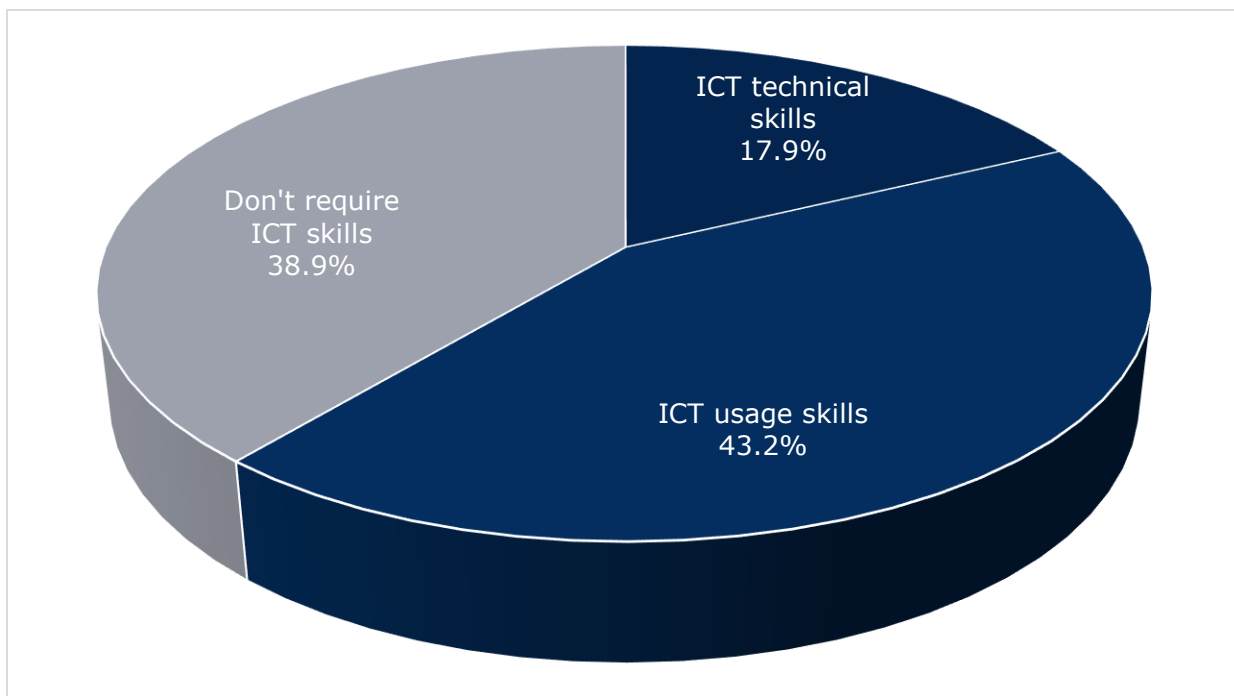


Figure 8: Percentage of Internet users by the level of ICT skills required at work

Technology Device

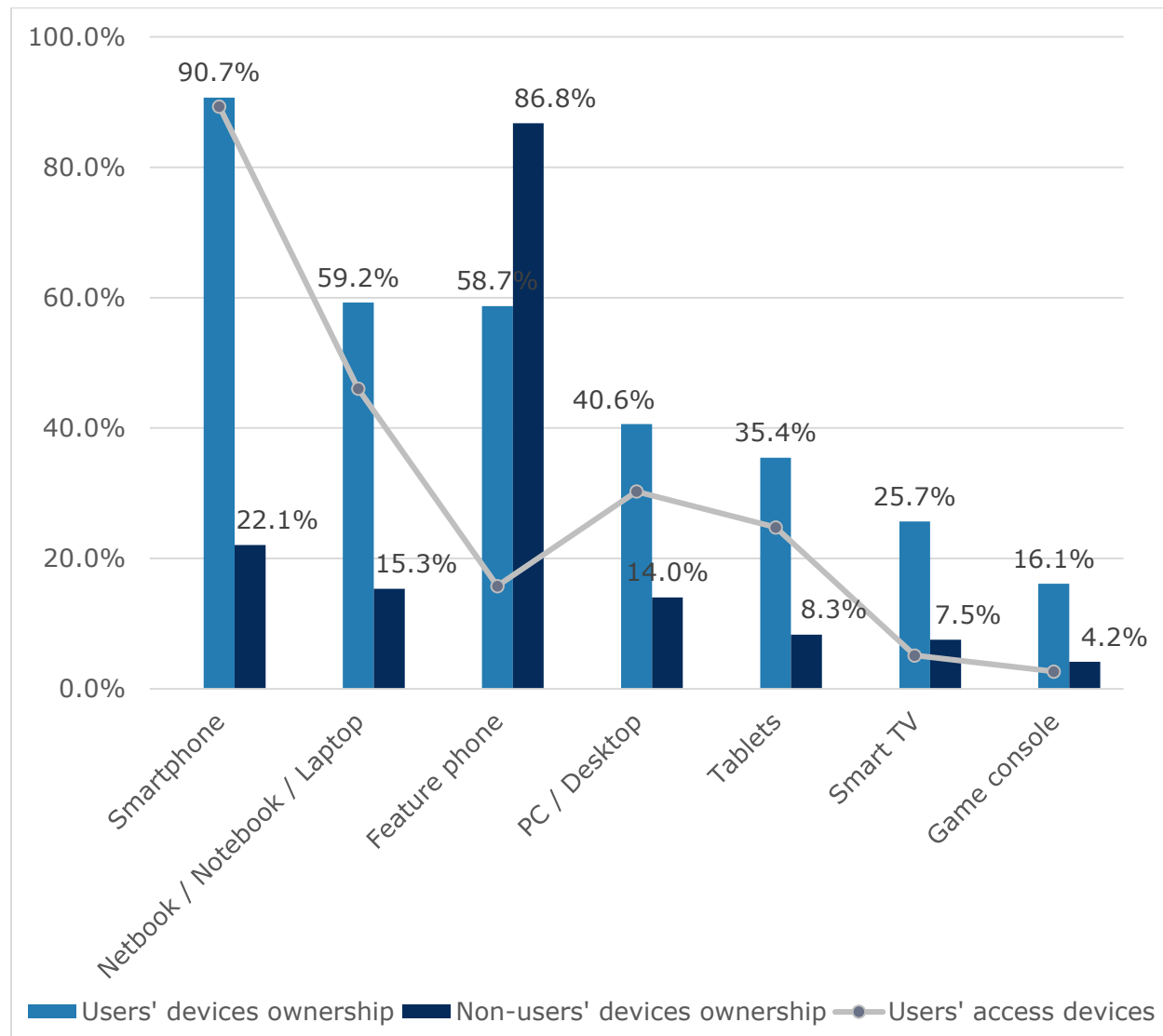


Figure 9: Bar chart – Percentage of Internet users and non-users by ownership of Internet accessible devices; Line graph – Percentage of device used by Internet users to access the Internet

Smartphones were the most commonly owned Internet access device among all Internet users in Malaysia. The percentage of smartphone ownership rose from 74.3% in 2014 to 90.7% in 2015. Similarly, take-up of tablet and smart TV continue to increase over the past three years, with 35.4% of Internet users having tablets, and one quarter of them (25.7%) have smart TV.

Ownership of netbook/notebook/laptop (59.2%) and feature phone (58.7%) by users were almost equal.

While smartphone remained the most popular means for people to access the Internet (89.3%), 46.0% said they used netbook/notebook/laptop to go online as well. This is followed by PC/Desktop (30.3%), tablet (24.8%), feature phone (15.8%), smart TV (5.1%) and game console (2.7%), regardless of device ownership.

Although equipped with Internet connectivity, at least ten-percent of Smart TV were left unconnected. While 4.2% Internet users relied on TV streaming box to connect their non-smart TV to the Internet.

For non-users, they also owned Internet-enabled devices but solely for offline purposes. Only 2.6% of non-users did not have any Internet accessible device.

Most Preferred Internet Access: Technology and Place

As shown in Figure 10, mobile broadband was the most preferred choice of Internet access among Malaysians. This was reflected by a 23% increase from 64.3% (2013) to 87.3% (2015). The percentage of accessing Internet via ADSL fell by 7.8% to 21.1%, while home fibre technology increase by 4.5% to 17.7% over the same period. The main reason for the decline in ADSL was due to Internet users' migration to a higher bandwidth connection speeds. More than half (59.6%) of Internet users used free Wi-Fi to go online, accounted more than double of those who used fixed broadband (21.1% of ADSL and 17.7% of home fibre subscriptions). Technology advancement like faster speeds and larger data allowances suggested that mobile broadband is a viable alternative to fixed broadband services.

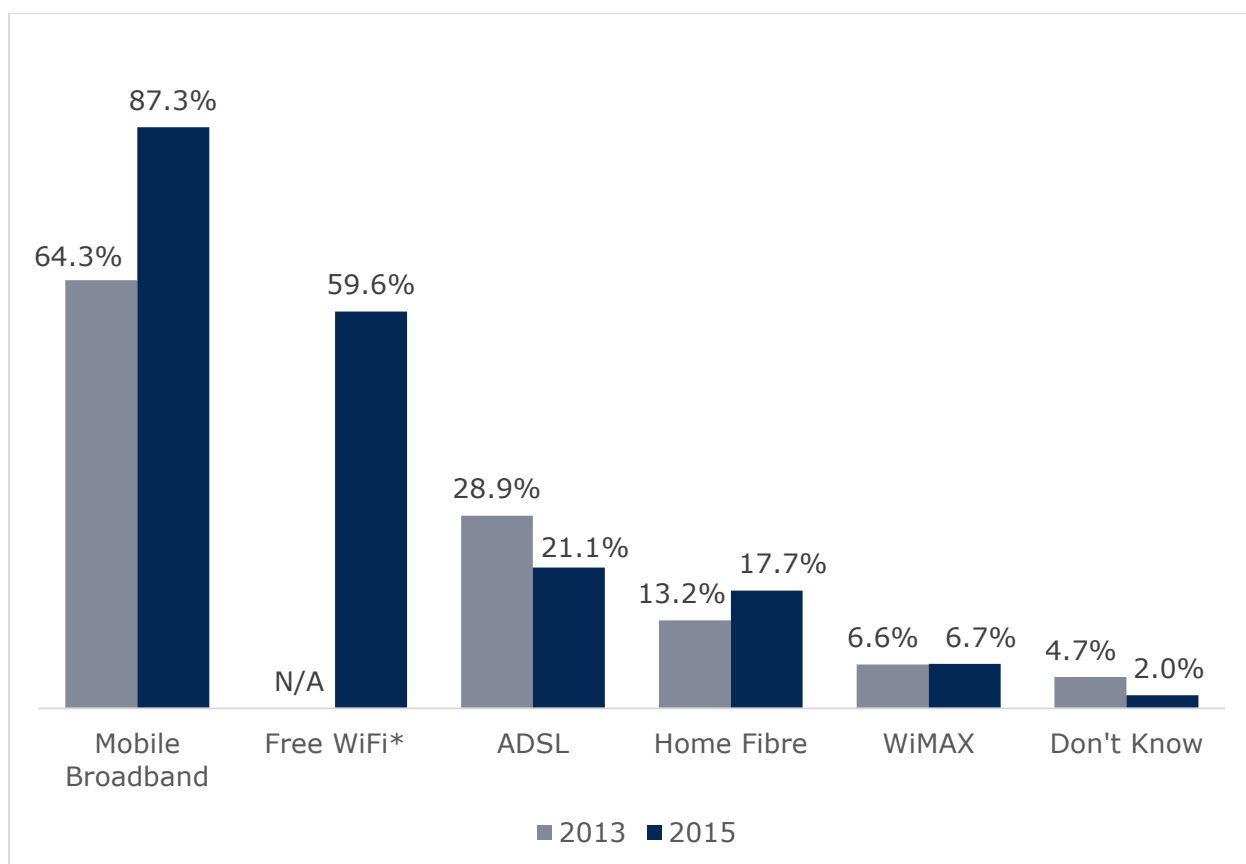


Figure 10: Percentage of Internet users by the type of Internet access in 2013 and 2015

*Free Wi-Fi was excluded in the 2013 questionnaire

Looking at the trend by places of Internet access (Table 4), on-the-go users grew significantly by 20.4% from 2014 to 2015. Similarly, users using free Wi-Fi anywhere and users accessing Internet at another person's home increased by 10.7% and 9.1% respectively over the same period. This was mainly due to free connection and at the same time save one's mobile data consumption.

Commercial Internet centres collect a fee from its patrons to access the Internet. There were 37.3% of Internet users who frequented these places like cybercafés that provide fully networked gaming session which could be hardly set-up elsewhere. The percentage of users visiting public Internet

centres such as *PI1M* and public libraries also increased at an encouraging pace in the past two years. These facilities imposed a minimal fee or do not charge its patrons. Although Internet access at place of education increased to 20.2% from 17.2% in 2014, it still remained the least preferred place.

On the down trend, home users started to decline while connectivity at place of work plateau.










Place	2012	2013	2014	2015	TREND
On-the-go (have mobile broadband)	24.3%	22.0%	65.1%	85.5%	
Free Wi-Fi anywhere	22.8%	31.0%	50.6%	61.3%	
Home	63.1%	73.9%	73.0%	61.0%	
Place of work	34.8%	36.7%	46.6%	46.0%	
Another person's home	5.3%	5.9%	32.1%	41.2%	
Commercial centres	18.6%	10.8%	29.3%	37.3%	
Community centres	1.8%	2.6%	19.4%	30.0%	
Place of education	5.6%	13.5%	17.2%	20.2%	
Other locations	1.4%	0.5%	0.2%	0.1%	

Table 4: Percentage of Internet users by places of access in 2012 – 2015

What do Netizens Do Online?

The Internet has transformed the ways in which people communicate. On average, users spent 18.8³ hours online in a week, equivalent to 2.7 hours in a day. This was more than the average hours spent by users watching TV (2.5 hours) in 2014.

Over-the-top (OTT) messaging services, providing the instant chatting experience anytime and anywhere is showing an increasing trend. Nine in ten (92.7%) Internet users used OTT to communicate with friends and family. Apart from texting, the use of Internet telephony services was consistently on the rise reaching up to 39.1% of users, increased by 4.9% from 2014.

The Internet remained as an important source of information for 90.1% users, while 80.2% said they were 'hooked' on social media. For leisure activities, streaming video or watching online TV was preferred by 70.9% of users followed by listening to music (64.2%), downloading music or video (57.4%), reading e-publications (50.1%) and playing computer games (43.7%).

In addition to entertainment, the Internet also provided convenience to students and educators to have virtual group discussion, conduct research, find reference material, etc. As such, about two-third (67.5%) of Internet users used Internet as a study space (not restricted to students who contributed to 18.9% of user base).

³ Hour spent online in a week was with maximum cap at 42 hours for the computation of mean.

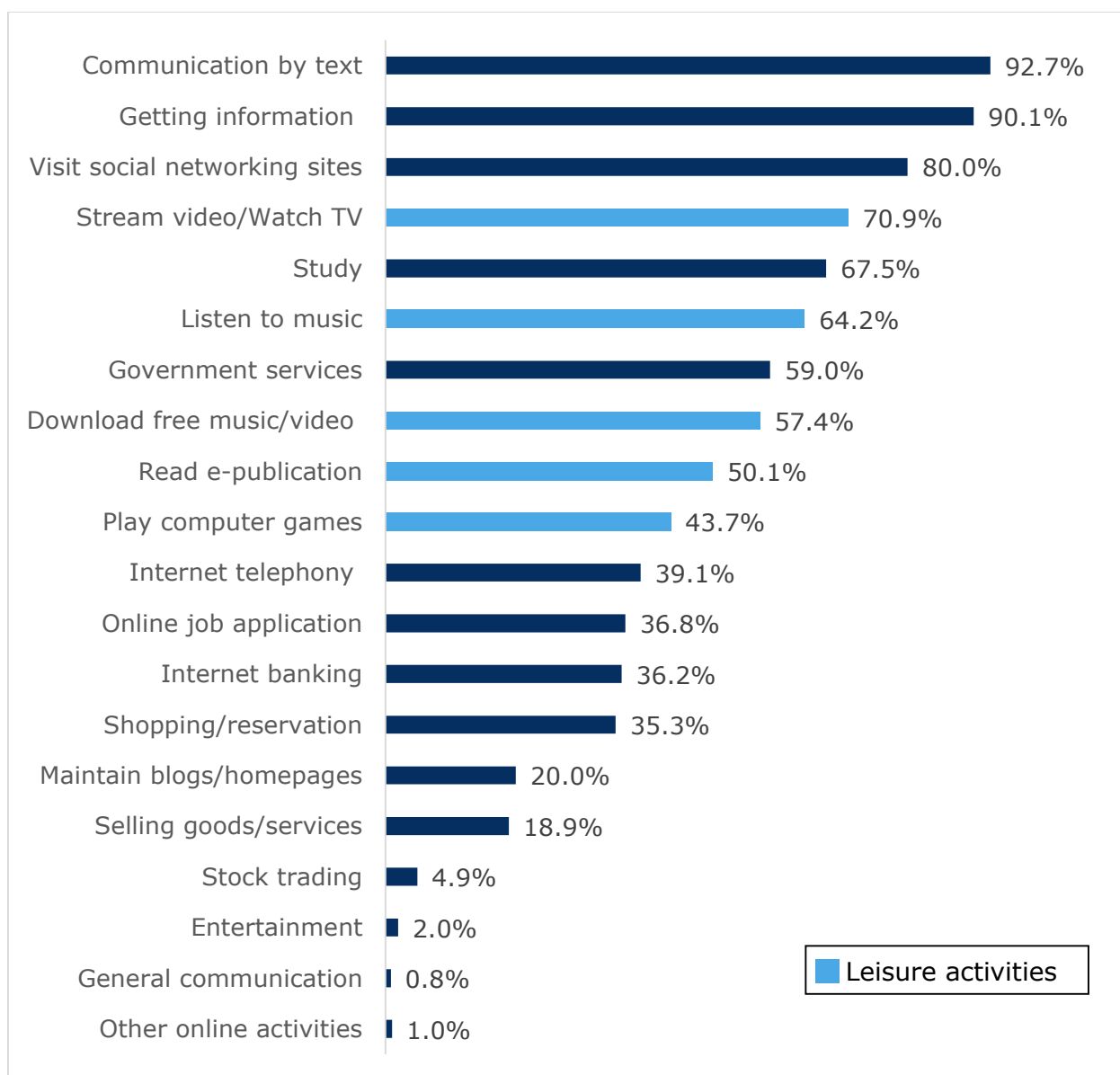


Figure 11: Percentage of Internet users by online activities

The survey also assessed on how the Internet transformed the way government and citizens interact. There were 59.0% users who got connected to the public services through the Internet. Meanwhile, 36.8% of Internet users found that it was convenient to apply for jobs online. From the e-commerce perspective, although the percentage of users who did online-

shopping has reduced by 2.7%, the Internet banking activities increased by 1.1% in comparison to the previous year.

Online Activities	2014	2015
Getting information	88.2%	90.1%
Visit social networking sites	87.1%	80.0%
Government services	60.4%	59.0%
Internet banking	35.1%*	36.2%
Shopping/reservation	38.0%	35.3%

Table 5: Percentage of Internet users by selected online activities in 2014 and 2015

*Internet banking was included in 'Financial activities' as a purpose of Internet use in IUS 2014

In general, the Internet use was somewhat shaped by the users' level of trust towards the Internet. It was found that 45.6% trusted the Internet whilst 38.5% felt otherwise. The remaining 15.9% were neutral.

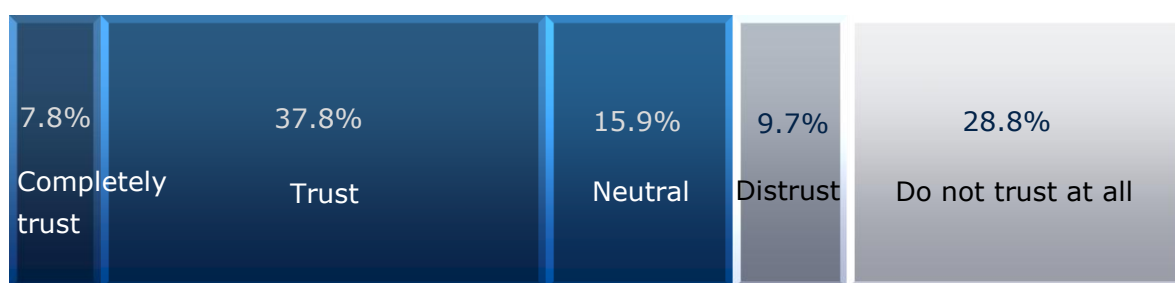


Figure 12: Percentage of Internet users by level of trust in the Internet

Information is power

The survey found that nine out of ten Internet users go online to get information they needed. These information seekers also relied on other sources, such as people around them (75.0%), TV (67.0%), printed media (65.9%) and radio (50.7%). Only 0.1% claimed that they did not have to find any information at all. The Internet has transformed how people search for information, shifting the culture from passive information receiver to active information seeker.

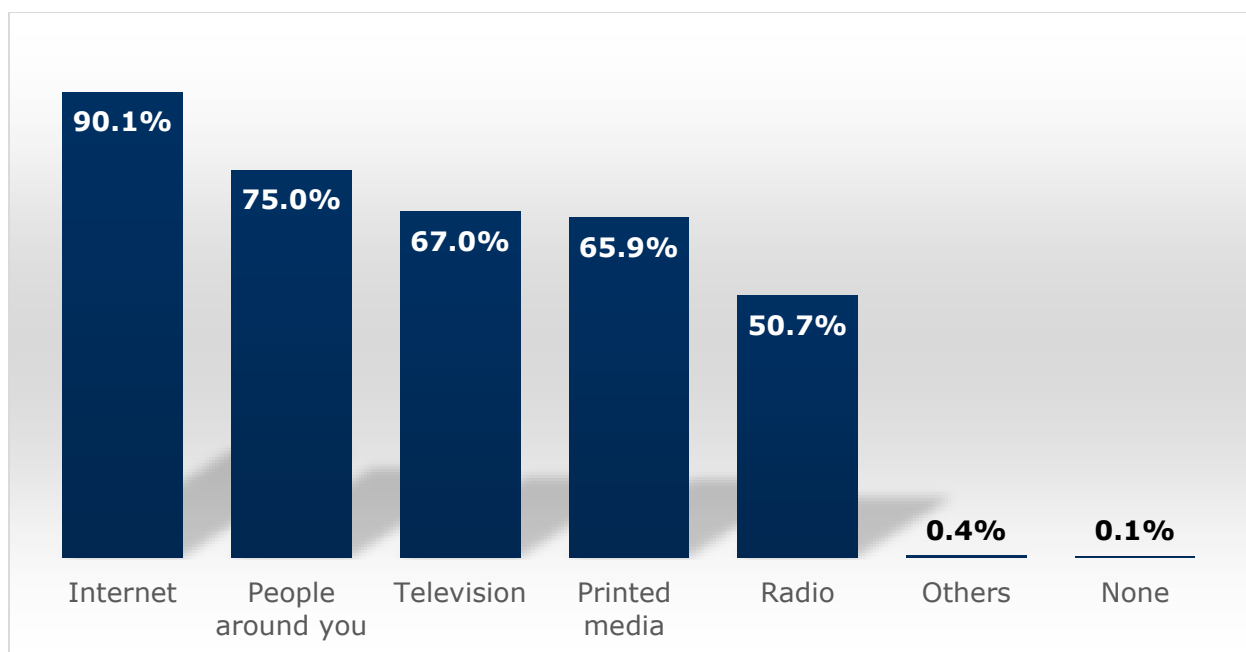


Figure 13: Percentage of Internet users by types of information sources

Meanwhile, resorting to only one source of information could be unwise in this age of information technology. It was observed that most Internet users were vigilant by having multiple information sources in comparison to the non-users, whose tendency for the number of information sources was relatively limited. Amongst non-users with only one information source (30.1%), most of them obtained information from TV contents (42.2%).

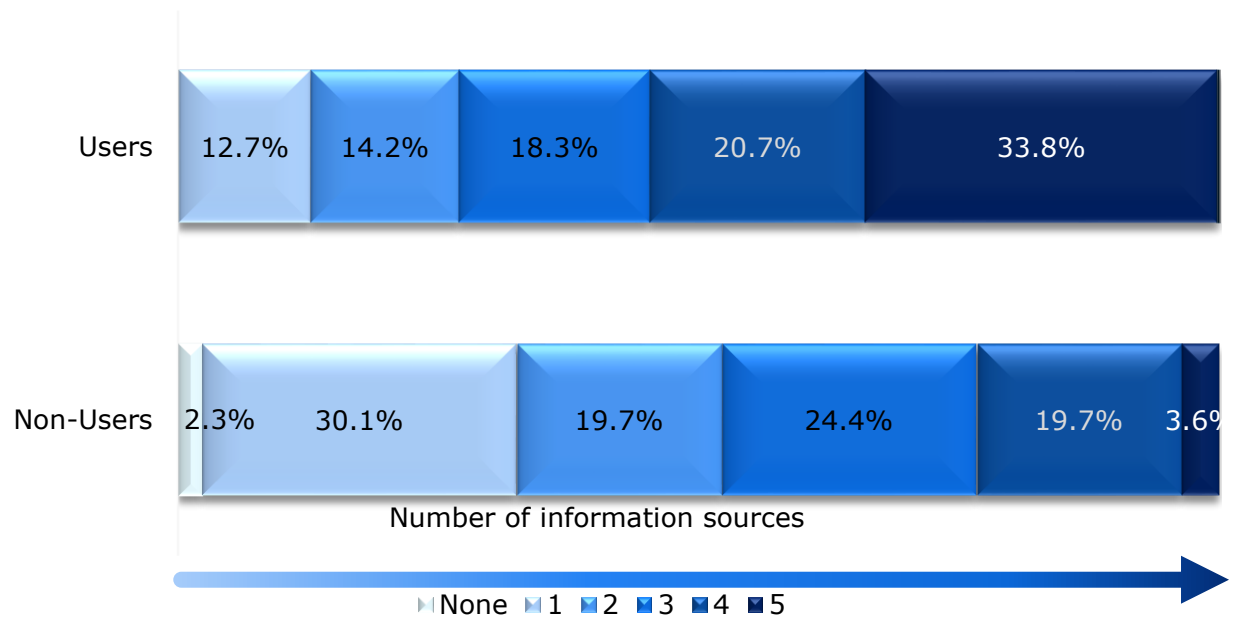


Figure 14: Percentage of users and non-users by number of information sources

Among users who regarded the Internet as the source of information, 90.4% claimed that the information was obtained from instant messaging. Information searched via search engine appeared to be secondary at 87.2%, followed by information obtained from the social media (86.9%), online video (69.5%), news portal (65.5%) and online forum (24.0%).

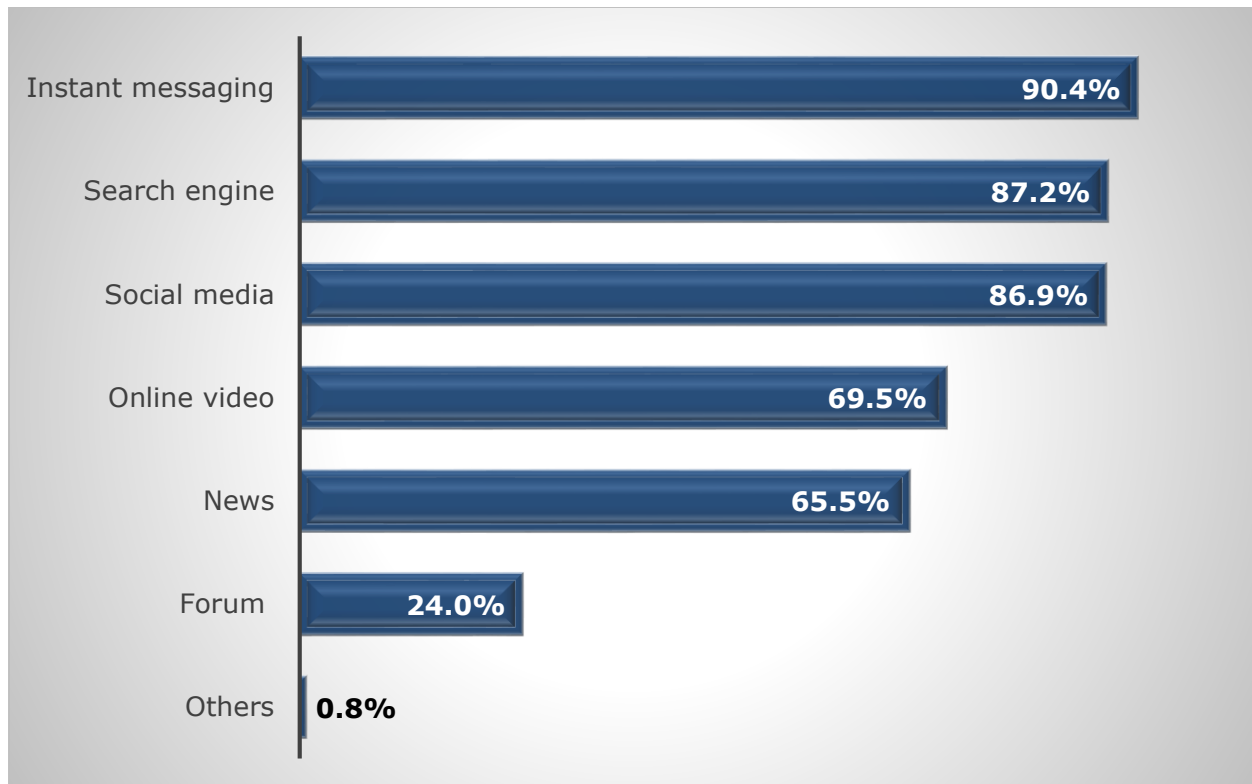


Figure 15: Percentage of Internet users who get information via Internet by types of portal

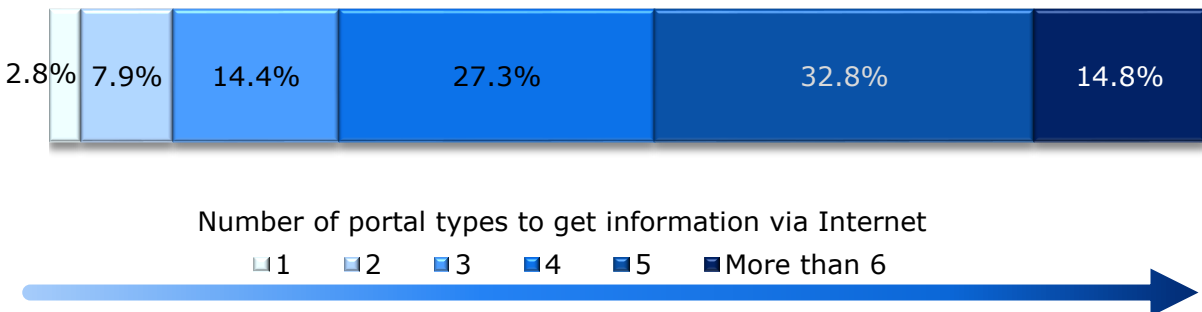


Figure 16: Percentage of Internet users by number of portal visited to get information via Internet

In getting information online, users were more selective of the source. On average, users obtained information from only four types of portals, while one-third of Internet users obtained inputs from as many as five types of online portals.

Social Networking

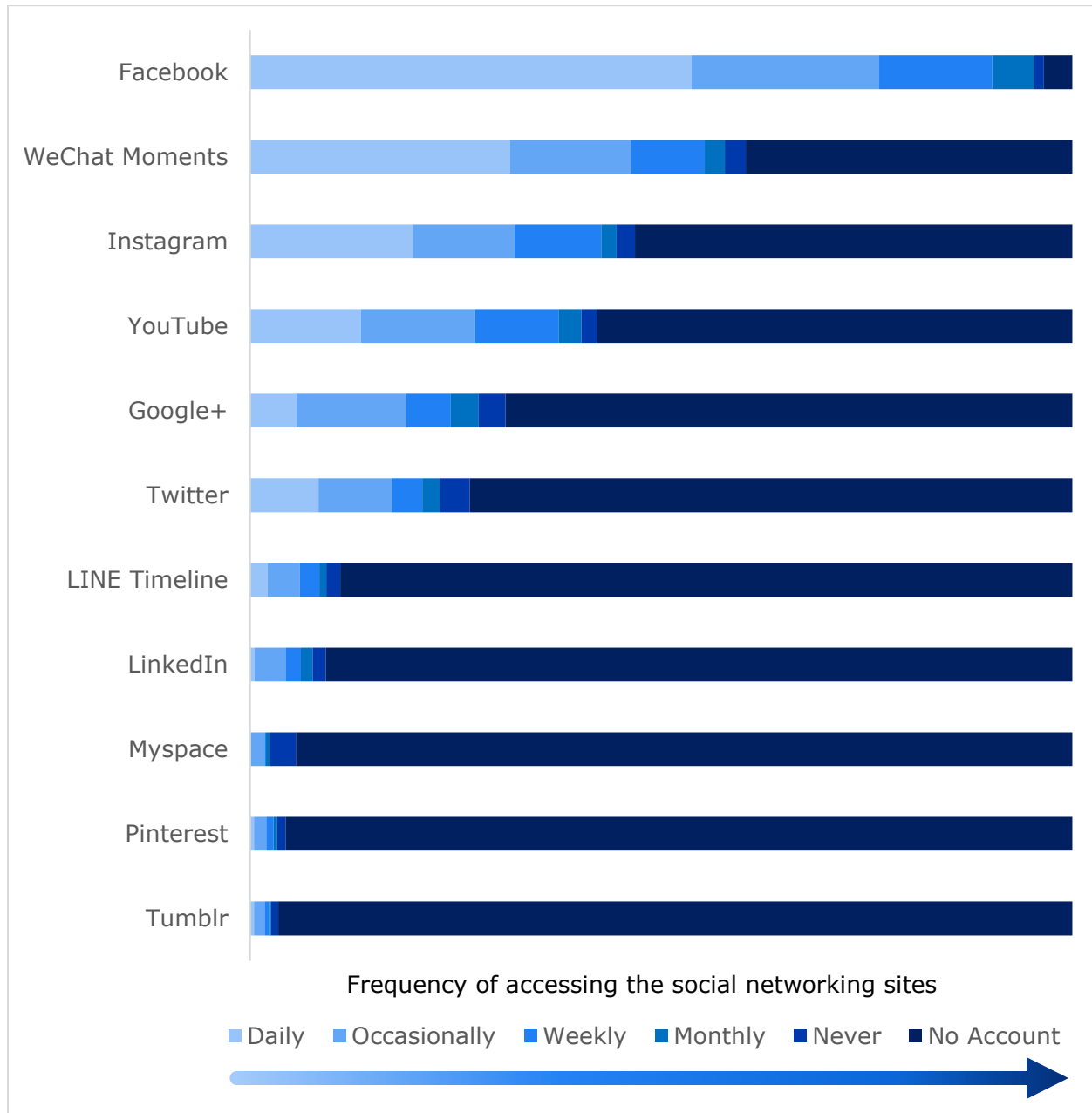


Figure 17: Distribution of Internet users who accessed the social networking sites by frequency

Eight in ten Internet users (80.0%) visited social media sites, of those 96.5% claimed that they owned a Facebook account. Half of them accessed their

accounts on a daily basis. This is followed by WeChat Moments with 61.2% account ownership and 31.7% daily visitors. About 46.0% of Internet users have Instagram account and 42.1% of YouTube account users. On the contrary, social media that required some literacy skills such as Twitter and LinkedIn accounted for less than one third of users.

On average, one user registered for four types of social media account. However, 60.0% of them thought that each person should own only one account for any social media. In terms of the usage frequency in a day, these social media followers were mostly connected for four hours or less. There were 4.1% users who browsed the social media for more than twelve hours in a day.

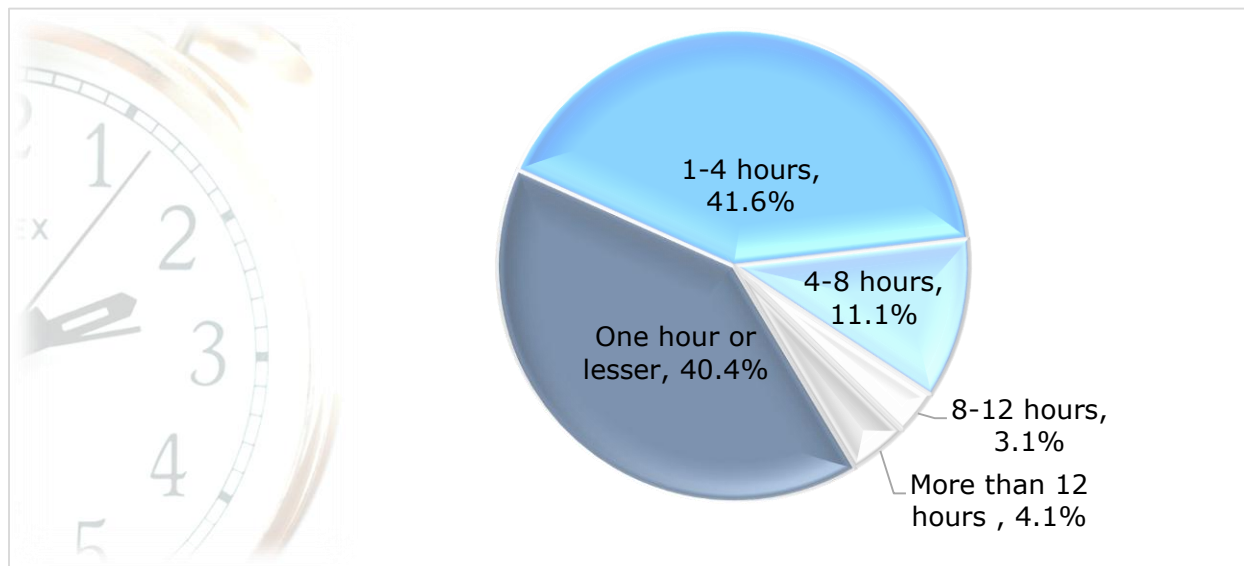


Figure 18: Percentage of social media users by the length of time spent for online social networking in a day

As mentioned in the previous section, majority of Internet users also used social media as their preferred source of information. Of late, it has become one of the active platforms for fundraising efforts besides being used as a source of information. The survey found that 18.6% of social media users used it to contribute while the remaining 81.4% were cautious.

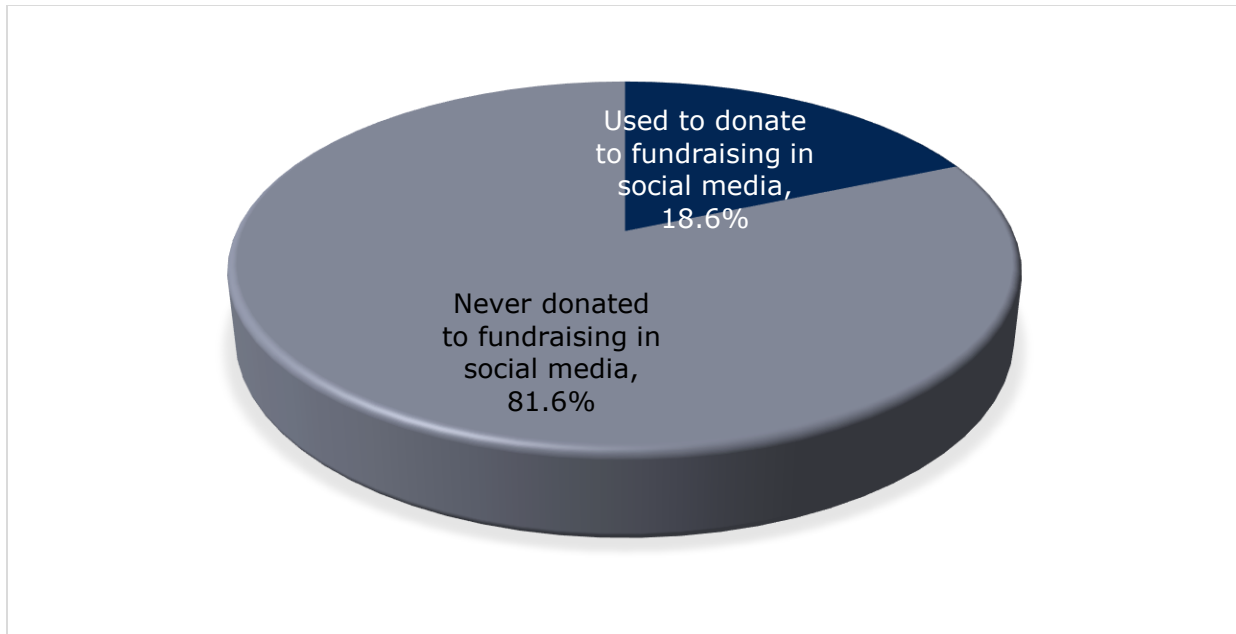


Figure 19: Percentage of social media users who used it to donate to any fundraising efforts on social media

The communication that took place via social media generally revolved among close acquaintances such as family, friends and co-workers. Apart from that, one quarter of social media users did not mind befriending a stranger on social media.

Communication via Social Media	No	Yes		
		Nearly Always	Fairly often	Rarely
Friends	4.4%	38.3%	22.0%	35.4%
Family / Relatives	9.3%	36.2%	18.3%	36.2%

Co-workers	30.3%	21.5%	15.1%	33.0%
Other acquaintances	28.8%	6.4%	8.2%	56.6%
Strangers / People you do not already know	76.0%	0.6%	0.9%	22.5%

Figure 20: Percentage of social media users by whom they communicated with and the frequency intervals

MCMC through *Klik Dengan Bijak* (KDB) campaign promotes positive use of Internet including safety usage such as sharing information online, especially those related to privacy. Figure 21 showed 85.0% of users shared their own photos over the social media. Both contact number and home location were treated somewhat confidential with only 38.3% and 38.1% of users shared this information. Meanwhile, 18.3% users shared their political views online. On average, users had four types of social media accounts, however only 20.1% linked these accounts.

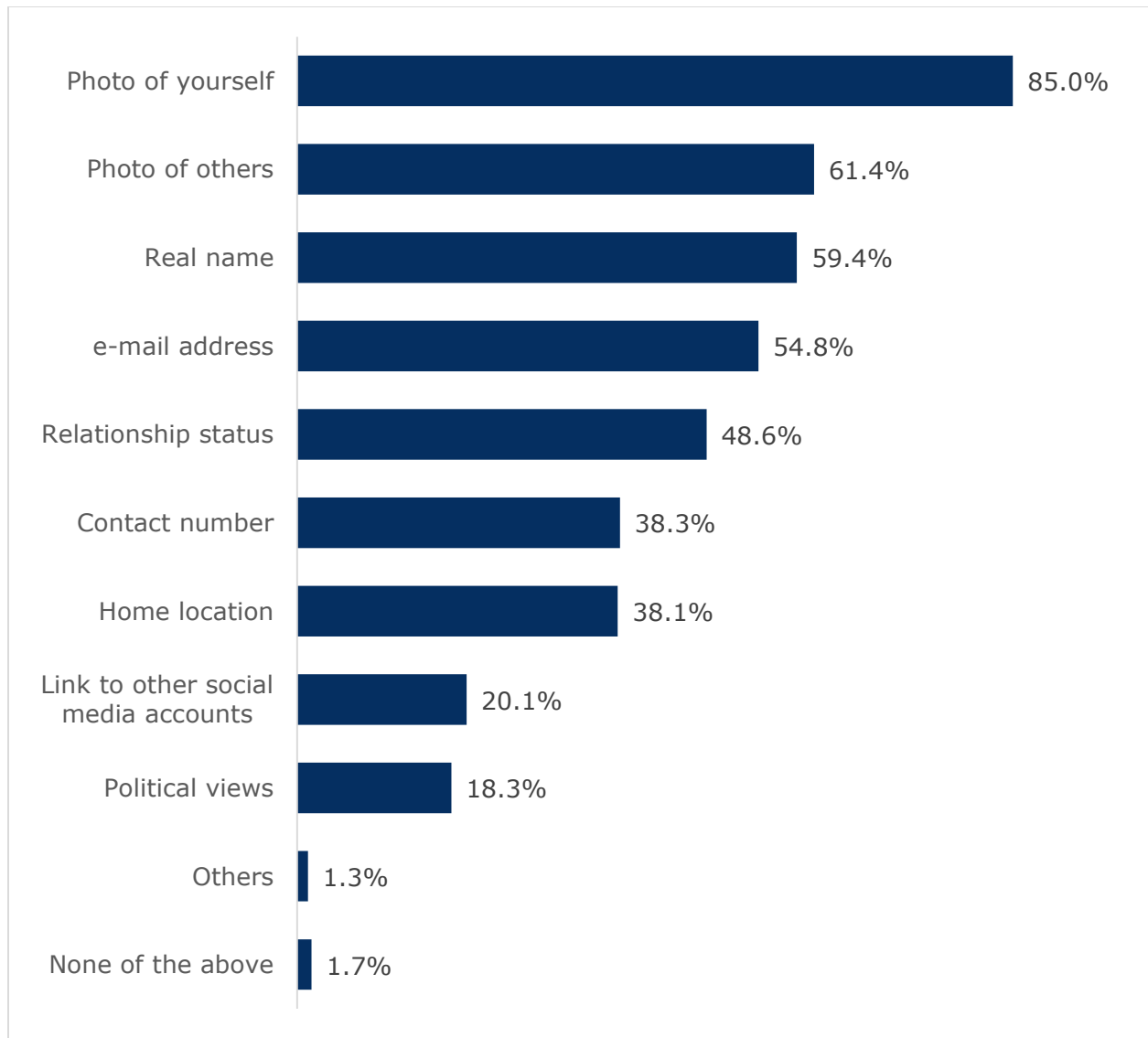


Figure 21: Percentage of social media users by types of personal information shared on social media

The social media also continuously enhanced their security features by introducing applications that could allow users to protect their database. About 60.0% of users set up their privacy level and performed housekeeping activities in their network or friends' list. Half of social media users were cautious over the location information while posting any content onto their account. Photo tagged by a friend was another way to enable stranger to track one's location notwithstanding their account's privacy setting. Some 45.8%

used to remove themselves from photo tagging while 39.3% have deleted others' comment on their profile.

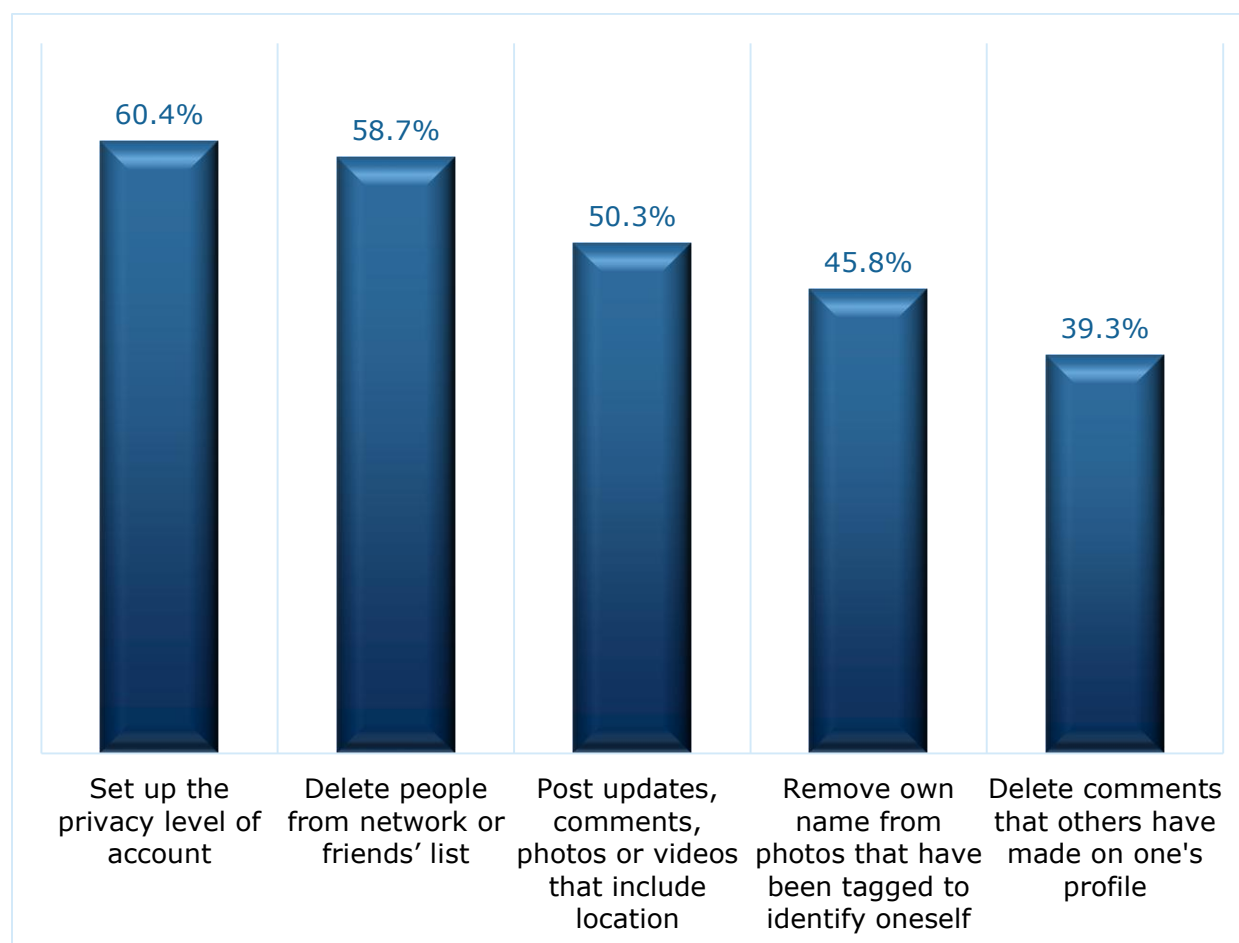


Figure 22: Percentage of social media users by social media activities to safeguard private information

Connecting to Public Services

Figure 23 showed that 59.0% of Internet users visited the government official websites, of those 17.8% knew how to access these websites directly. Surprisingly, 30.2% of Internet users neither visited government official websites nor obtained information on government services from any other online platform.

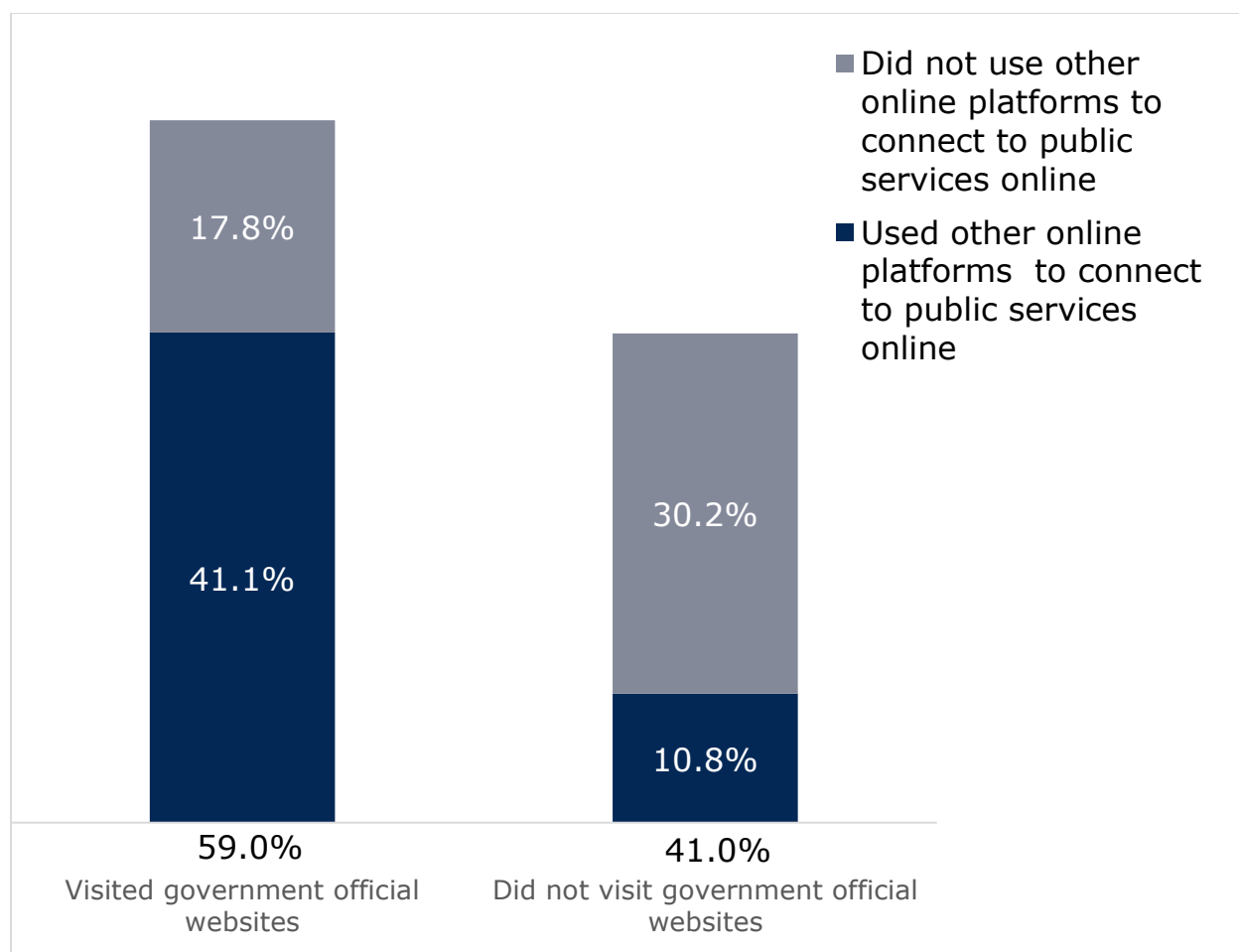


Figure 23: Percentage of Internet users by their experience with online public services through official websites or other online platforms

Among those who visited government official websites, 70.0% of them were searching for job vacancy in the public sectors while 65.5% were looking for education opportunity including admission, financial aid, programme structure, etc. Despite having at least 67.7% of Internet users in the working group category, less than half (30.4%) were using the online income tax services.

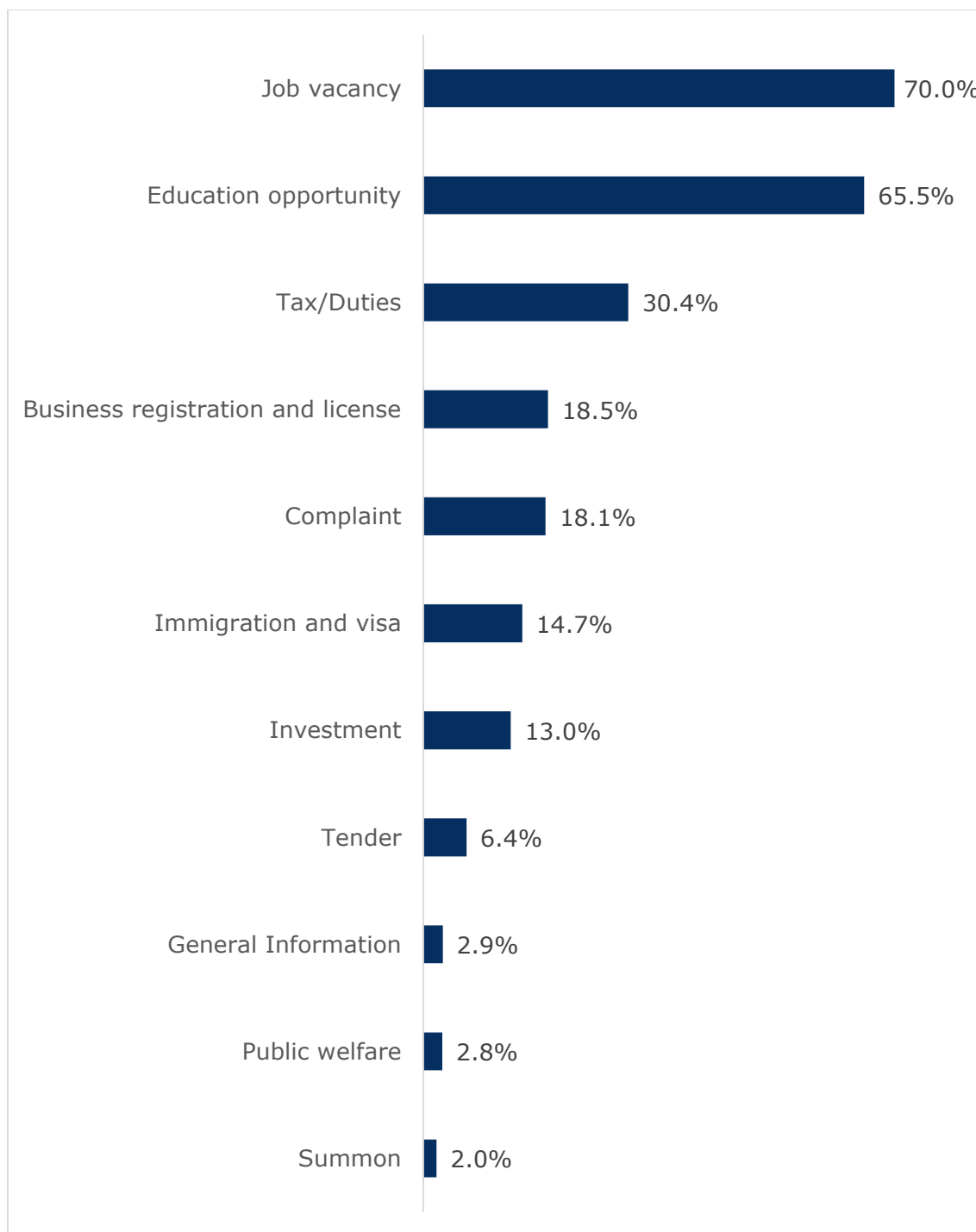


Figure 24: Percentage of Internet users by the types of public services they engaged with government through the official websites

In an effort to deliver better services to the *rakyat*, the government has introduced various online services. As such, 18.5% of Internet users engaged on online business registration and license application, 18.1% of users used online gateway to submit complaints to government bodies and 14.7% used online immigration services.

On the other hand, Internet users also visited the government websites for investment (13.0%) and tender purposes (6.4%). Among other purposes of visiting official portals were to obtain general information (2.9%), public welfare enquiries (2.8%) and summons issued (2.0%).

Figure 25 showed the percentage of Internet users who sought information from social media (69.6%) surpassed those who visited official websites (59.0%). Likewise, government information also circulated via instant messaging (56.1%), e-mails (39.4%) and blogs (37.3%). One-quarter of the users also accessed to online video platforms.

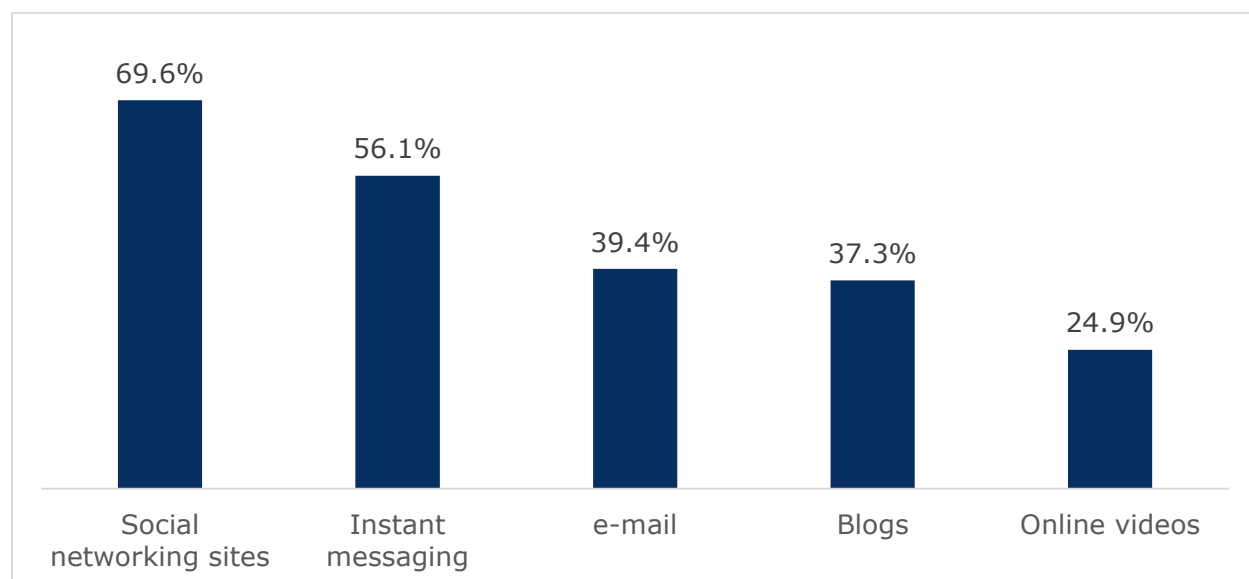


Figure 25: Percentage of Internet users by types of other online platforms they used to get government information

Internet Banking



The survey revealed that only 36.2% of Internet users used e-banking facilities, while another 62.1% of users had never performed online transactions. Also, 1.7% Internet users had stopped from performing online transaction. This was largely

due to the security issues or preference towards conventional banking transaction.

Amongst current Internet banking users, one quarter (25.3%) were fairly new users with experience of less than a year and almost one third (31.9%) had been using Internet banking between one to three years. The average users were having at least three years of Internet banking experience.

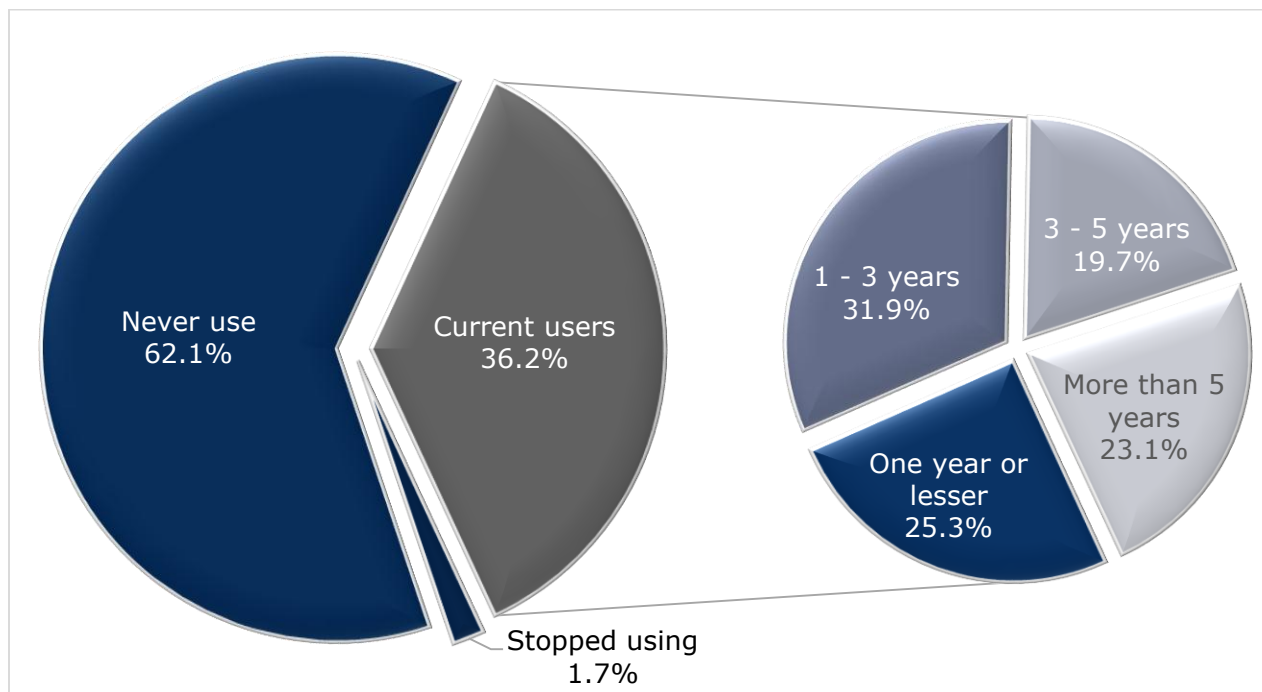
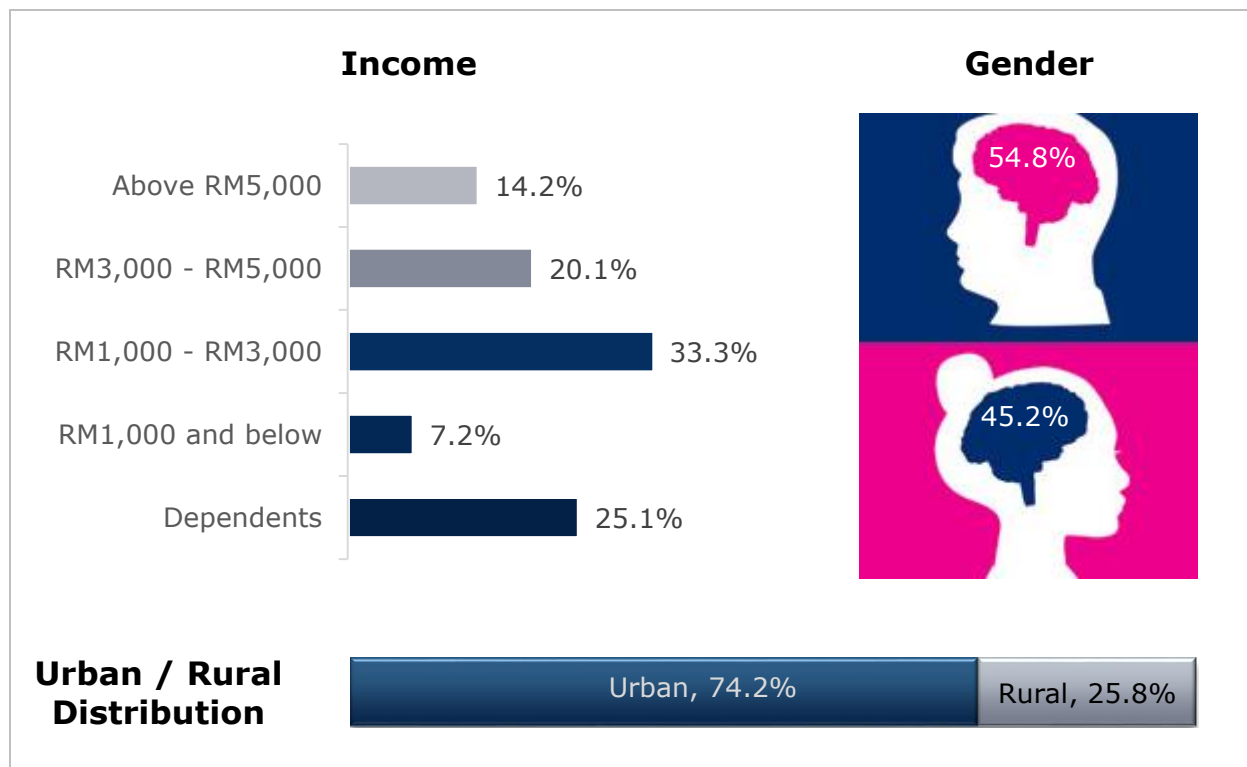


Figure 26: Percentage of Internet users by online banking usage and percentage of e-banking experience of current users

Figure 27 shows the profiling of online banking user based on income, gender and age. Those who earn between RM1,000 to RM3,000 attributed to the largest share of usage (33.3%). The ratio between male and female of Internet banking users was 1:1.2, while the ratio between male and female Internet users was 1:1.5, reflecting higher adoption of e-banking among female users. Almost half (46.4%) of Internet banking users made up of young adults aged from 20 to 29 years with 60.0% of users holding at least a diploma qualification. Moreover, these users were mostly based in urban areas (74.2%). Our analysis showed that the future trend of e-banking will be dominated by young adults with high academic qualification living in the urban areas.



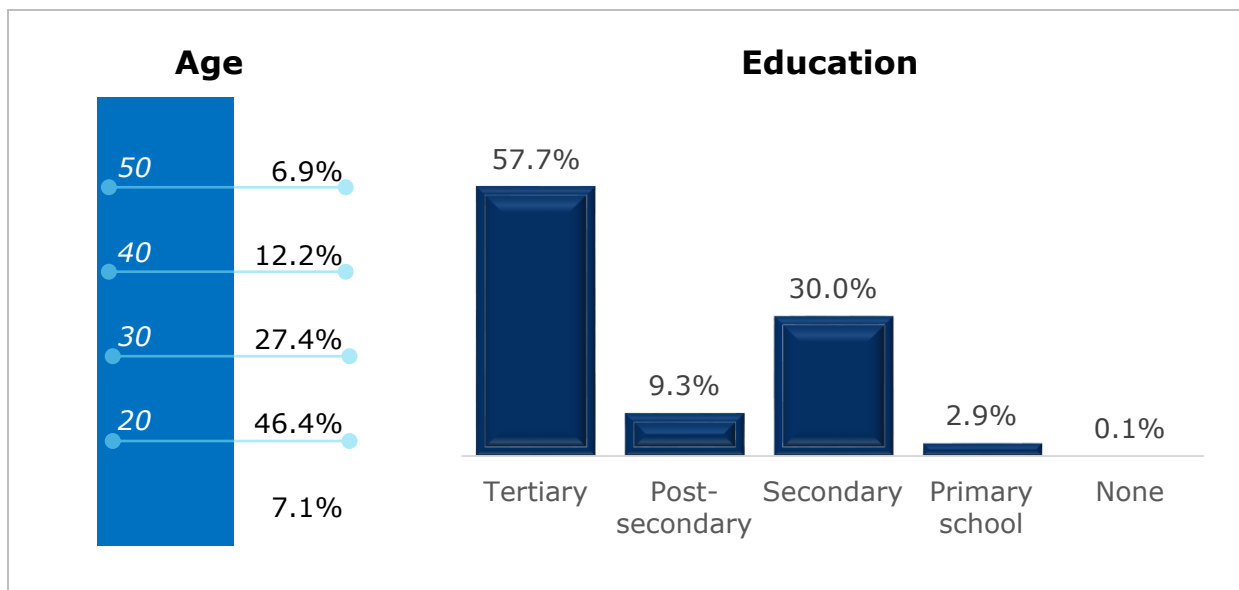


Figure 27: Profiling of online banking users by monthly income, gender, urban/rural distribution, age and educational attainment

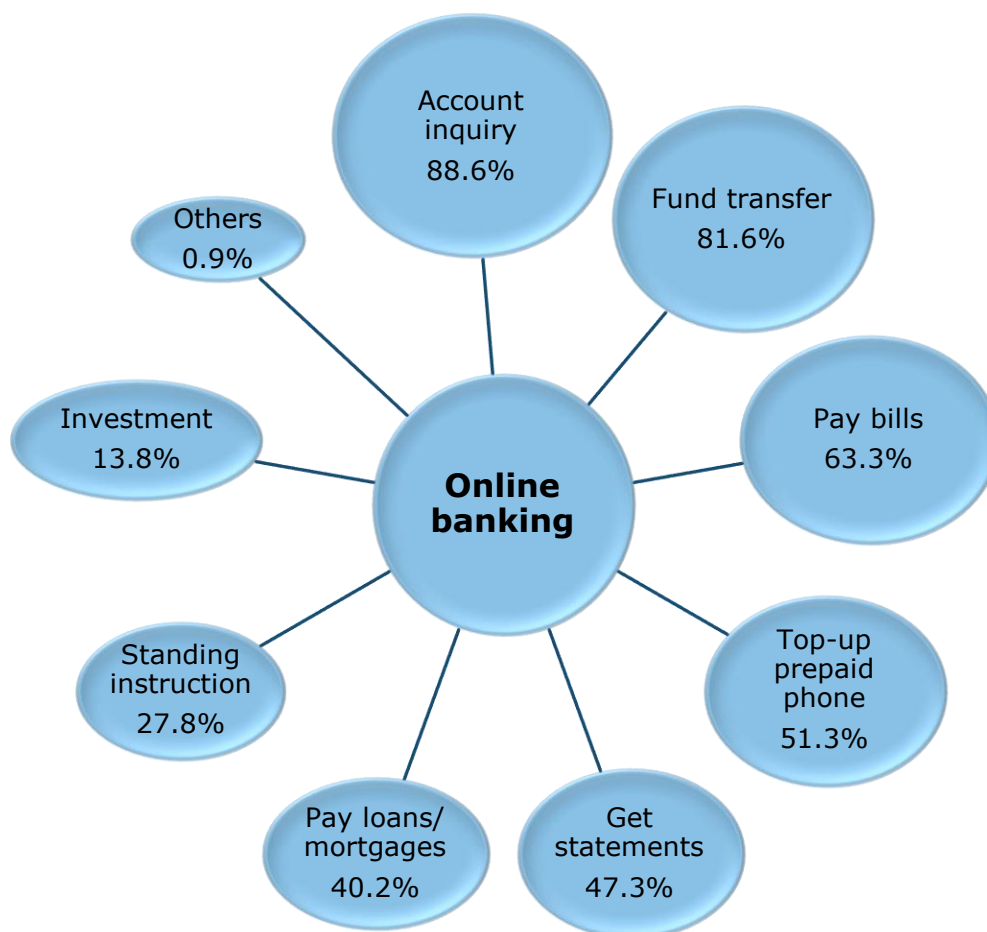


Figure 28: Percentage of online banking users by the types of e-banking activities

With regards to e-banking activities, 88.6% claimed that they made real-time inquiries to check their account balance, transactions and other information. 81.6% of them used inter and intra bank fund transfer facilities, 63.3% paid their bills online and 51.3% topped-up their prepaid phone. The next popular activities were generating bank statement (47.3%) as well as paying loans and mortgages (40.2%). Three in ten (27.8%) users adopted the flexibility to automate periodical payment through standing instruction.

However, there was less preference by users to use the online banking platform to manage personal investment (13.8%).

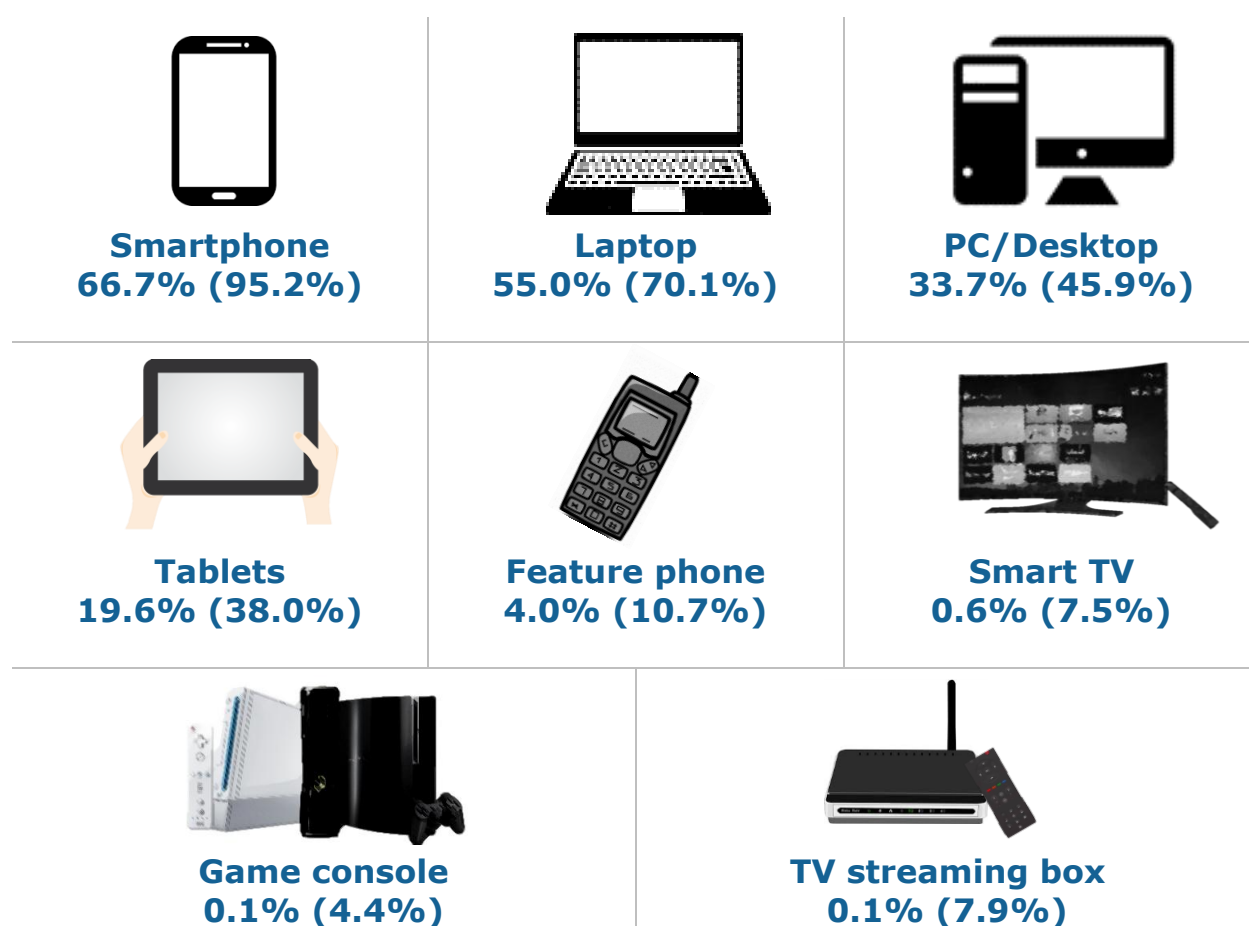


Figure 29: Percentage of online banking users by the device they use to do online banking and, in bracket, percentage of these users by the device they used to access the Internet

In performing their daily e-banking transactions, almost all (95.2%) e-banking users used smartphone to go online but only two third (66.7%) of them used this device to manage their virtual bank accounts. The online banking platforms were made available on smartphone either through mobile banking applications or the bank's official mobile website. This indicated that users began to adopt to the convenience of mobile banking. Laptop (55.0%) came in as next most used device to connect to online banking followed by desktop (33.7%) and tablets (19.6%). Other devices that were being used by e-banking users were feature phone (4.0%), Smart TV (0.6%), game console (0.1%) and TV streaming box (0.1%).

Despite the advancement of technologies in mobile banking, 62.1% of Internet users who did not find the Internet banking facility attractive while 1.7% decided to abandon it.

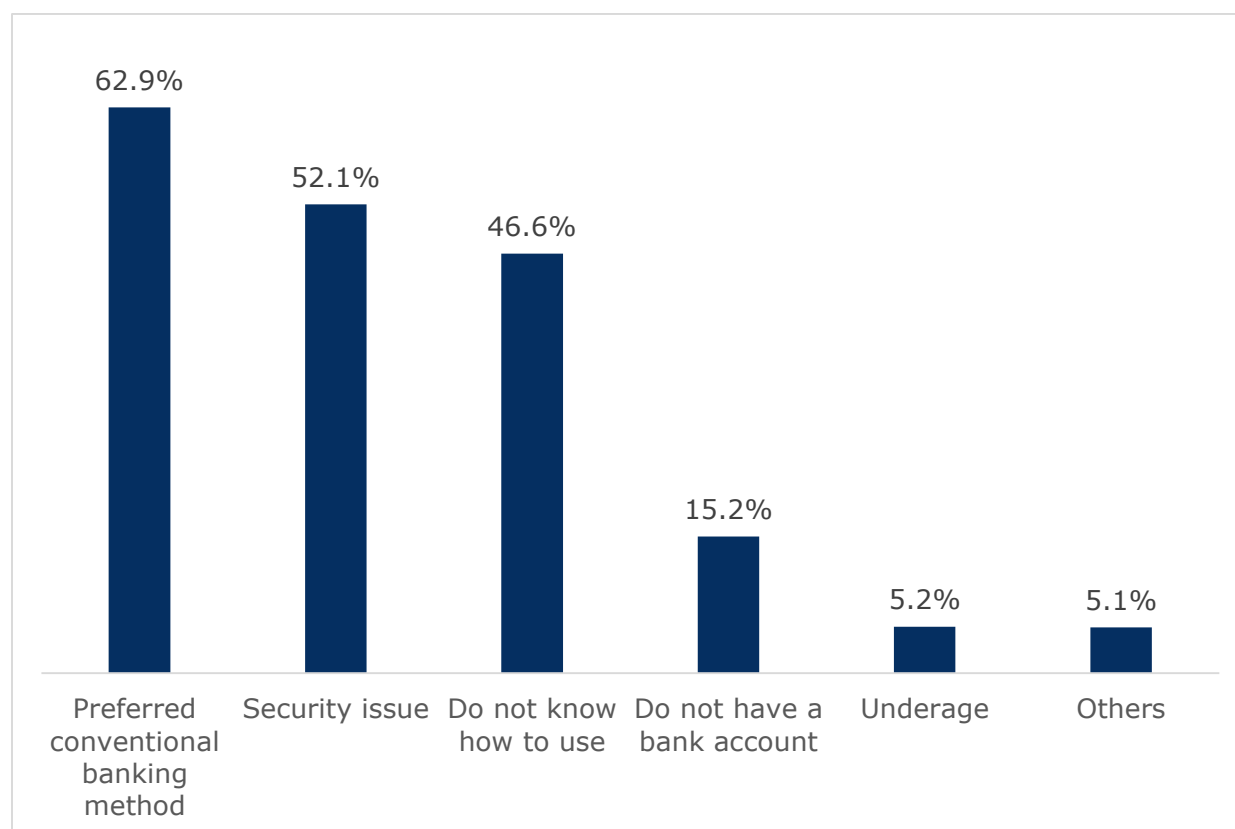


Figure 30: Percentage of online banking non-users by the reasons they did not do online banking

From the survey, it was found that there were few reasons why non-users of e-banking refused to use this service. A total of 62.9% claimed that they preferred conventional banking rather than e-banking. Moreover, 52.1% of non-users of e-banking said that this facility had frequently been vulnerable to fraudulent acts. However, 47.0% of non-users would consider switching to Internet banking if the security level could meet their expectation.

46.6% of e-banking non-users were sceptical that an unintentional mistake could cause loss of money due to lack of Internet skills. Thus, a simpler portal layout could encourage 38.2% of non e-banking users to adopt e-banking. The survey also found that 32.6% non-users preferred phone aid to be provided while setting up their online banking account.

Interbank online transaction fees imposed by financial institutions were perceived as redundant for 35.5% non-users. They would consider adopting virtual banking if these institutions could provide free interbank transaction. In addition, 32.1% non-users would welcome Internet banking if there is a reward system.



At least 15.2% revealed that e-banking was irrelevant to them because they did not have any bank account, under age, have limited financial control and lack of perceived benefit. One third (35.4%) of non-users stood firm with their current conventional banking method and had no interest to switch to online banking.

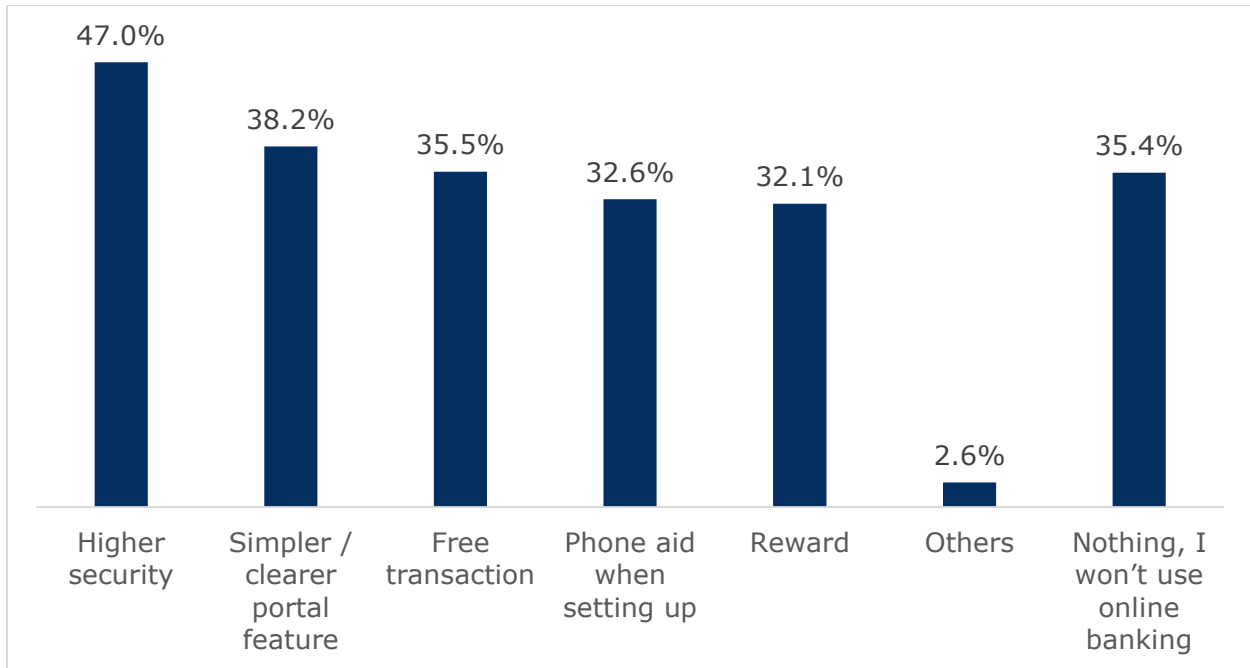


Figure 31: Percentage of online banking non-users by the motivating factor to switch to online banking

Virtual Retail Therapy

Although the percentage share of online shoppers were just slightly above one third of Internet users, those who used to shop online said that they had a delightful experience and would most probably do it again.

On top of the 35.3% existing online shoppers, this spending trivia could potentially spread to another 10.2% online window shoppers who claimed to have experienced browsing through online retails but never completed any transaction thus far.

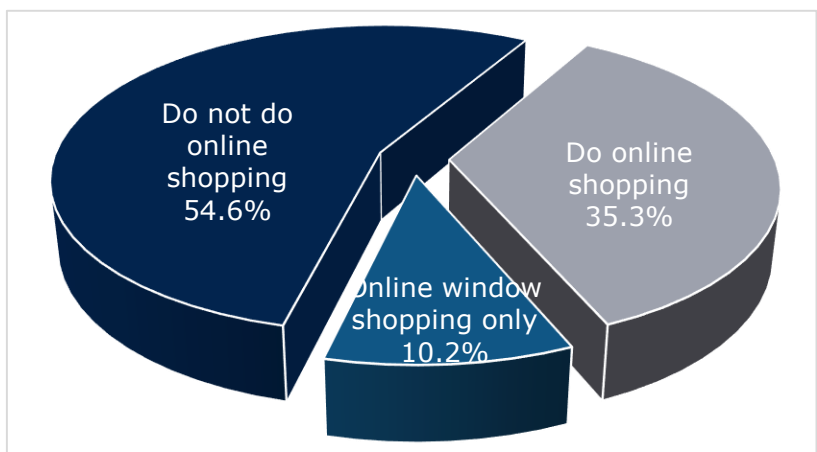


Figure 32: Percentage of Internet users by online shopping experience

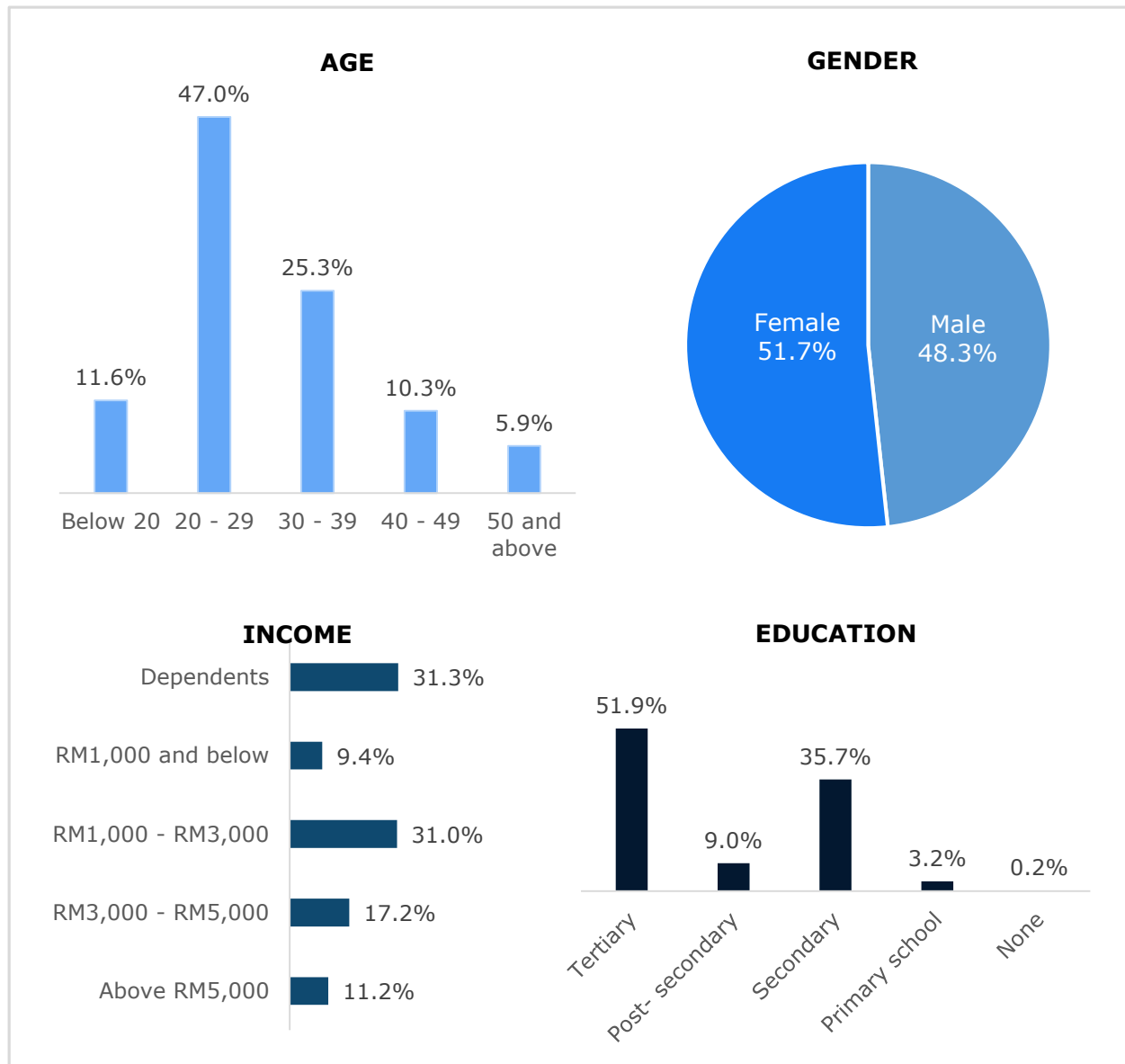


Figure 33: Profile of online shoppers by age, gender, monthly income and educational attainment

A glimpse into the profile of these online shoppers found that almost two third were youths between 20 to 39 years old. The younger cohort (below 19 years old) associated as being school-goers and family dependent were almost as savvy in shopping online as their parents (40 years old and above) at 11.6% and 16.2% respectively. This was reflected in the income level breakdown where most online shoppers were dependents with no steady income.

Female represented 51.7% of online shoppers which was also supported by its adoption rate discussed earlier (women: 44.9%; men: 28.7%). In terms of educational attainment, individuals with higher academic qualification coherently performed online shopping where half of the online shoppers were at least a diploma holder.

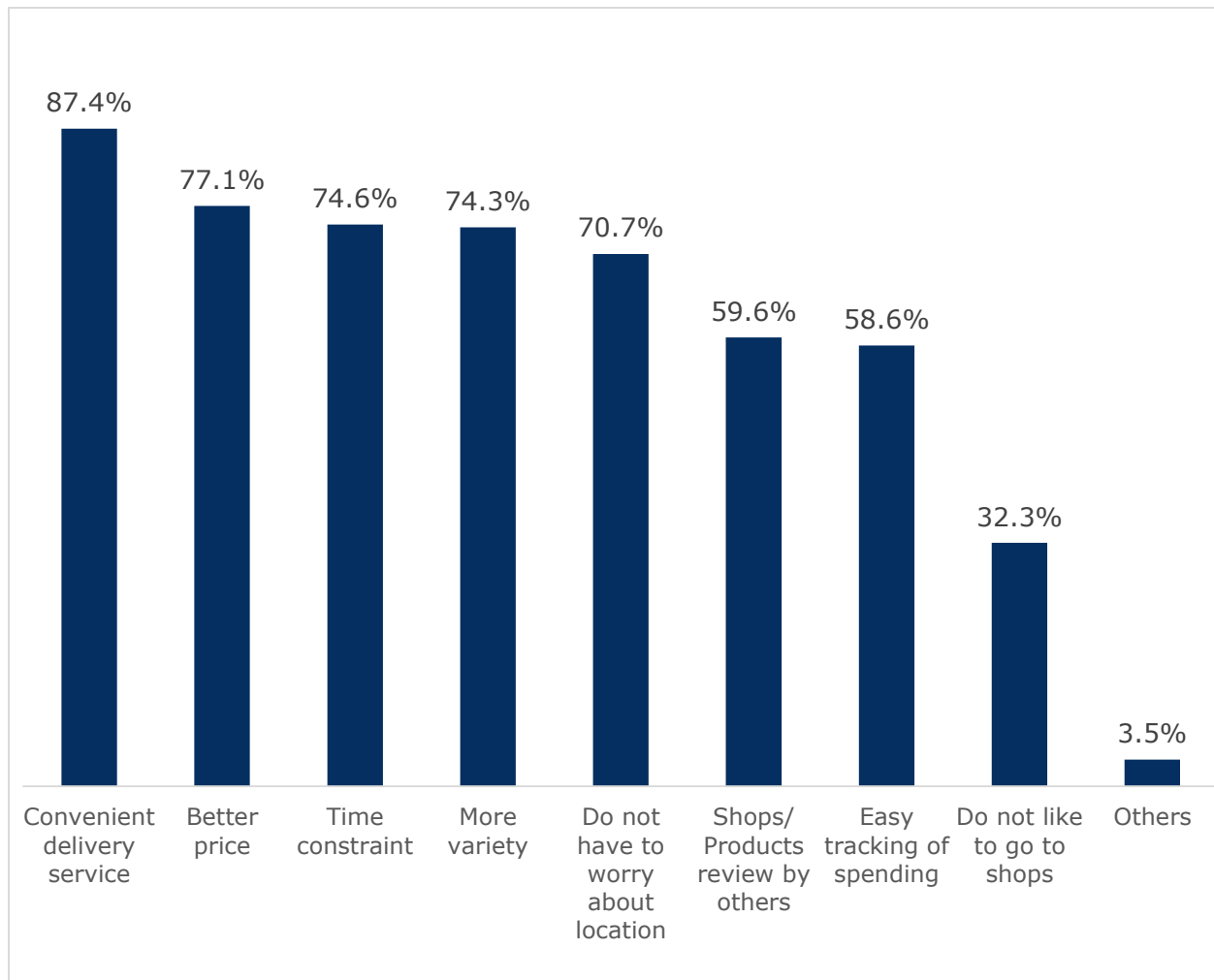
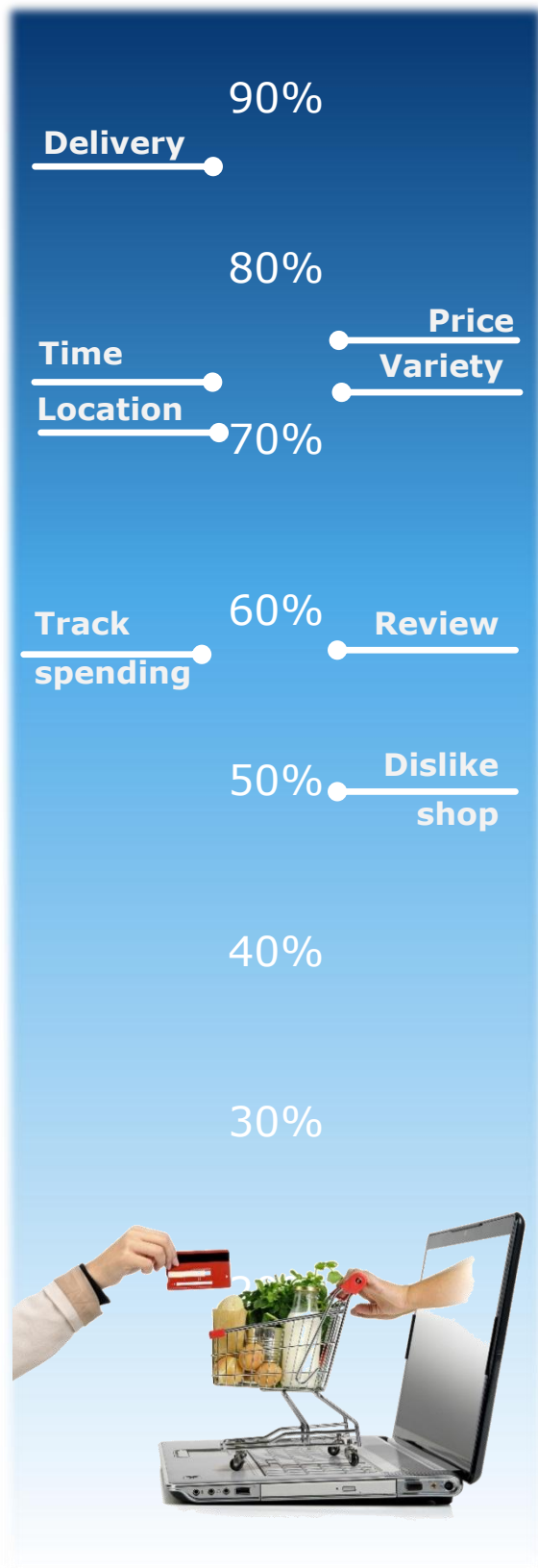


Figure 34: Percentage of online users by reasons for online shopping

Online consumers generally agreed to all advantages that online shopping had over conventional buying experience. Nine out of ten shoppers liked the convenience of delivery services while eight out of ten shoppers perceived that online products were offered at a better price. Three quarters of online



shoppers appreciated the time saved when buying online because retail shops and malls did not operate round the clock.

Furthermore, the Internet enabled shoppers to catch up with the latest fashion and trends in local and international markets. Seven out of ten shoppers enjoyed the advantage of shopping without boundary. In addition, a study conducted by PWC⁴ indicated that 69.0% of Malaysian online buying behaviour was influenced by reviews. Six out of ten buyers liked the feature of peer reviews on shops or products. The same percentage also liked how online shopping could allow them to keep track of their expenses.

Although a majority of Malaysian online shoppers were satisfied with the offerings from e-commerce marketplace, going to the stores was still a primary preference for shopping. Only one third of shoppers chose to shop online because they disliked going to the physical shops. Other reasons that

⁴ source: www.pwc.com/gx/en/industries/retail-consumer/global-total-retail.html

attracted some 3.5% of connected shoppers included curiosity, time saving and cost effectiveness.

Top Three Most Preferred Online Consumer Products



73.9% Clothing,
jewellery &
accessories



58.6% Travel
arrangement



48.4% Top-up
prepaid
phone

Clothing, jewellery and accessories are preferred consumer products for online shopping. This was followed by the use of Internet to make travel arrangement including transportation, accommodation and tour package as experienced by 58.6% of the shoppers. Many travel service providers in Malaysia embraced e-commerce by weaving-in automated and real-time technology into their business processes as a means to be the best-cost provider in the industry.

Telcos have also leveraged on technology to provide good service to its customers. Online prepaid top-up was ranked third with 48.4%, seven percentage point above food and beverages. Some users were keen to buy housewares (31.4%) such as furniture and electrical appliances compared to buying groceries (10.6%) online.

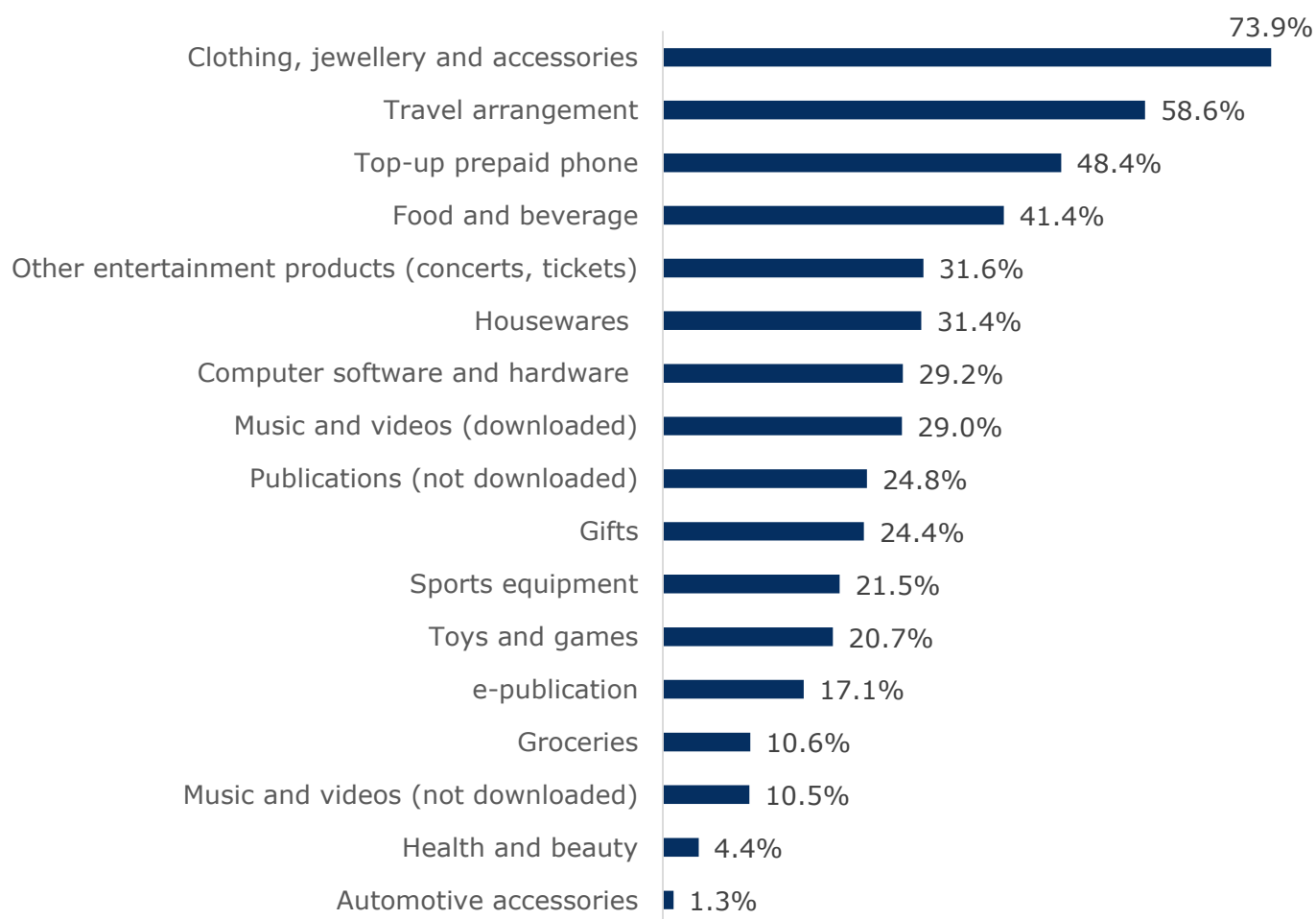


Figure 35: Percentage of online shoppers by types of goods and services

E-ticketing has been widely adopted by entertainment industry to provide hassle-free advanced booking service. There were at least 31.6% connected shoppers who purchased entertainment products and services online. The digital shift was not impeccable among avid readers who although made their purchases online, had a higher preference for printed publication (24.8%) over the electronic copy (17.1%). Nevertheless, when purchasing audio visual products, online consumers opted for downloadable forms (29.0%) such as MP3, MP4 than CD or DVD formats (10.5%). Toys and games were still

relevant for the online retail especially collectible items which were highly sought after through auction sites.

The survey also identified an emerging trend in the marketing of health and beauty products through the online platform. Consumers need to be wary over viral medical misinformation or cyber-quackery. It is always advisable to seek consultation from reliable health practitioners on medication and health issues.

A secured payment process is crucial to spur the e-commerce industry. Among Internet users, 43.1% preferred to use e-banking as a method of payment while 33.8% opted for credit card payment. The percentage of shoppers who preferred online or offline bank transfer and cash-on-delivery is higher with 70.5% and 41.7% respectively. This indicated that the security of payment over the Internet is the major concern for Internet users while performing online shopping.

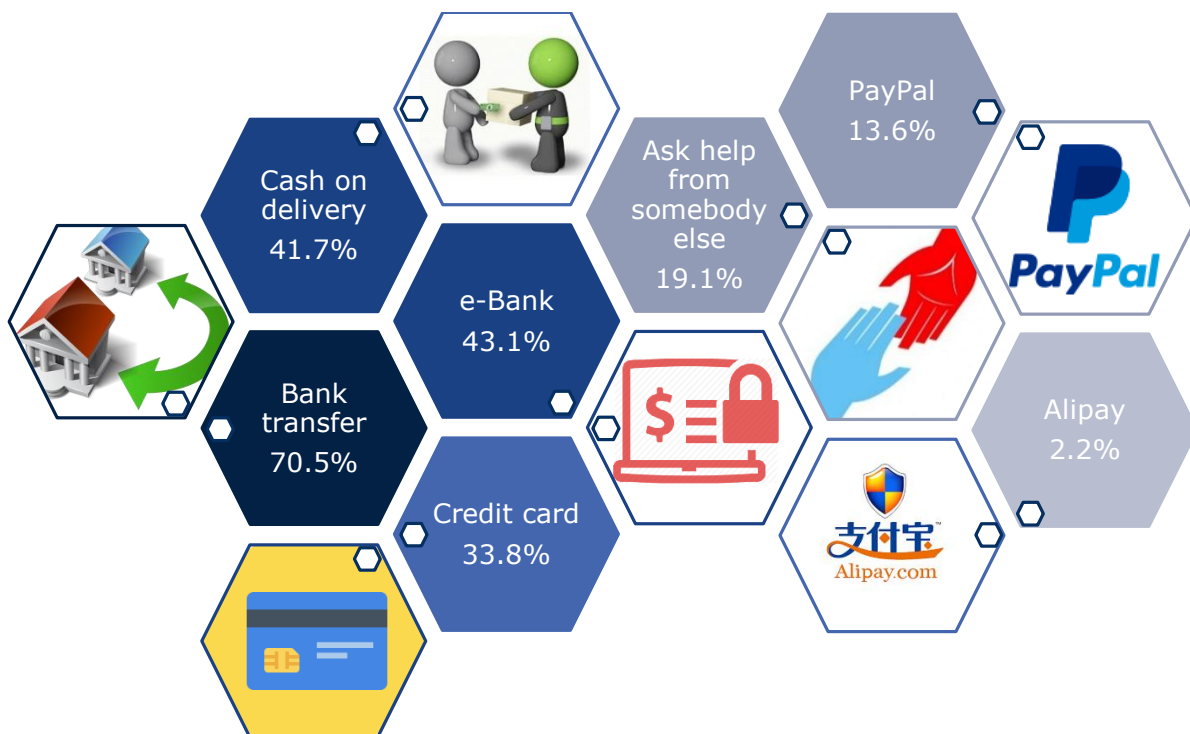


Figure 36: Percentage of online shoppers by mode of payment

The survey identified a group of cyber-shoppers (19.1%) who asked for help from a third party to clear their online bills. This payment approach was not only limited to dependents without monthly income, but also those who are gainfully employed.

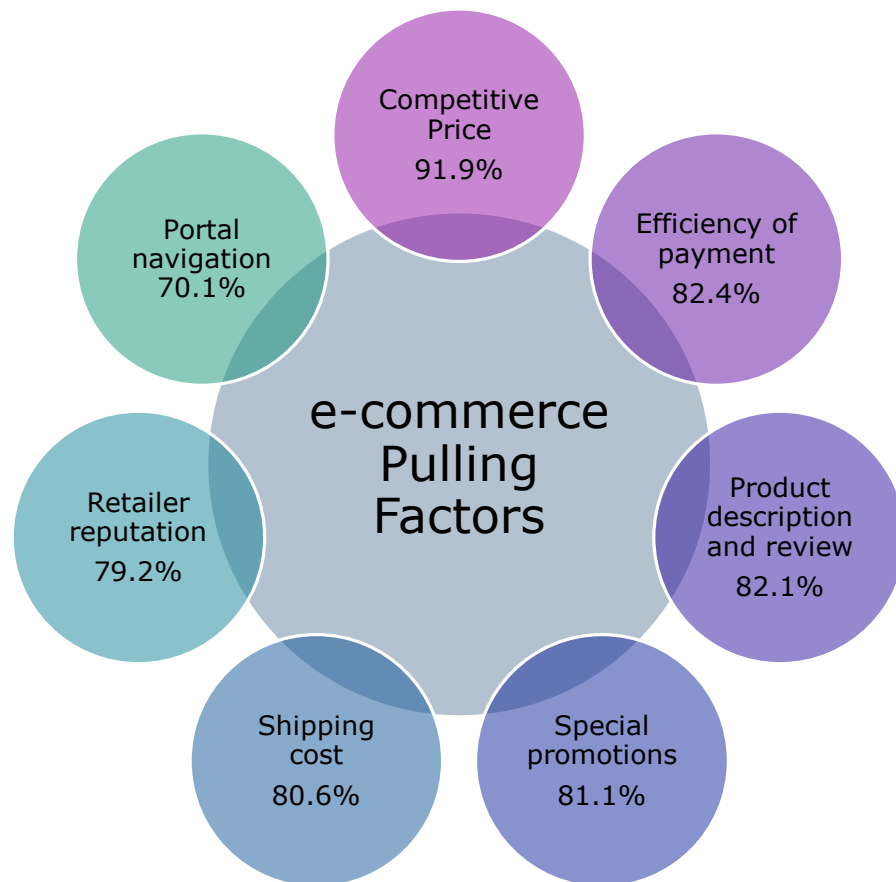


Figure 37: Percentage of online shoppers by the types of e-commerce pulling factors

In order to stay competitive in the e-commerce industry, it is important for entrepreneurs to consistently ensure excellent quality of services. At 91.9%, a majority of online shoppers recognised that merchants could easily enlarge their patronage base by offering competitive price. Efficient payment process was viewed as the next most important factor to secure a complete transaction. If the portal was not linked with prominent payment gateways, it could easily drive shoppers away as they were annoyed by the hassle of offline payment.

Eight out of ten shoppers collectively felt the necessity for product descriptions and reviews to be made available on the commercial sites while the retailers' reputation was a key factor for the returning customers. This reputable image may be built by buyers' experience review, responsive to enquiries and satisfactory after sale service. Occasionally, online traders were expected to carry out special promotion campaigns to attract potential customers. Conditional free shipping could also be a driving factor to boost sales and reward big spenders at the same time.

A user friendly portal was what it took to be a cutting edge for online merchant. Seven out of ten shoppers felt that a portal that provides sort and filter features could enable users to easily reach out to the product needed.

Cloud Storage and Smart Home

For the past three years, smart device adoption by Internet users had shown a promising growth. It had also become a norm for users to own multiple devices. As a result, the adoption of mobile broadband (87.3%) was significantly high, indicating a quest for mobility by users.

Thus, to ensure convenience of seamless data retrieval, cloud storage could be one of the best solutions for the time being. The survey found that Internet users were hesitant to the idea of cloud storage. Only 12.9% of users owned cloud account for the use of keeping documents containing personal information (78.6%), phone contacts (74.8%), photos (65.0%), work related documents (49.2%) and videos (26.4%). There were a few of them who just left the storage idle.

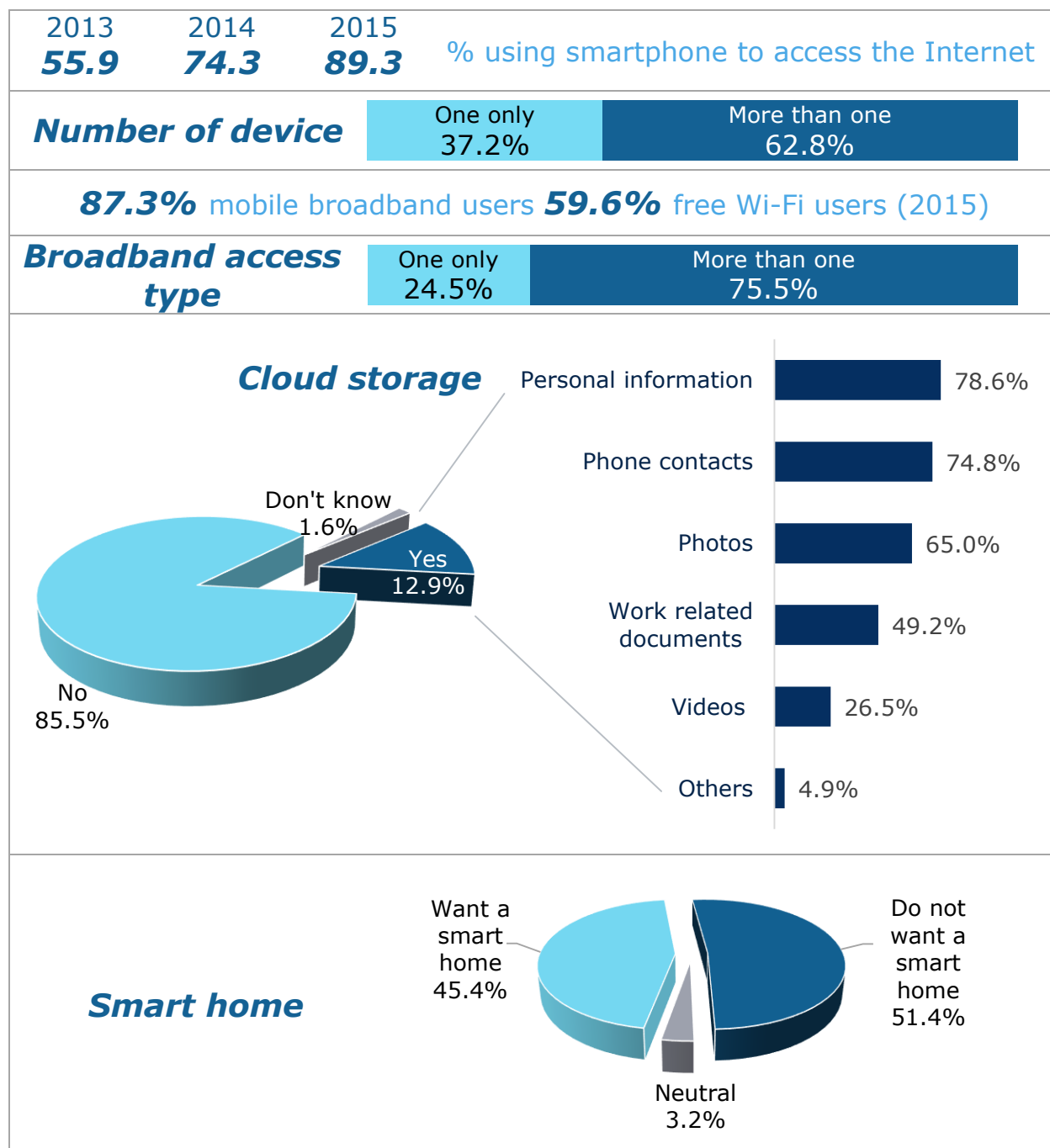


Figure 38: Internet users' cloud storage adoption and opinion on smart home

Nearly half of the users wished to live in a smart home that will be fully equipped with connected appliances and automated systems in pursuit of a digital lifestyle.

CONCLUSION

The Malaysian Internet users' behaviour were in short characterised as socially driven. It was evident that among selected common online activities, Malaysians were more prone to exert themselves in leisure activities that incorporated networking features such as OTT messaging, Facebook and participation in informal forums. These platforms turned out to be the primary source of information for a majority (86.9%) of Internet users against news portal which accounted for only 65.5% of user base.

The adoption of banking, shopping or trading via online were relevant to about one third of Internet users, which was relatively small as compared to social networking. Thus, to gain more adoption, Internet banking providers should be able to encounter three major challenges identified in this survey, namely (1) security assurance, (2) seamless portal or applications experience and (3) lower cost or no cost for interbank transactions.

The online platform had significantly brought the retail industry to a new level. Consumers were generally satisfied with their online purchasing experience and suggested improvement measures in the online markets. Online consumers generally presumed that e-commerce should offer better price. Other pulling factors included swift payment process and availability of reviews for comparison purpose.

The survey also observed the adoption of cloud storage and the idea of connected homes. It was found that the adoption of cloud storage was still low among Internet users. On the other hand, users were more receptive to the idea of connected homes with nearly half of online community ready to be equipped with smart home technology.

TABLES

Caution is required in the use of the estimates tabulated below.

While the MCMC takes every care to minimise non-sampling errors, which cannot be quantified, the estimates presented are also subject to sampling error, which is a measure of the chance variation that occurs because a sample, and not the entire population is canvassed. The sampling error of an estimate is usually expressed as a percentage of that estimate to give the relative sampling error (RSE) of that estimate.

In general, estimates that are small are subject to high RSEs. As a guide, only estimates with RSEs of 25% or less are considered reliable for general use. Estimates with RSEs greater than 25% but less than or equal to 50% are denoted with one asterisk in these tables and should be used with caution; while estimates with RSEs greater than 50% are denoted by two asterisks and are considered too unreliable for general use. However, these estimates may be aggregated with others until an RSE of less than 25% is obtained.

Confidence intervals for very small estimates should be based on the binomial distribution rather than the normal approximation to the binomial. As an alternative, the method of Korn and Graubard, 1998 may also be used.

Percentages may not add up to 100 because of rounding.

Internet Users

		RSE
Users	77.6%	1.0
Non-users	22.4%	3.3

State of Residence

	User	RSE	Non-user	RSE
Johor	10.8%	5.9	10.9%	14.6
Kedah	6.8%	7.6	7.0%	18.6
Kelantan	5.7%	8.3	9.1%	16.1
Melaka	2.8%	12.0	0.5% **	70.5
Negeri Sembilan	3.3%	11.0	3.4% *	27.3
Pahang	5.3%	8.6	5.5%	21.2
Perak	8.1%	6.9	8.8%	16.4
Perlis	0.9%	21.7	0.8% **	57.5
Pulau Pinang	4.4%	9.5	4.9%	22.4
Sabah	9.1%	6.4	11.7%	14.0
Sarawak	6.7%	7.6	9.1%	16.1
Selangor	20.9%	4.0	17.1%	11.2
Terengganu	5.4%	8.6	2.9% *	29.7
W.P. Kuala Lumpur	9.0%	6.5	7.8%	17.5
W.P. Labuan	0.4% *	31.6	0.3% **	99.9
W.P. Putrajaya	0.3% *	35.3	0.3% **	99.9

Nationality

		RSE
Malaysian	92.9%	0.6
Non-Malaysian	7.1%	7.4

Ethnicity

		RSE
Malay	67.6%	1.5
Bumiputra Sabah/Sarawak	11.8%	5.8
Orang Asli	0.2% *	44.7
Chinese	13.1%	5.4
Indian	6.7%	7.9
Others	0.5% *	30.1

Gender

		RSE
Male	59.4%	1.7
Female	40.6%	2.5

Age Group

	User	RSE	Non-user	RSE
Below 15	0.9%	21.7	0.0% **	NA
15 - 19	14.6%	4.9	4.4%	23.7
20 - 24	22.0%	3.8	5.7%	20.7
25 - 29	16.2%	4.6	7.3%	18.2
30 - 34	14.0%	5.1	7.0%	18.6
35 - 39	10.6%	5.9	12.0%	13.8
40 - 44	7.6%	7.1	13.0%	13.2
45 - 49	5.7%	8.3	12.0%	13.8
50 - 54	4.8%	9.1	11.5%	14.2
55 - 59	1.8%	14.9	9.4%	15.9
60 - 64	1.2%	18.5	7.6%	17.9
65 and above	0.6% *	25.7	10.2%	15.2

Urban-Rural

		RSE
Urban	62.1%	1.6
Rural	37.9%	2.6

Educational Attainment

		RSE
Degree or higher (include Advanced Diploma)	15.9%	4.7
Diploma	15.5%	4.8
STPM/STAM/Certificate/UEC-Senior Middle Three	8.4%	6.7
SPM/SPVM	38.0%	2.6
Sijil 4 Thanawi/SMA	0.5% *	27.7
PT3/PMR/UEC-Junior Middle Three	9.9%	6.2
Secondary school	5.7%	8.3
Primary school	5.0%	8.9
None	1.1%	19.5

Current Students Educational Status

		RSE
College/University	11.5%	3.8
Secondary school	7.3%	5.9
Primary school	0.1% **	57.5

Income Category

		RSE
Above RM5,000	7.1%	7.4
RM3,000 - RM5,000	11.8%	5.6
RM1,000 - RM3,000	33.2%	2.9
RM1,000 and below	15.5%	4.8
Dependent	32.4%	3.0

The use of ICT at Work

		RSE
ICT technical skills	17.9%	5.3
ICT usage skills	43.2%	2.8
Don't require ICT skills	38.9%	3.1

Device Ownership

	User	RSE	Non-user	RSE
Smartphone	90.7%	0.7	22.1%	9.6
Netbook/Notebook/Laptop	59.2%	1.7	15.3%	12.0
Feature phone	58.7%	1.7	86.8%	2.0
PC/Desktop	40.6%	2.5	14.0%	12.6
Tablets	35.4%	2.8	8.3%	16.9
Smart TV	25.7%	3.5	7.5%	17.9
Game console	16.1%	4.7	4.2%	24.5
None of the above	0.2% *	50.0	2.3% *	32.9
Fixed line telephone	32.3%	3.0	17.1%	11.2

Multiple response

Device to Access Internet

		RSE
Smartphone	89.3%	0.7
Netbook/Notebook/Laptop	46.0%	2.2
PC/Desktop	30.3%	3.1
Tablets	24.8%	3.6

Feature phone	15.8%	4.7
Smart TV	5.1%	8.8
TV streaming box	4.2%	9.7
Game console	2.7%	12.3

Multiple responses

Access Type

		RSE
Data/Bundle plan	82.8%	0.9
Free Wi-Fi	59.6%	1.7
Streamyx	21.1%	3.9
Home Fibre Internet	17.7%	4.4
Mobile Broadband (with Dongle)	14.1%	5.0
Pay Per Use	10.5%	6.0
WiMAX	6.7%	7.6
Don't Know	2.0%	14.4
Others	0.2% *	44.7

Multiple responses

Online Activities

		RSE
Communication by text	92.7%	0.6
Getting information	90.1%	0.7
Visit social networking sites	80.0%	1.0
Streaming video/Watch TV	70.9%	1.3
Study	67.5%	1.4
Listen to music	64.2%	1.5
Government services	59.0%	1.7
Download free music/video	57.4%	1.8
Read e-publication	50.1%	2.0
Play computer games	43.7%	2.3
Internet telephony	39.1%	2.5
Online job application	36.8%	2.7
Internet banking	36.2%	2.7
Shopping/reservation	35.3%	2.8
Maintain blogs/homepages	20.0%	4.1
Selling goods/services	18.9%	4.2
Stock trading	4.9%	9.0
Entertainment	2.0%	14.4
General communication	0.8%	22.3
Other online activities	1.0%	20.3

Source of Information

		RSE
Internet	90.1%	0.7
People around you	75.0%	1.2
TV	67.0%	1.4
Printed media	65.9%	1.5
Radio	50.7%	2.0
Others	0.4% *	33.3
None	0.1% **	70.7
Don't know	0.1% **	70.7

Multiple responses

Types of Information Portal

		RSE
Instant messaging	90.4%	0.7
Search engine	87.2%	0.8
Social media	86.9%	0.8
Online video	69.5%	1.4
News Portal	65.5%	1.6
Forum	24.0%	3.8
Others	0.8%	24.2

Multiple responses

Social Networking Account Ownership

		RSE
Facebook	96.5%	0.4
Twitter	26.5%	3.8
LinkedIn	9.0%	7.3
Google+	30.9%	3.4
Instagram	46.7%	2.4
YouTube	42.1%	2.7
Pinterest	4.1%	11.0
Myspace	5.4%	9.6
Tumblr	3.2%	12.5
LINE Timeline	10.8%	6.6
WeChat Moments	60.2%	1.9

Multiple responses

Social Networking Access Frequency

	Never	RSE	Daily	RSE	Weekly	RSE	Monthly	RSE	Occasionally	RSE
Facebook	1.2%	20.7	53.8%	2.1	13.8%	5.7	5.1%	9.8	22.8%	4.2
Twitter	3.6%	11.8	8.3%	7.6	3.6%	11.7	2.2%	15.3	9.0%	7.3
LinkedIn	1.6%	17.8	0.5%*	31.5	1.9%	16.5	1.4%	19.1	3.8%	11.5
Google+	3.3%	12.4	5.6%	9.3	5.5%	9.5	3.4%	12.2	13.4%	5.8
Instagram	2.2%	15.1	19.8	4.6	10.6%	6.6	1.9%	16.5	12.3%	6.1
YouTube	1.9%	16.3	13.5%	5.8	10.1%	6.8	2.8%	13.4	13.9%	5.7
Pinterest	1.0%	22.2	0.5%*	33.3	0.9%	24.1	0.4%*	35.3	1.5%	18.4
Myspace	3.2%	12.6	0.1%**	70.7	0.2%**	57.7	0.5%*	33.3	1.7%	17.5
Tumblr	0.9%	24.1	0.5%*	33.3	0.5%*	31.5	0.3%*	44.7	1.3%	19.9
LINE Timeline	1.7%	17.3	2.1%	15.6	2.4%	14.6	0.8%	24.9	4.0%	11.2
WeChat Moments	2.5%	14.1	31.7%	3.3	9.0%	7.3	2.4%	14.4	14.7%	5.5

Multiple response

Privacy Setting on Social Networking Sites

	RSE
Set up the privacy level of account	60.4% 1.8
Delete people from network or friends' list	58.7% 1.9
Post updates, comments, photos or videos that includes location	50.3% 2.3
Remove own name from photos that have been tagged to identify oneself	45.8% 2.5
Delete comments that others have made on one's profile	39.3% 2.8
None of the above	11.8% 6.2

Multiple response

Communication on Social Networking Sites

	RSE
Family	90.6% 7.1
Friends	95.6% 10.7
Co-workers	69.6% 3.5
Other acquaintances	71.2% 3.6
Strangers	23.8% 1.3

Multiple response

Communication Frequency on Social Networking Sites

	Rarely	RSE	Fairly often	RSE	Nearly Always	RSE
Family	36.3%	3.0	18.3%	4.8	36.3%	3.0
Friends	35.4%	3.1	22.1%	4.3	38.3%	2.9
Co-workers	33.1%	3.2	15.1%	5.4	21.6%	4.3
Other acquaintances	56.8%	2.0	8.2%	7.6	6.4%	8.7
Strangers / people you do not already know	22.6%	4.2	0.9%	24.1	0.6%*	30.1

Multiple responses

Appropriate Number of Social Networking Accounts

	RSE
None	1.1%
1	60.1%
2	20.0%
More than 2	19.0%

Time Spent on Social Networking Sites in a Day

	RSE
One hour or lesser	40.4%
1-4 hours	41.6%
4-8 hours	11.1%
8-12 hours	3.1%
More than 12 hours	4.1%

Donation to Fundraising Efforts on Social Networking Sites

	RSE
Donated to fundraising in social media	18.6%
Have never donated to fundraising in social media	81.6%

Visited Online Public Services Official Portal

	RSE
Yes	59.0%
No	41.0%

Purposes of Using Online Public Services

		RSE
Job vacancy	70.0%	1.7
Education opportunity	65.5%	1.9
Tax and duty	30.4%	4.0
Business registration and license	18.5%	5.6
Complaint	18.1%	5.6
Immigration and visa	14.7%	6.4
Investment	13.0%	6.9
Tender	6.4%	10.1
General Information	2.9%	15.4
Others	5.1%	11.5
Public welfare	2.8%	15.6
Summons	2.0%	18.7

Multiple responses

Getting Government Information via Other Platforms

		RSE
Yes	52.0%	2.0
No	48.0%	2.1

Other Online Platforms to Get Government Information

		RSE
Social networking sites	69.6%	1.9
Instant messaging	56.1%	2.5
e-mail	39.4%	3.5
Blogs	37.3%	3.7
Online videos	24.9%	4.9
Others	0.1% **	100.0

Multiple responses

Online Banking

		RSE
Yes	36.2%	2.7
Stopped using	1.7%	15.3
Never used	62.1%	1.6

Online Banking Experience

		RSE
One year or less	25.3%	5.8
1 - 3 years	31.9%	5.0
3 - 5 years	19.7%	6.9
More than 5 years	23.1%	6.2

Frequently Used Online Banking Features

		RSE
Account inquiry	88.6%	1.2
Transfer funds	81.6%	1.6
Pay bills	63.3%	2.6
Top up prepaid phone	51.3%	3.3
Download / print statements	47.3%	3.6
Pay loans / mortgages	40.2%	4.1
Standing instruction	27.8%	5.5
Manage investment	13.8%	8.5
Others	0.1% **	99.9
Nothing	0.8% *	37.6

Multiple responses

Online Banking Devices

		RSE
Smartphone	66.7%	2.4
Netbook / Notebook / Laptop	55.0%	3.1
PC / Desktop	33.7%	4.8
Tablets	19.6%	6.9
Feature phone	4.0%	16.6
Smart TV	0.6% *	44.6
Game console	0.2% **	70.6
TV streaming box	0.2% **	70.6
Don't know	0.1% **	99.9

Multiple responses

Reasons for Not Using Online Banking

		RSE
Prefer conventional banking method	62.9%	2.0
Security issue	52.1%	2.4
Do not know how to use	46.6%	2.7
Do not have a bank account	15.2%	6.0
Underage	5.2%	11.0
Others	5.1%	11.0

Reasons to Switch to Online Banking

		RSE
Higher security	47.0%	2.7
Simpler / clearer portal feature	38.2%	3.3
Free of charge transaction	35.5%	3.4
Phone aid when setting up	32.6%	3.7
Rewards	32.1%	3.7
Others	2.6%	15.6
Refused to use online banking	35.4%	3.5

Multiple responses

Online Shopping

	%	RSE
Do online shopping	35.3%	2.8
Online window shopping only	10.2%	6.1
Do not do online shopping	54.6%	1.9

Online Shopping Purpose

		RSE
Convenient delivery service	87.4%	1.3
Better price	77.1%	1.9
Time constraint	74.6%	2.0
More variety	74.3%	2.0
Do not have to worry about location	70.7%	2.2
Shops/ Products review by others	59.6%	2.8
Easy tracking of spending	58.6%	2.9
Do not like to go to shops	32.3%	5.0
Others	3.5%	17.9

Multiple responses

Types of Goods and Services Purchased Online

		RSE
Clothing, jewellery and accessories	73.9%	2.0
Travel arrangement	58.6%	2.9
Top-up prepaid phone	48.4%	3.5
Food and beverage	41.4%	4.1
Other entertainment products (concerts, tickets)	31.6%	5.1
Housewares	31.4%	5.1
Computer software and hardware	29.2%	5.4
Music and videos (downloaded)	29.0%	5.4

Publications (not downloaded)	24.8%	6.0
Gifts	24.4%	6.0
Sports equipment	21.5%	6.6
Toys and games	20.7%	6.7
e-publication	17.1%	7.6
Groceries	10.6%	10.0
Music and videos (not downloaded)	10.5%	10.0
Others	6.7%	12.8
Health and beauty	4.4%	16.1
Automotive accessories	1.3% *	30.0

Multiple responses

Online Shopping Mode of Payment

		RSE
Online bank transfer	70.5%	2.2
e-Bank	43.1%	3.9
Cash on delivery	41.7%	4.1
Credit card	33.8%	4.8
Ask help from somebody else	19.1%	7.1
PayPal	13.6%	8.7
Alipay	2.2%	22.7

Multiple responses

Online Shopping Factors

		RSE
Competitive price	91.9%	1.0
Efficiency of payment	82.4%	1.6
Product description and review	82.1%	1.6
Special promotions	81.1%	1.7
Shipping cost	80.6%	1.7
Retailer reputation	79.2%	1.8
Portal navigation (filter, sort, etc.)	70.1%	2.2
Others	3.4%	18.2
None	0.2% **	70.6

Multiple responses

Own Cloud Storage Account

		RSE
Yes	12.9%	5.3
No	85.5%	0.8
Don't know	1.6%	15.9

Cloud Storage Content

		RSE
Personal information	78.6%	3.0
Phone contacts	74.8%	3.3
Photos	65.0%	4.2
Work related documents	49.2%	5.8
Videos	26.5%	9.5
Others	4.9% *	25.2

Multiple responses

Smart Home

		RSE
Want a smart home	45.4%	2.2
Do not want a smart home	51.4%	2.0
Neutral	3.2%	11.3

LIST OF ABBREVIATIONS

ADSL	Asymmetric digital subscriber line
CATI	Computer Assisted Telephone Interview
ICT	Information and Communications Technology
IDC	International Data Corporation
IUS	Internet Users Survey
KDB	Klik Dengan Bijak
M2M	Machine to Machine
MBB	Mobile broadband
MCMC	Malaysian Communications and Multimedia Commission
MSISDN	Mobile Station International Subscriber Directory Number
OTT	Over-the-Top
Wi-Fi	Wireless Fidelity
WiMAX	Worldwide Interoperability for Microwave Access
RSE	Relative sampling error
SRS	Simple random sample

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