



**SURUHANJAYA KOMUNIKASI DAN MULTIMEDIA MALAYSIA  
MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION**



# **INTERNET USERS SURVEY 2018**

STATISTICAL BRIEF NUMBER TWENTY-THREE

MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION, 2018

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## SECTION 1: EXECUTIVE SUMMARY

The Internet Users Survey (IUS) is an annual survey conducted by Malaysian Communications and Multimedia Commission (MCMC). IUS provides information on the characteristics and behaviours of Internet users in Malaysia, as well as analysis to gauge changes in terms of users' behaviour and trends.

IUS 2018 reached to a sample of 4,160 Internet users at national level. Respondents were selected at random and all interviews were conducted through Computer Assisted Telephone Interview (CATI) system.

The survey focused on selected key variables including place and device of Internet access, time spent online, purpose of using Internet, social networking and messaging, online banking, parental control services and demographic as well as socio-economics background of Internet users. On top of that, new topic on online content sharing was introduced in IUS 2018.

The survey draws attention to the following findings:

- Percentage of Internet users continue to rise – The percentage of Internet users at national level increased from 76.9% in 2016 to 87.4% in 2018.
- Smartphone remained as the most common device used to access Internet – Nine out of ten Internet users used smartphone (93.1%) to go online. Meanwhile, the use of fixed and home-based devices such as smart TV, TV streaming box and game console saw a steady increase over the years.
- Internet has become a pivotal medium in social engagement – Text communication and visiting social networking platform were the most common activities for Internet users (96.5% and 85.6% respectively). WhatsApp and Facebook were the most popular communication and social networking platform.
- Participation in online banking and financial activities has increased – More than half of Internet users used online banking (54.2%) in 2018, compared to 41.7% in 2016. The main barriers for online banking adoption were consumers' preference to physical ATM and bank branch, as well as lack of confidence or skills. Checking account/statement and transfer funds were the most common online banking activities.
- Majority of Internet users had shared content online, particularly among younger users – 61.8% shared content online, with educational content and entertainment/humorous content being the most usually shared content. Most of the content were shared online via social media (73.8%) and group messaging (70.6%). Nevertheless, most of them had taken various actions prior to sharing content online such as understand the content and ensure the content is not obscene, menacing or offensive.

- The take-up for parental control services was still low – Only 12.2% of parents amongst Internet users took advantage of the service as an initiative to ensure their child’s online safety. Most parents opted to setting their own rules and limits of Internet usage to their child, as well as staying nearby their child when they were online.

## SECTION 2: INTRODUCTION

### Survey background and objective

The Internet Users Survey (IUS) is a series of purpose built surveys conducted by the Malaysian Communications and Multimedia Commission (MCMC). It is part of MCMC regulatory function to monitor communications and multimedia activities and encourage development in the industry.

The main objective of IUS 2018 is to measure and understand users' behaviour and uncover opportunities present in the emerging market. The survey covers several scopes, which involved:

1. Internet access (time spent, place and device of access)
2. Online activities;
3. Online content sharing;
4. Child online safety and parental control; and
5. Demographics and socio-economics of Internet users

Results from this survey would give stakeholders a better understanding on Internet usage in Malaysia, for undertaking imperative initiative towards converging communications and multimedia industry.

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

## Methodology and analysis

The sample population was drawn from users of mobile-cellular and household fixed-telephone subscriptions, with Mobile Station International Subscriber Directory Number (MSISDN), public switched telephone network (PSTN) numbers and voice-over-Internet protocol (VoIP) numbers, that are identical to randomly generated numbers.

For mobile-cellular sample, respondent was the main user of that mobile-cellular number, while for fixed-telephone sample, an individual from that household was selected at random to be the respondent by asking to speak to the person whose birthday is next.

IUS 2018 was canvassed and administrated using a Computer Assisted Telephone Interview system operating out of MCMC CATI Centre in Cyberjaya. Fieldwork for this survey started on 26 April 2018 and ended on 10 August 2018. The survey adopted confidence level of 99% and precision of  $\pm 2\%$  for sample at national level, and reached to a sample of 4,160 Internet users.

There was only one stage of sample selection as the survey adopted a simple random sample (SRS). Sampling was done with probability proportional to prefix in terms of subscriptions for mobile-cellular, and proportional to state subscriptions for fixed-telephone.

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 convenient of 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.

Full results of the survey are appended in the form of percentage tables at the end of this report.

## Survey limitation and challenges

In the course of conducting this survey, some limitations and challenges were encountered. The limitation and challenges are described as follows:

Among the main challenges was difficulty to reach required number of samples. For this survey, a total of 27,673 calls were made to achieve 4,330<sup>1</sup> samples of Internet users. Of the total calls made, we received no response from 43.8% respondents, 7.7% refused to participate and 27.3% numbers were inactive/invalid numbers. In other words, we have to make 6.4 calls to get one users, or 4.1 calls for fixed-telephone frame and 8.4 calls for mobile-cellular frame.

In addition, respondents in fixed-telephone frame were difficult to be reached during weekdays. Therefore, the fieldwork was extended to weekend in order to increase higher response rate.

Furthermore, fieldwork of the survey has taken longer time to be completed in order to achieve required samples at the state-level. IUS 2018 has taken 3½ months to complete, while IUS 2017 took about 2¾ months only.

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<sup>1</sup> To ensure sample is proportionate to market shares, only 4,160 samples from 4,330 were used for analysis at the national level



## SECTION 3: MAIN FINDINGS

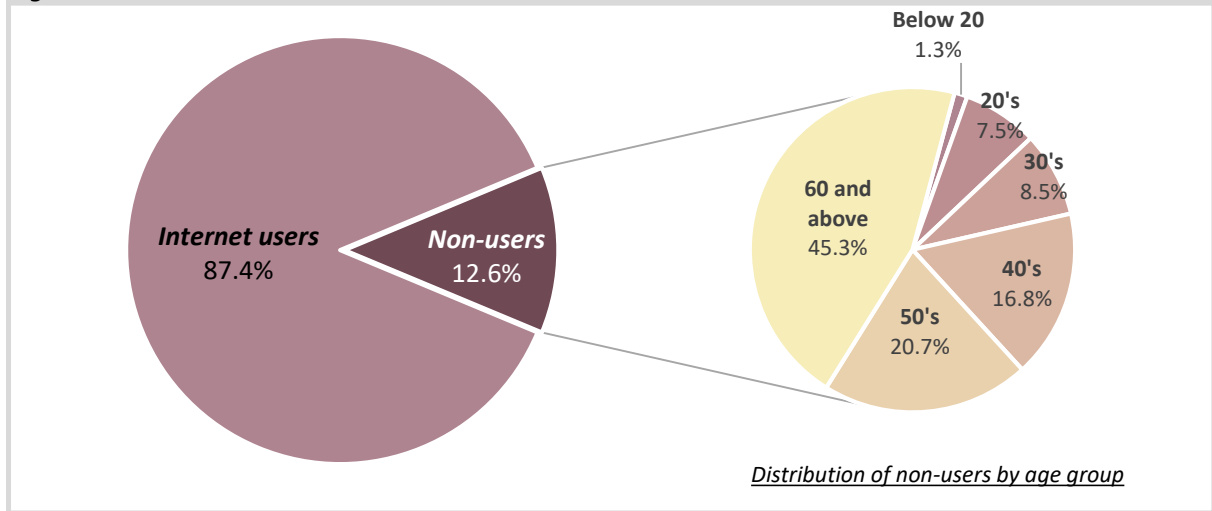
### Internet users and non-users

The survey determined that percentage of Internet users<sup>2</sup> in 2018 stood at 87.4%, a 10.5% percentage point increased from 76.9% in 2016. Approximately, there were 28.7 million Internet users, an increase from 24.5 million in 2016.

The upsurge in the number of Internet users in the country was mainly driven by the growth in mobile broadband segment, with wider access to 3G and 4G/LTE network coverage, improved network quality, as well as innovative and competitive new data plans and promotions by mobile service providers. Furthermore, there was similar observation across the globe, where the International Telecommunication Union (ITU) cited that swift advancement of mobile network and mobile devices capabilities has contributed to a more effective Internet access<sup>3</sup>.

In addition, continuous effort by the government through MCMC to reduce the price and increase the speed of fixed broadband has also contributed to the increase of Internet users.

Figure 1: Internet users and non-Internet users



On the other hand, non-Internet users continue to decline, from 23.1% in 2016 to 12.6% in 2018. Among the non-users, 3.2% were ex-users while 96.8% exclusively never used the Internet. The distribution of non-users comprised largely of respondents aged 60 and above (45.3%), followed by those who were in their 50's (20.7%), 40's (16.8%), 30's (8.5%), 20's (7.5%) and below 20 (1.3%). The mean age of non-users was 58.1 years old, an increase from 53.9 years old in 2016.

<sup>2</sup> Includes those using Internet from any location using any device in the last three months

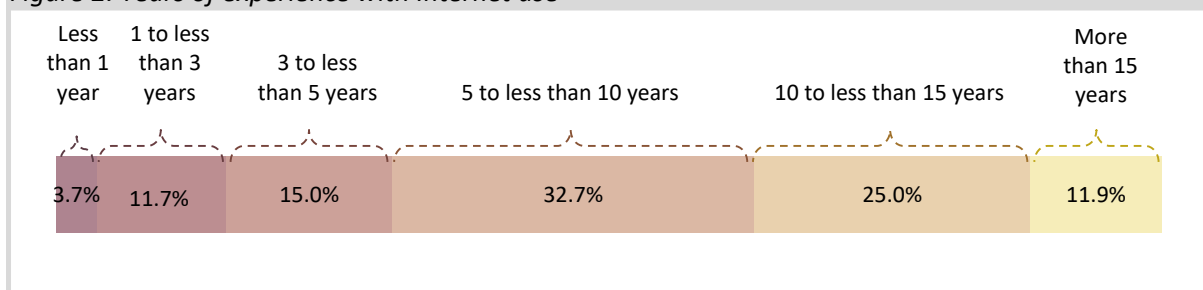
<sup>3</sup> Measuring the Information Society Report, Volume 1, 2017

## Internet access

### Years of experience with Internet use

Over a quarter of users have been using the Internet for more than 10 years. On average, Internet users in Malaysia have been in the online community for 8.5 years. This is as a result of the National Broadband Initiative (NBI) implemented in 2010, to bring broadband to the whole nation and encourage more Internet adoption. Under the High Speed Broadband (HSBB) Project, broadband infrastructures and services were rolled out throughout the country, including the upgrade of broadband service to higher speed of more than 10 Mbps in high economic impact areas.

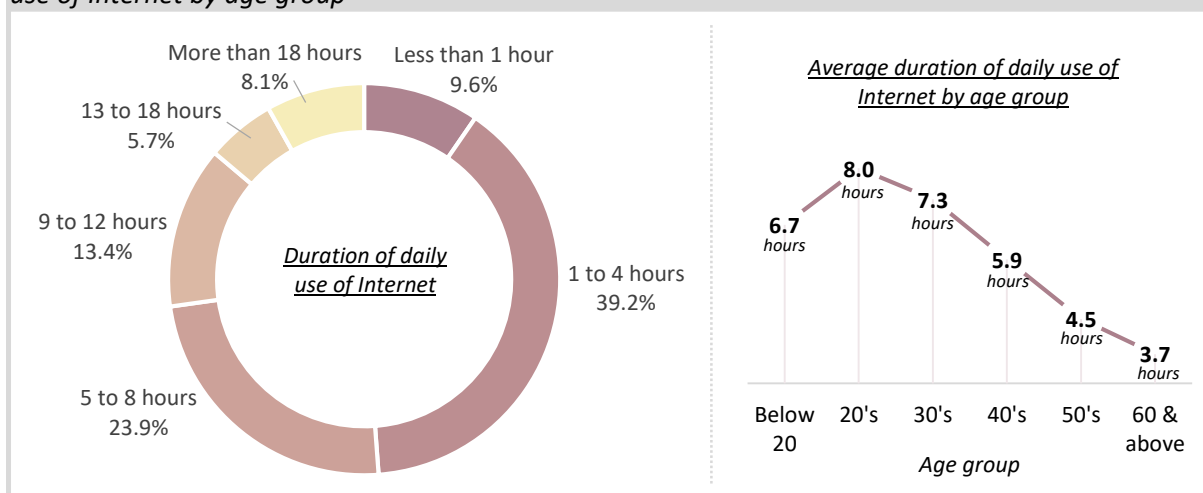
*Figure 2: Years of experience with Internet use*



### Duration of daily use of Internet

The survey found that on average, respondents spent 6.6 hours online in a day. There is no significant difference between gender in terms of time spent online. Male Internet users spent on average 6.7 hours online, while female Internet users spent 6.6 hours.

*Figure 3: Percentage distribution for duration of daily use of Internet and average duration of daily use of Internet by age group*



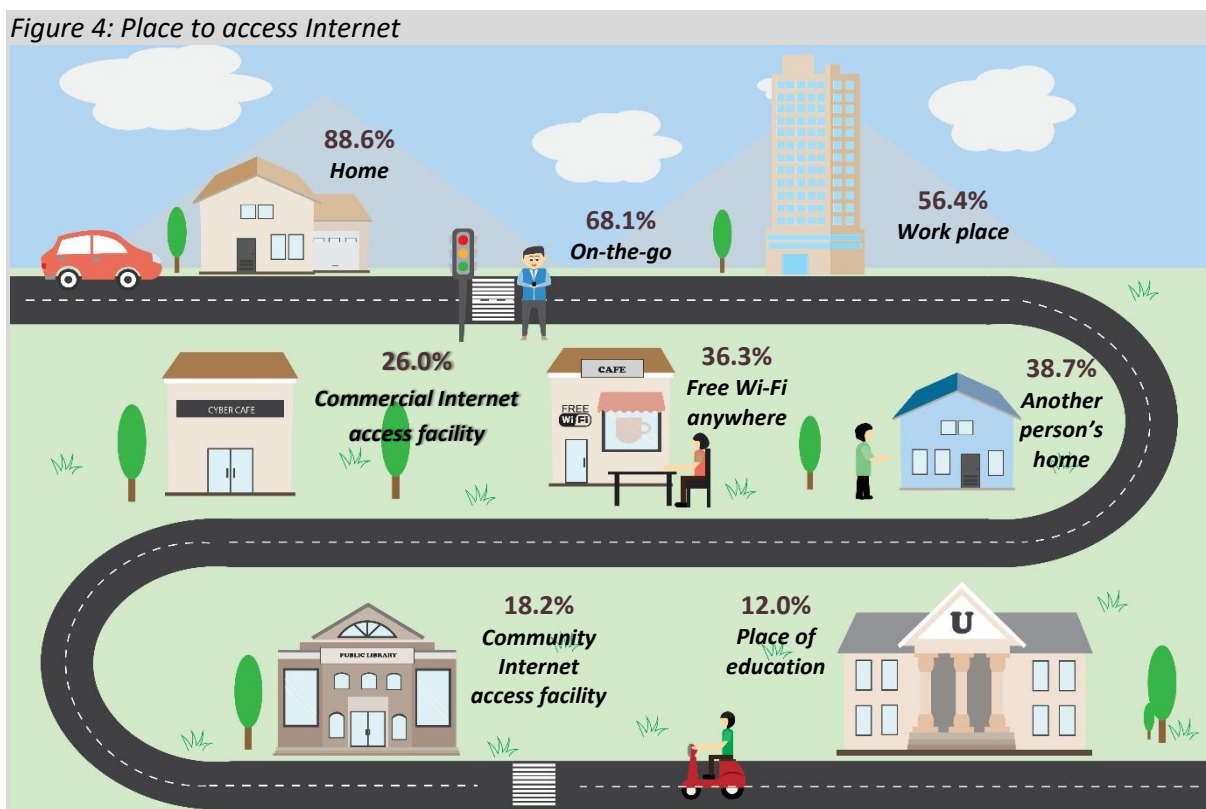
Majority of Internet users spent around 1 to 4 hours daily (39.2%), followed by 5 to 8 hours daily (23.9%). Moreover, 8.1% admitted that they spent more than three-quarters of their time daily connected to Internet.

It is also evident that duration of daily Internet use and age are inversely correlated. Younger respondents that were in their 20's allocated on average 8.0 hours daily to go online, followed by 7.3 hours of those in their 30's, 5.9 hours of those in their 40's and 4.5 hours of those in their 50's. Meanwhile, respondents aged 60 and above were using Internet for 3.7 hours only.

### **Place to access Internet**

At 88.6%, users' own home was the most frequent place to go online, a three percentage point increase from 2016. This is followed by the use of Internet via on-the-go (68.1%)<sup>4</sup>. Usage of Internet at work place stood at 56.4%, preceding usage at another person's home (38.7%). Less Internet users had access Internet via free Wi-Fi anywhere in 2018 as compared with 2016 (2016: 55.9%; 2018: 36.3%). This is partly due to innovative and competitive packages of mobile broadband offered by service providers that made users prefer their own mobile Internet data plan rather than relying on free Wi-Fi.

Figure 4: Place to access Internet



Commercial Internet access facilities were used by 26.0%, compared to 30.0% in 2016. Access from such facilities, that collect a fee from its patrons to access the Internet, saw a decline, which could be attributed to Internet users' preference of mobile Internet devices like smartphone and laptop<sup>5</sup>. Similarly, the percentage of users visiting community Internet access facilities like *Pusat Internet* and public libraries also dropped to 18.2%, from 19.6% in 2016. Broadband expansion and improvement in quality of service enabled better connectivity to reach more households and eventually lessen the

<sup>4</sup> Using Internet while on-the-go such as while walking, shopping or using GPS navigation while driving, etc.

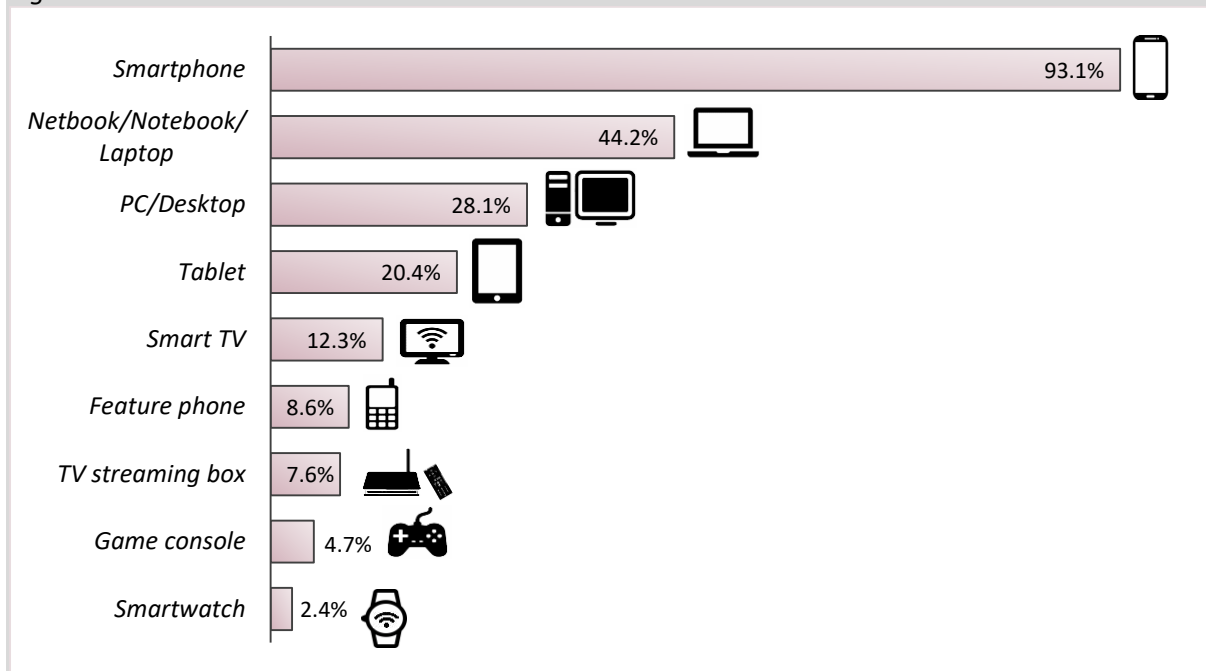
<sup>5</sup> Source: <https://www.youth.sg/Our-Voice/Opinions/2016/1/The-rapid-decline-of-Internet-cafes> and <https://www.bbc.com/news/av/world-us-canada-20307609/decline-and-fall-of-the-internet-cafe>

needs for users to visit Internet access facilities. Meanwhile, place of education remained the least frequent place for Internet access (12.0%).

### **Device to access Internet**

Smartphone remained the most popular means for users to access Internet, with nine out of ten Internet users went online using the device (93.1%), increased by 3.7 percentage point from 89.4% in 2016. This came as no surprise as the subscriptions of mobile-broadband in Malaysia reached 36.2 million in second quarter 2018, compared with only 2.6 million fixed-broadband subscriptions<sup>6</sup>.

*Figure 5: Device to access Internet*



The increasing computing power of smartphone which enabled the growth of new applications and functionalities has led to the decline in accessing the Internet via laptop, desktop, feature phone and tablet. Internet access via portable personal computer (netbook, notebook and laptop) declined by 15.1% since 2014 and stood at 44.2%, while, access using tablet declined by 7.5% and stood at 20.4% within the same period. The use of feature phone as an online device also continued to decline, dropping from 12.5% in 2014 to 8.6% in 2018.

Meanwhile, home devices such as Smart TV, TV streaming box and game console are gaining traction among Internet users, in line with the growth of streaming services. The percentage of accessing Internet via smart TV doubled up from 6.7% in 2016, to 12.3% in 2018, while TV streaming box from 5.6% in 2016 to 7.6% in 2018. Though only 2.4% of Internet users went online via smartwatch in 2018, global trend indicated that market for smartwatch and other wearable devices is expected to further grow in the coming years<sup>7</sup>.

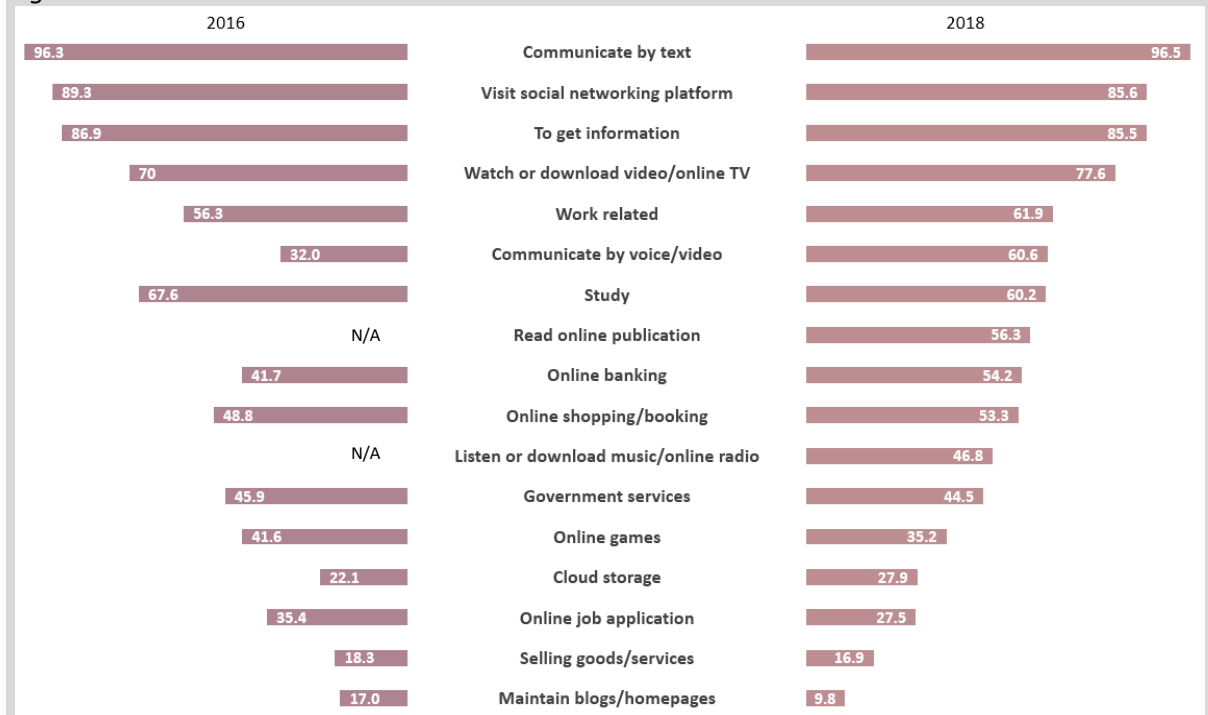
<sup>6</sup> Source: MCMC Communications & Multimedia Facts & Figures 2Q 2018

<sup>7</sup> Source: <https://www.gartner.com/en/newsroom/press-releases/2018-11-29-gartner-says-worldwide-wearable-device-sales-to-grow->

## Online activities

Social engagement continues to be the most frequent activities amongst Internet users. As much as 96.5% used Internet for texting via over-the-top (OTT) messaging platform, while the use of Internet telephony (whether by voice or video calls) was on the rise, reaching up to 60.6% as compared to 32.0% in 2016. Apart from texting and Internet telephony, social networking was also common amongst Internet users (85.6%).

Figure 6: Online activities



Majority of Internet users also relied on Internet for information seeking (85.5%), that provides access to relevant results in an instant. Moreover, various forms of media presentation – such as video, audio and infographic – for information dissemination has made Internet an interactive and commonly preferred source of knowledge.

Apart from text and video communications, video streaming was also a widely used OTT services by Internet users. With faster speeds, cheaper mobile plan and devices as well as more data allowance, streaming, communication by voice/video and downloading online music as well as playing games online were on the rising trends.

The survey identified that 77.6% of Internet users have spent time streaming and/or downloading online videos and TV, an increment from 70.0% in 2016. Watching video via online platform has gone beyond watching shared videos on YouTube or Facebook only. Users are now streaming video content on OTT platform as well, such as Netflix, Iflix and Tonton. The growth of video streaming consumptions can be attributed to consumers' preference to be in control of what they want to watch, anytime, anywhere. Furthermore, streaming platforms are also appealing to consumers as it would enable

them to binge-watch a series, view pre-release content, and enjoy the content with minimal, if not without advertisement.

Meanwhile, 46.8% of Internet users listened and/or downloaded online music and radio<sup>8</sup>. This includes music consumption via OTT applications such as Spotify and Apple Music, and listening to podcast as well as live Internet radio. Another leisure activity, playing online games, was preferred by 35.2% of Internet users. The popularity of these online activities has contributed to a large growth of Internet traffic in Malaysia. For instance, the traffic has increased tenfold to more than 2 Exabyte in 2018 as compared with 0.19 Exabyte in 2014.<sup>9</sup>

The survey also revealed that Internet was used by 61.9% of its users to assist and complete their work-related tasks. Moreover, Internet also provided convenience to 60.2% of the users for study and learning purposes, be it formal or informal. More than half of Internet users (56.3%) stated that they also read online publication<sup>10</sup> namely e-book, online magazine, newspaper or journal.

Besides getting information, socialising and entertaining ourselves, Internet has also facilitated our way of participating in economics activities, especially with the emergence of numerous online banking and online shopping services. This trend has shown positive trends to the growth of digital economy in Malaysia. As such, 54.2% of Internet users carried out online banking and financial activities, compared to 41.7% in 2016.

Likewise, the percentage of online shoppers among Internet users increased, from 48.8% in 2016 to 53.3% in 2018. The e-commerce market in Malaysia is showing a positive trend, with e-commerce gross value added contributed 6.3% to nation's gross domestic product (GDP) in 2017, a steady growth from 4.6% in 2010. Furthermore, value added for e-commerce increased to RM85.8 billion in 2017, from RM75.0 billion in 2016<sup>11</sup>. The adoption of electronic and mobile wallet has also contributed to the increasing number of online shoppers and banking users<sup>12</sup>. Additionally, rising number of Internet users and trust towards online banking are catalyst in developing wider digital ecosystem including e-Commerce, Fintech and various digital services.

It is also found that 44.5% of Internet users accessed online government services, while 27.5% for job seeking purposes. As the data show, usage of government online services is hovering around 45.0% since 2014. Therefore, there is more room for improvement in delivering better online government services. The percentage of Internet users that maintained a blog or personal homepage dropped to 9.8%, as compared with 17.0% in 2016. This might be due to the ubiquitous use of social media that has replaced blog and homepage as a medium for Internet users to express their thoughts and share their interests.

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<sup>8</sup> Excluding those who listen to music via video sharing platform such as YouTube

<sup>9</sup> Source: MCMC

<sup>10</sup> In IUS 2017, 'Read online publication' activity was grouped together under 'Downloading audio/images/reading materials'

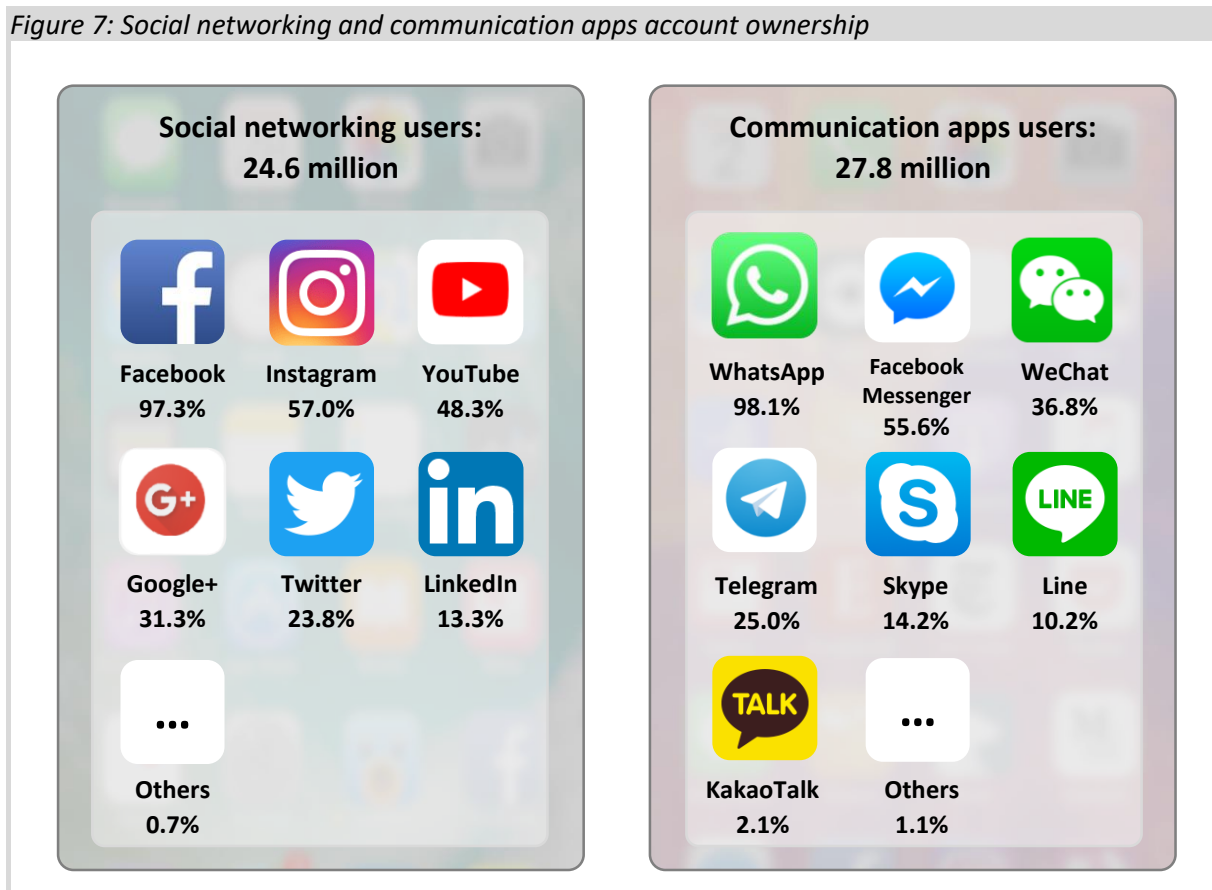
<sup>11</sup> Source: Information and Communication Technology Satellite Account 2017, Department of Statistics Malaysia (DOSM)

<sup>12</sup> Source: <http://www.thesundaily.my/news/2017/10/27/e-wallet-boost-e-commerce>

## Social networking and communication applications

Today, social media has become an important tool for connecting people, building communities, voicing out one's opinion, and business' marketing and advertising. The survey estimated that there were about 24.6 million social networking users in 2018, of those, 97.3% owned a Facebook account, making it remains the most preferred social networking platform in the country. This is followed by Instagram account (57.0%) and YouTube (48.3%), Google+ (31.3%), Twitter (23.8%) and LinkedIn (13.3%).

Figure 7: Social networking and communication apps account ownership



With regards to communication apps, survey found that there were around 27.8 million users in 2018. WhatsApp was the most preferred communication apps, with almost all of them owned an account with it (98.1%). About half owned Facebook Messenger account (55.6%), followed by WeChat (36.8%) and Telegram (25.0%).

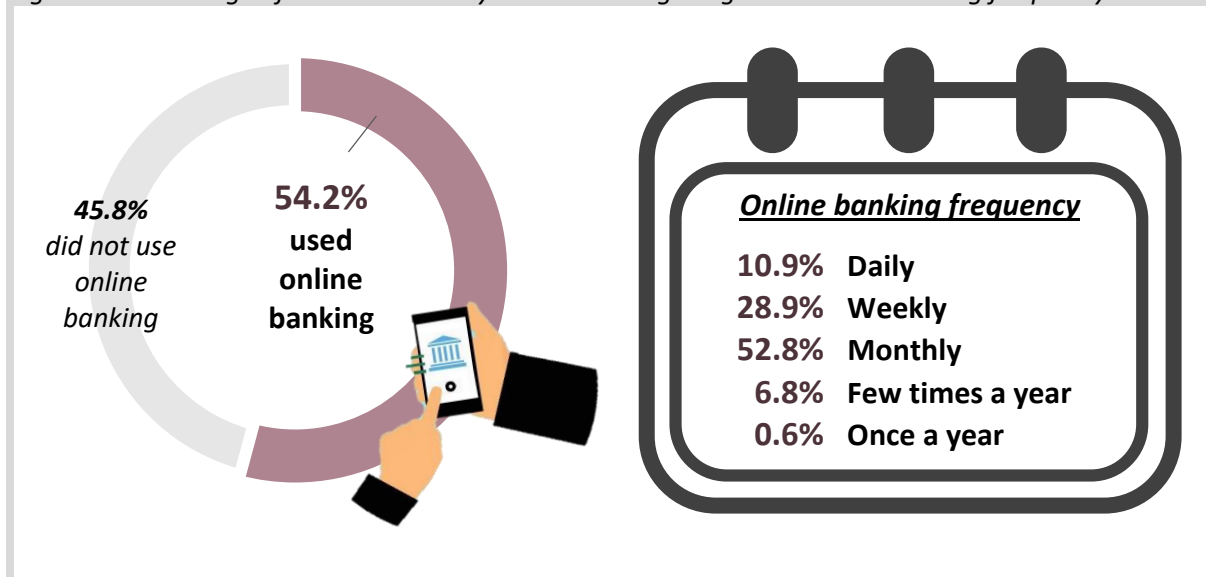
The use of OTT services for communication was prevalent amongst Internet users, due to the value-added benefits offered by the OTT services, such as communication with anyone at any time, regardless of the geographical location and customisation of messaging texts and theme, as well as the convenient of accessing the service over multiple devices.

## Online banking and financial activities

The survey revealed that more Internet users used online banking for their financial activities. In 2018, 54.2% has used the services, as compared to 41.7% in 2016<sup>13</sup>. This is in line with data from Bank Negara Malaysia (BNM) where it reports that the value of Internet banking transactions has been steadily increased over the past decade. For instance, total value of transactions was RM5,217.2 billion in 2016 and reached RM6,502.8 billion in 2017<sup>14</sup>.

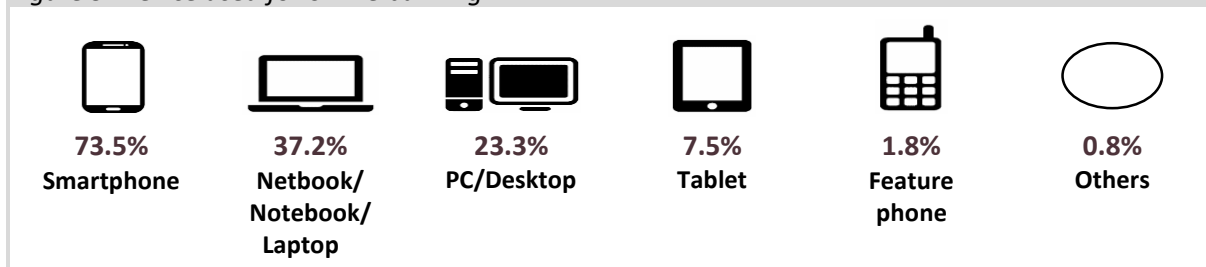
### **Online banking frequency and device**

Figure 8: Percentage of Internet users by online banking usage and online banking frequency



Over half (52.8%) of online banking users used the service on monthly basis, followed by 28.9% on weekly and 10.9% on daily. Mobile devices were the preferred platform for e-banking users to access banking websites or applications, where 73.5% of them used smartphone and 37.2% used portable personal computer (netbook, notebook and laptop).

Figure 9: Device used for online banking



<sup>13</sup> As at October 2018 Bank Negara Malaysia (BNM) reported that the number of Internet Banking subscriptions (individual) was at 27.8 million or equivalent to 86.9% per 100 inhabitants. This data is not unique subscribers as one person may own and use multiples accounts with different banks. However, data from IUS 2018 is pertaining to individual using online banking service without taking into consideration the number of accounts they may have.

<sup>14</sup> Source: Bank Negara Malaysia Payment Statistics – Electronic Payments: Volume and Value of Transactions (Retrieved October 2018)

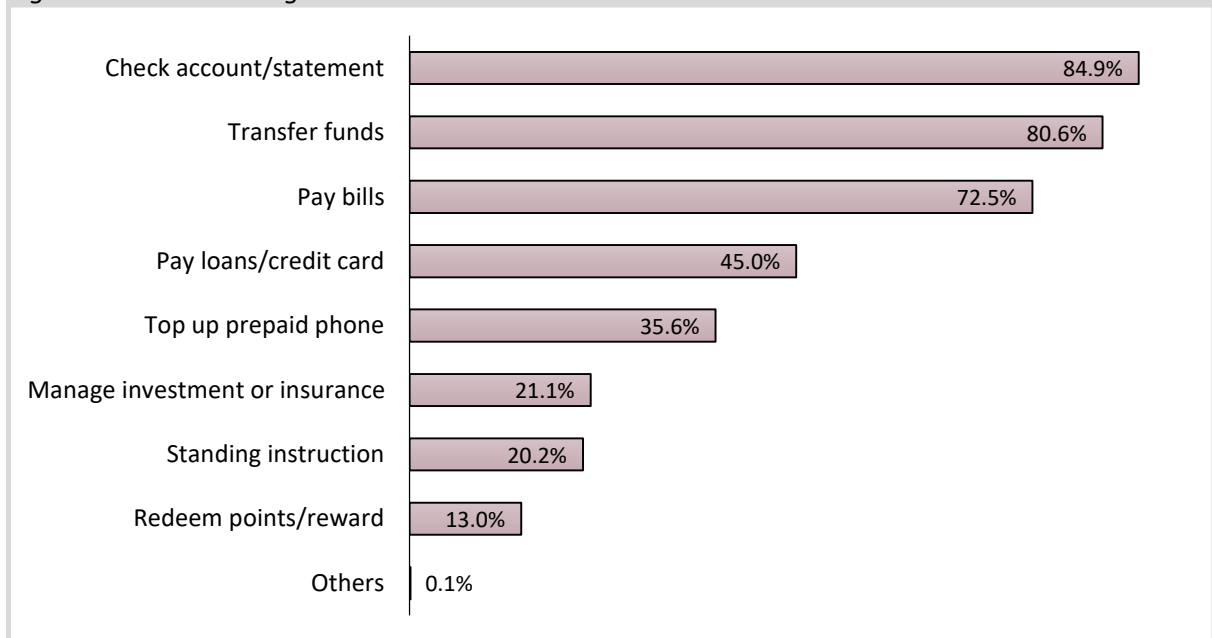


### Online banking activities

When asked about online banking activities, 84.9% of online banking users has made real-time inquiries to check their account balance, transaction history and other information, while 80.6% used intra and inter-bank fund transfer facilities. For 72.5% users, online banking has made paying bills easier with only few clicks away, rather than having to queue up to make over the counter payment. Almost half of online banking users (45.0%) used this platform to pay their outstanding loan and credit card, while 35.6% used it to reload their mobile prepaid credit.

A little over one-fifth of online banking users were also benefiting from the service by managing their investment and insurance online (21.1%), as well as setting up a standing instruction (20.2%). A standing instruction would enable users to set a fixed amount to be automatically pay or transfer to another party, at regular interval. Nevertheless, majority of online banking users were still unaware of points and rewards programme offered by the providers, as only 13.0% of them made the redemption from their respective banks.

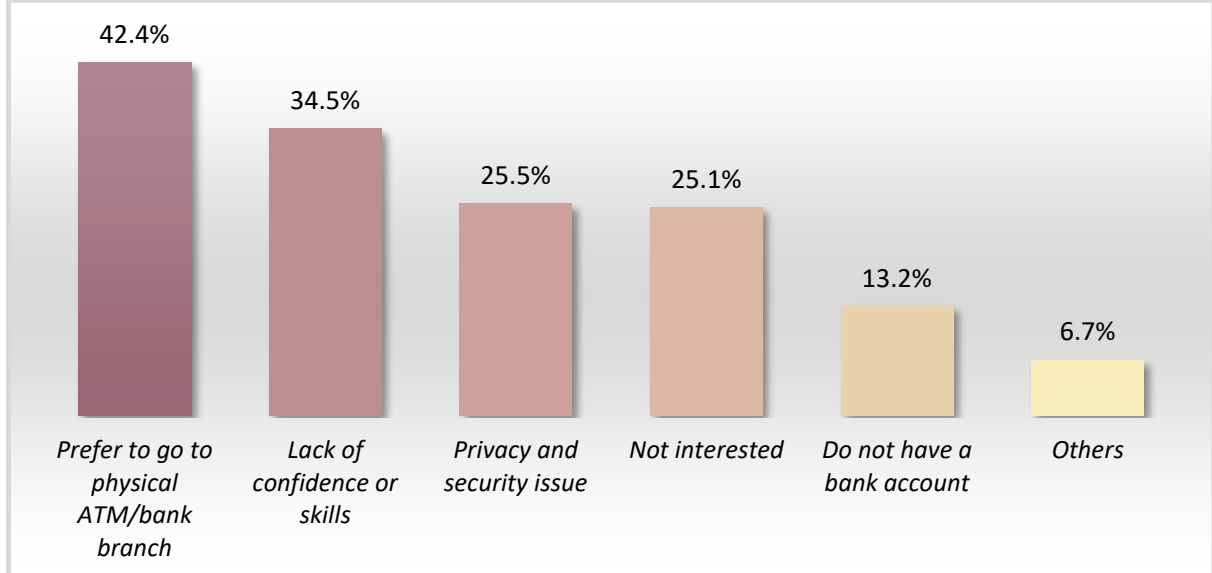
Figure 2: Online banking activities



### **Reasons for not using online banking and financial services**

The remaining 45.8% of Internet users who did not use online banking services were asked about their reason for not doing so. A total of 42.4% cited that they prefer to go to physical bank branch or automated teller machine (ATM) rather than going online to carry out banking activities. In 2015, out of 63.8% of those who were not using online banking, 62.9% claimed that they preferred as such.

**Figure 3: Reason for not using online banking**



It is also found that 34.5% did not use online banking due to lack of confidence or skills to engage in such activity, as compared with 46.6% in 2015. This includes language barriers when accessing e-banking website or applications, worried about selecting wrong transaction options and making unintentional mistake that could cause loss of money, and unsure how to set up an online banking account.

Moreover, about a quarter of non-online banking users (25.5%) were concerned about privacy and security issue of e-banking, dropped from 52.1% in 2015. Such concerns include unauthorized access to user's account, system vulnerability that could lead to fraudulent act and network intrusion, as well as uncertainty on the safety of personal data information.

For 25.1%, they simply were not interested to use online banking, while 13.2% claimed that they have no bank account. Meanwhile, 6.7% cited other reasons for not using online banking, such as limited services offered on online banking, to avoid overspending, age factor and unable to effectively access online banking facilities due disability.

## Online content sharing

### Online content sharing behaviour

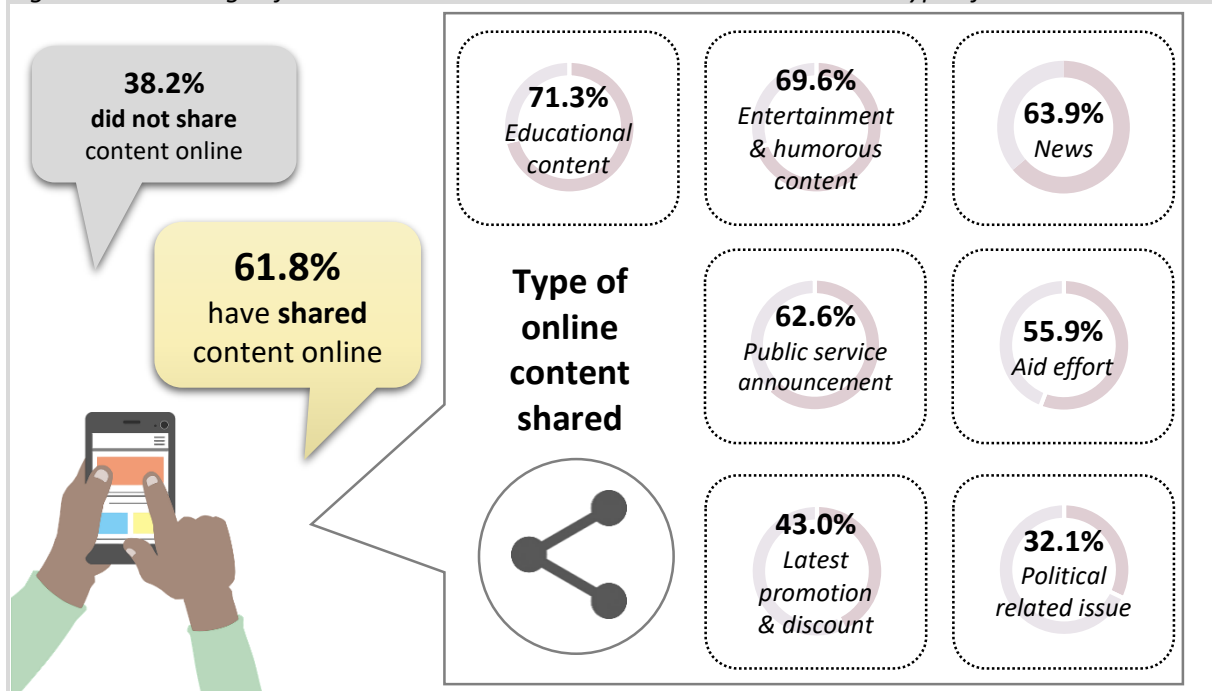
From amusing memes and heart-warming stories of humanity, to latest political ruckus and viral community issue, millions of videos, photos and articles are being shared online every single day. This section of the survey intended to understand the online content sharing behaviour of Internet users, in order for relevant stakeholders to devise an effective preventative measures and advocacy programs to ensure Internet is a safe place for its users.

From the survey, 61.8% of Internet users claimed that they have shared content online. It is also found that the likeliness of an Internet user to share would dropped as age group moving up<sup>15</sup>. For example, 67.4% of Internet users in their 20's shared content online, while only 51.7% of those aged 50 and above did so.

### ***Type of online content shared***

The most common content shared online was educational materials (71.3%), including content about workings of the world, instructions, how-tos, advices, experiences and so on. Then, 69.6% have shared entertainment and humorous content, followed by latest news (63.9%).

Figure 4: Percentage of Internet users that have shared content online and type of content shared



Meanwhile, 62.6% shared public service announcement, for instance water disruption announcement as well as natural disaster warnings and safety checklist. Aid effort, such as search for missing person,

<sup>15</sup> Percentage of Internet users that have shared content online within a particular age group: Below 20 (66.5%), 20's (67.4%), 30's (62.1%), 40's (60.5%), 50 and above (51.7%)

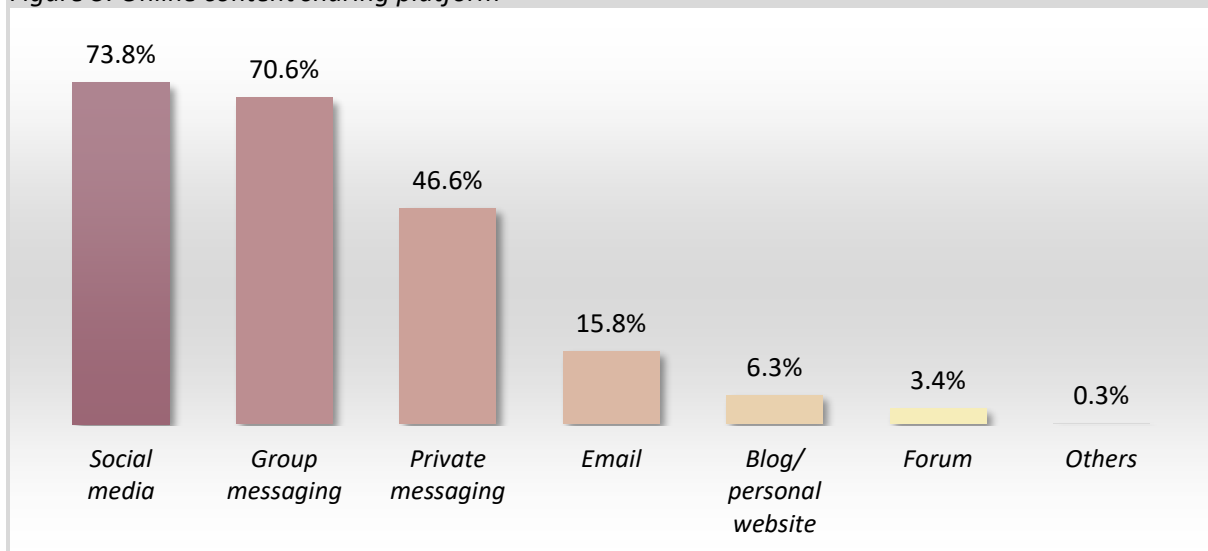
donation for medical aids and humanitarian mission, was shared by 55.9%. Less than half shared latest promotion and discount advertising (43.0%), while political related issue was the least frequent content shared online (32.1%).

### **Online content sharing platform**

When asked about platform used to share content online, as much as 73.8% shared content online across their social media, such as Facebook, Instagram, YouTube or Twitter. Meanwhile, group messaging was preferred over private, one-on-one messaging to share content online (70.6% and 46.6% respectively). Only a small number shared via email (15.8%), blog or personal website (6.3%) or online forum (3.4%).

The use of social media and messaging apps to share content online was preferred due to its ease of use sharing function, for instance, ‘Share’ button on Facebook, ‘Retweet’ on Twitter and ‘Forward’ on WhatsApp. Moreover, the used of ‘hashtags’ (#) in social media platform has led to an effective way of reaching a more extensive audience, by making it easier for them to browse content according to their interests.

**Figure 5: Online content sharing platform**

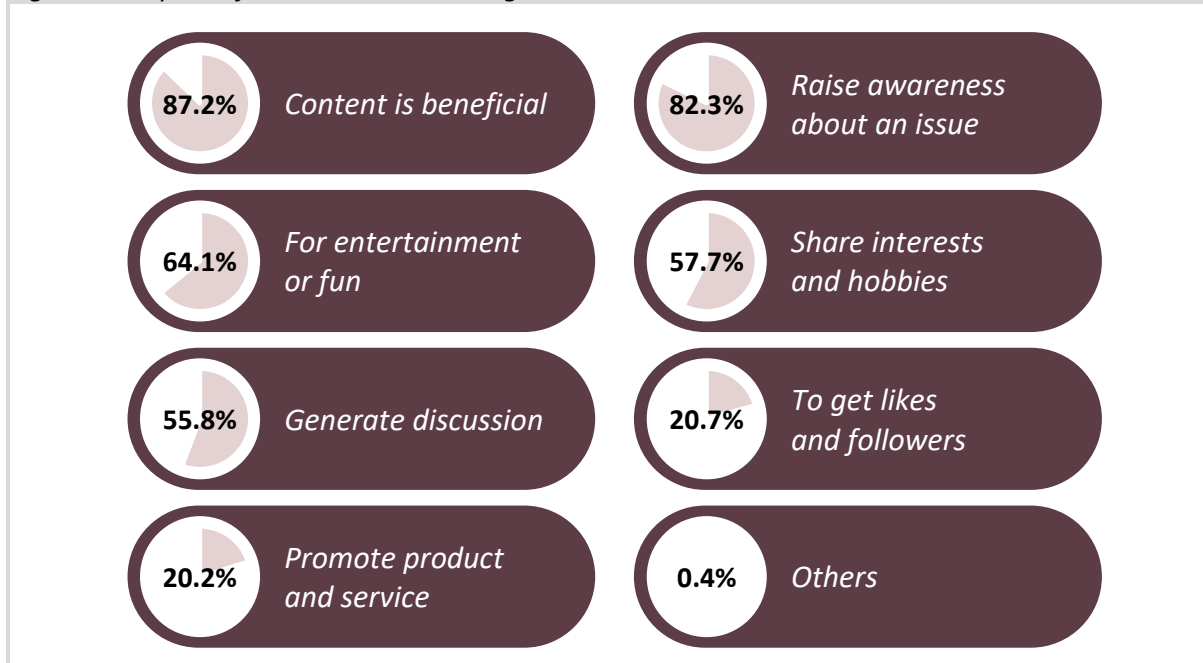


### **Purpose of online content sharing**

Next, respondents were asked about the motivation or purpose for sharing content online. Majority of them claimed that they shared content online because it was beneficial to the recipients (87.2%), while slightly more than eight out of ten said to raise awareness about an issue (82.3%). Moreover, 64.1%, shared content online just for fun and to entertain recipients, while 57.7% shared with intent to generate discussion with and among their recipients about a particular topic.

For 20.7%, they confided that they were aiming for more “likes” and followers when sharing content online, mainly through their social media account. This was more prevalent amongst those in their 20’s and below, than the older age groups. Subsequently, 20.2% took advantage of online sharing medium to promote products and services.

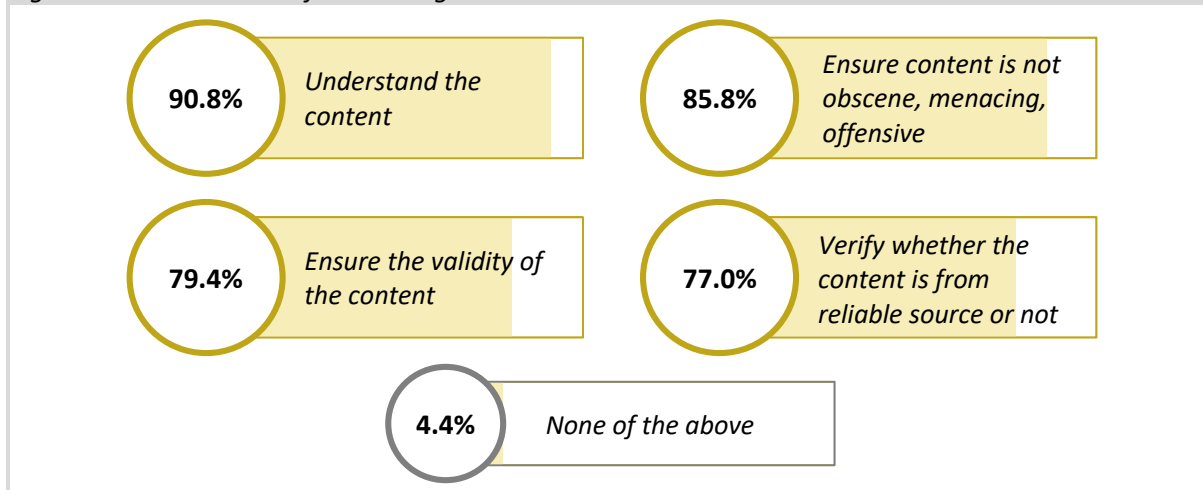
Figure 6: Purpose of online content sharing



#### Action taken before sharing online content

In general, those who shared content online had taken precautionary measures before sharing any content online, in one way or another. Nine of ten understood the content thoroughly before circulating it to others (90.8%). Most of them also ensured that the content is not obscene, menacing or offensive (85.8%), as well as valid and accurate (79.4%) before sharing it online. They also verified that the content came from reliable source before sharing (77.0%). Only 4.4% confessed that they did not do any of these measures before sharing content online.

Figure 7: Action taken before sharing online content



From the findings above, Internet users has indeed become accustomed to sharing content online. With around 3.6 billion Internet users worldwide<sup>16</sup>, some of the contents that are being shared are

<sup>16</sup> Source: ITU World Telecommunication/ICT Indicators database – Key ICT indicators for developed and developing countries and the world (Retrieved October 2018)

bound to be abusive and bogus. Sharing and providing contents that are indecent, obscene, false, menacing, or offensive will not only cause a run-in with the law, but more importantly, it will lead to damaging consequences to our society.

Accordingly, MCMC undertake initiatives to ensure a safe, secure and responsible Internet use, through *Klik Dengan Bijak* (KDB) programme. KDB takes a holistic approach on awareness and education on Internet safety and security by promoting a shared culture or responsibility with families, schools, industry, government and others in the community, all playing their part to encourage positive use of the Internet.

## Child online safety and parental control

In a society where Internet has profoundly influenced our lifestyle, digital literacy has become an important part of today's children's development. The survey found that nine of ten children<sup>17</sup> aged 5 to 17 were using Internet. The use of smartphone for online activities amongst the children was omnipresent where 91.8% of them accessed the Internet from the device. Text communication, social networking, getting information and watching videos were the top online activities for children.

However, Internet has certainly pose many concern to parents such as, exposure to inappropriate contents, cyberbully, communicating with strangers and online scam. They are now challenged on the best way to monitor their child's online behaviour and ensure safety in the cyberspace. Hence, this part of the survey intended to explore parents' attitude on their child online safety. From the survey, it is determined that 28.5% of Internet users were parents<sup>18</sup> with child/children aged 5 to 17 years old that also accessed Internet.

The usage of parental control is one of the approaches to assist parents to ensure their child online safety. Parental control would enable parents to restrict or limit access to specific websites, words or images that deem inappropriate for their child. In terms of awareness, 62.4% of parents were aware of parental control, an increase from 51.0% in 2016. However, the usage of parental control was still low with only 12.2% of them utilised the service.

Figure 16: Awareness on parental control by parents among Internet users



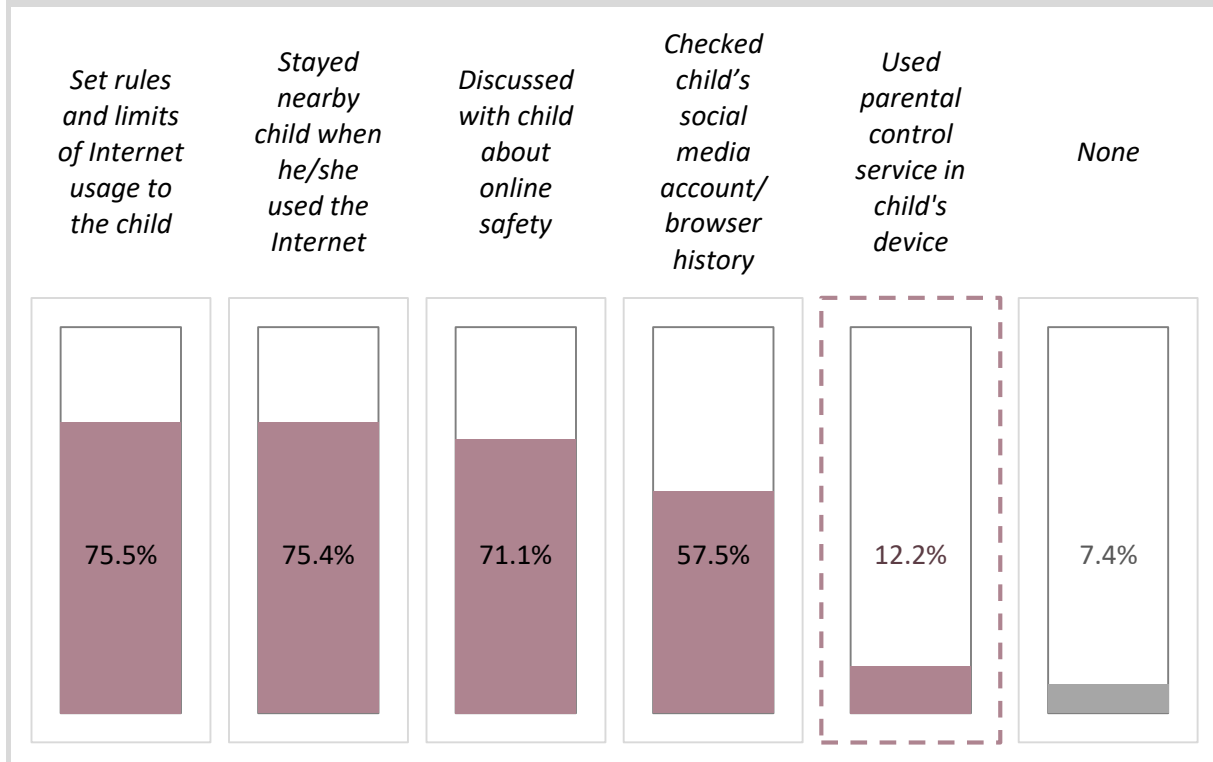
While using parental control might be unfavourable to parents, they assuredly had employed other methods to protect their child when using Internet. When asked about action they had taken to ensure the safety of their child online, 75.5% set their own rules and limits of Internet usage to the child. They also closely monitor their child's Internet usage by staying nearby the child when he or she used the Internet (75.4%). Educating and discussing with their child about safety Internet use were also

<sup>17</sup> For the purpose of this survey, a child is defined as those aged 5 to 17 years old. Caution is required in the use of this statistics, as it is not representative of the children population in the country

<sup>18</sup> For the purpose of this survey, a parent is defined as Internet users with child/children aged 5 to 17 years old that also accessed Internet. Sample for parents in this survey was based on confidence level of 95% and precision of  $\pm 5\%$ . For parents with more than one child aged 5 to 17 that accessed Internet, they were asked to consider the child that celebrated the most recent birthday when answering the question

common among parents (71.1%). Just over half of parents checked their child's social media account or browser history (57.7%).

Figure 17: Action taken by parents to ensure child online safety





## Demographics and socio-economics of Internet users

### Gender

At 59.0%, men outnumbered women (41.0%) in the distribution of Internet users. According to DOSM<sup>19</sup>, the sex ratio of Malaysian population stood at 1.1 while the survey determined that sex ratio of Internet users is 1.4. The distribution of Internet users by gender has recorded a stable trend throughout the year.

Figure 18: Gender distribution of Internet users

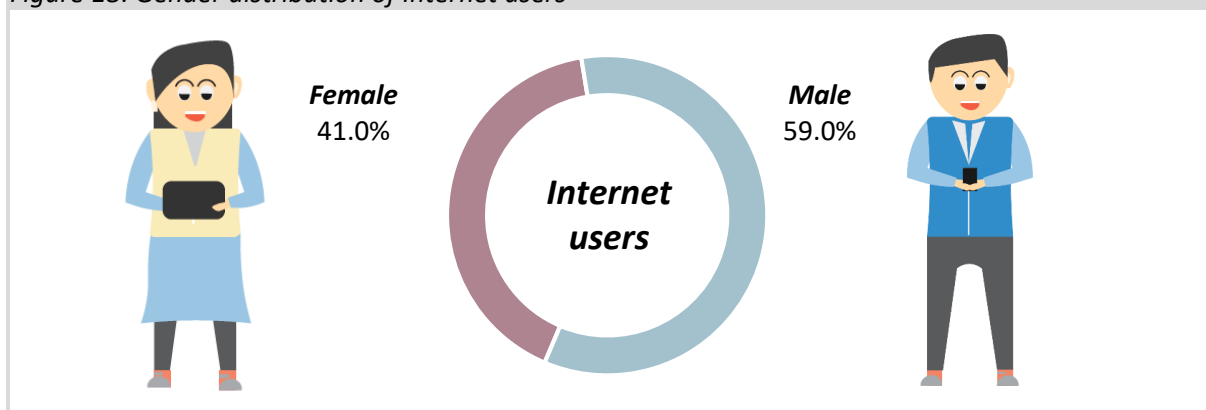


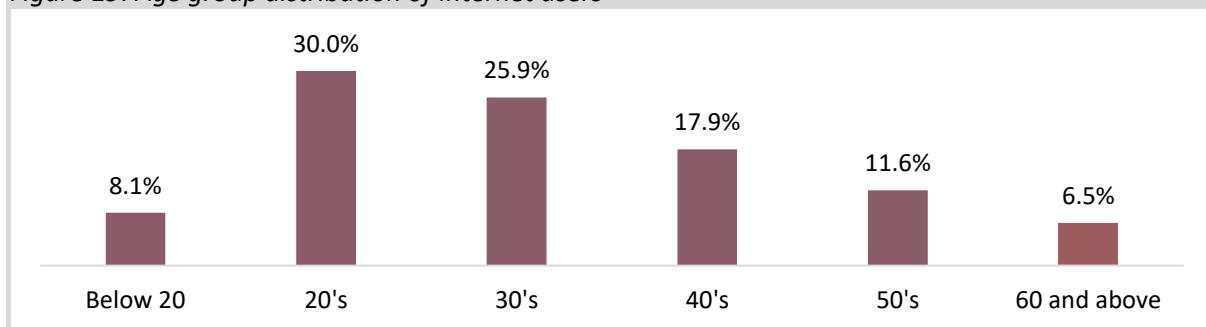
Table 1: Gender distribution and ratio of Internet users (2014, 2016, 2018)

Gender	2014	2016	2018
Female (%)	41.7	42.6	41.0
Male (%)	58.3	57.4	59.0
Ratio	1.4	1.3	1.4

### Age

The mean age of Internet users in 2018 increased to 36.2 years, compared to 33.0 years in 2016. This shows that higher age groups are joining the online community. Internet users were mainly comprised of adults in their 20's and 30's, where they accounted for 30.0% and 25.9% respectively.

Figure 19: Age group distribution of Internet users

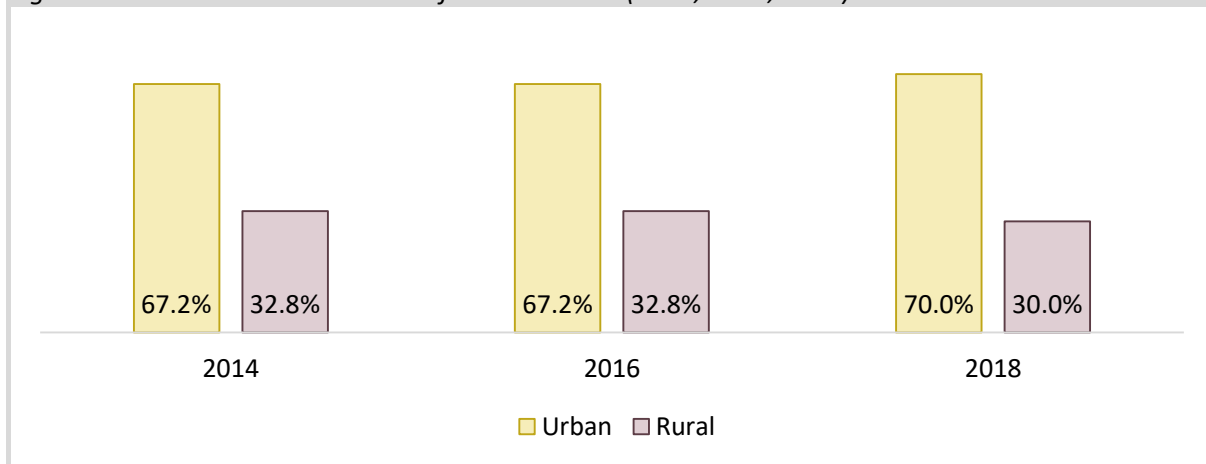


<sup>19</sup> Source: Current Population Estimates, Malaysia, 2018, DOSM – July 2018 revision

### Urban-rural distribution

The survey found that there is some disparity in distribution of Internet users by strata. Urban users made up for 70.0% of Internet users, while rural users only accounted for 30.0%. The ratio of Internet users by strata is 2.3 urban users to 1.0 rural users. The increment of urban users is in line with the increasing percentage of urban population in Malaysia. For instance, the percentage of urban population increased to 75.6% in 2018 as compared to 73.6% in 2014<sup>20</sup>.

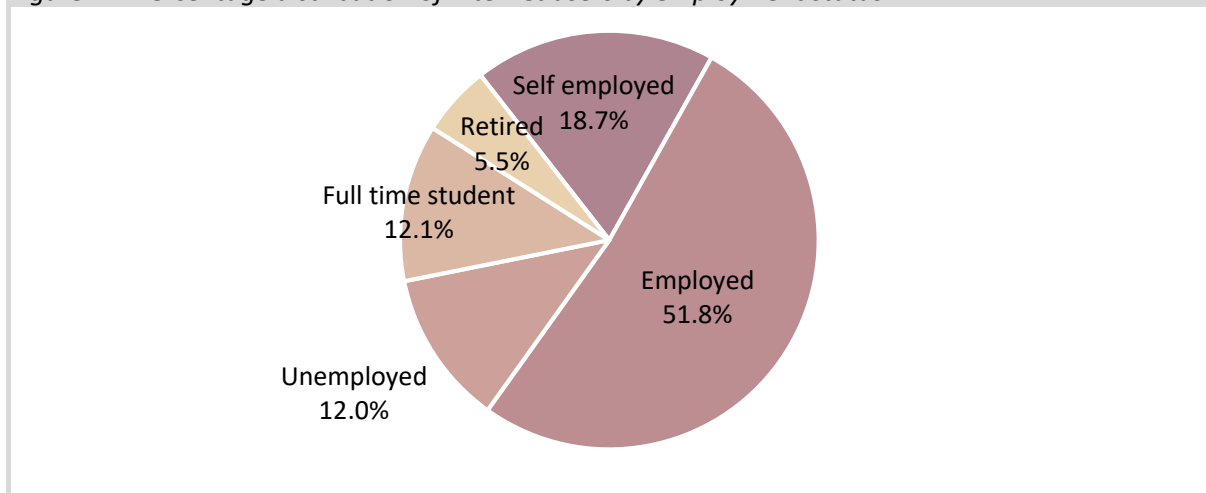
Figure 20: Urban-rural distribution of Internet users (2014, 2016, 2018)



### Employment and current educational status

Almost three-quarters (70.4%) of Internet users are employed, including self-employed, followed by full-time students at 12.1%. Of those who are full time students, 70.7% currently enrolled in college or university and 27.4% in secondary school, while 1.9% in primary school or kindergarten. Additionally, the percentage distribution of retirees among Internet users has increased from 2.2% in 2016, to 5.5% in 2018.

Figure 21: Percentage distribution of Internet users by employment status



<sup>20</sup> Source: Compendium of Environment Statistics, Malaysia, 2018, DOSM

## SECTION 4: CONCLUSION

The growing number of Internet users was primarily contributed by the expansion of mobile broadband infrastructure and intensive market competition. With broadband operators have invested heavily in expanding the facilities and improving quality of services, 3G and LTE network in Malaysia had achieved 96.2% and 92.0% respectively. Additionally, the competitive mobile broadband market is making the service to be more affordable, thus accelerating digital inclusion.

Furthermore, the extension of broadband facilities, for both mobile and fixed broadband, has also change the way Internet users went online. Better coverage and services are making it easier for users to access Internet at the comfort of their own home. This has eventually led to the decline in users' accessing Internet at both commercial and community Internet access facilities such as at cyber café and *Pusat Internet*. The National Fiberisation and Connectivity Plan (NFCP) is set to take place beginning 2019, that aims to improve broadband quality and coverage, thus it can be expected that number of households with Internet access will grow at a faster rate.

The use of OTT platform is getting widely accepted by Internet users due to its three key appeals, namely easy accessibility, customisation and control, as well as low cost to access. When it comes to mobile messaging, more users are abandoning short message service (SMS) to take advantage of the OTT messaging services. Only five years ago, in 2013 they were 76,984.0 million of SMSes sent, as compared with only 8,513.9 million in 2017, a decline of 88.9%<sup>21</sup>. Additionally, the usage of OTT platform for streaming and media consumption is also gaining popularity, especially with the faster and better coverage Internet services offered to consumers.

The rising number of Internet users and increase in users' trust in online banking facilities will lead to more opportunity in flourishing digital economy. Additionally, the advent of online banking facilities will be a catalyst towards developing a cashless society. According to YAB Prime Minister, Tun Dr. Mahathir Mohamad, a cashless society will increase integrity and transparency in monetary transaction, and in return will diminish, if not eliminate, fraud and corruption<sup>22</sup>.

While online content sharing becomes a norm amongst Internet users, they are still being mindful about the content shared. Majority of them had taken various action before sharing the content online, in order to avoid sharing false information or abusive content. This however does not mean that advocacy and awareness programmes should be phased out, rather, to look into more stimulating approaches to cultivate smarter and more vigilant Internet users. It needs to be emphasised that sharing content must be done in ethical manners, especially in this era of free-flow information.

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<sup>21</sup> Source: Communications and Multimedia: Pocket Book of Statistics, MCMC

<sup>22</sup> Source: <https://www.thestar.com.my/news/nation/2018/12/02/pm-no-graft-if-we-go-cashless/>

## SECTION 5: 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.

For comparison, past data are appended together where available.

Percentages may not add up to 100 because of rounding.

Estimated number of Internet Users	
	(million)
2014	20.1
2016	24.5
2018	28.7

Percentage of Internet Users						
	2014		2016		2018	
	Percentage	RSE	Percentage	RSE	Percentage	RSE
Users	66.6	1.2	76.9	1.0	87.4	0.5
Non-users	33.4	2.4	23.1	3.3	12.6	3.7

Years of experience with Internet use		
	2018	
	Percentage	RSE
Less than 1 year	3.7	7.8
1 to less than 3 years	11.7	4.2
3 to less than 5 years	15.0	3.6
5 to less than 10 years	32.7	2.2
10 to less than 15 years	25.0	2.6
More than 15 years	11.9	4.1

Duration of daily use of Internet		
	2018	
	Percentage	RSE
Less than 1 hour	9.6	4.7
1 to 4 hours	39.2	1.9
5 to 8 hours	23.9	2.7
9 to 12 hours	13.4	3.9
13 to 18 hours	5.7	6.2
More than 18 hours	8.1	5.1

Place to access Internet						
	2014		2016		2018	
	Percentage	RSE	Percentage	RSE	Percentage	RSE
Home	73.0	1.2	85.6	0.8	88.6	0.5
On-the-go	65.1	1.5	84.0	0.9	68.1	1.0
Work place	46.6	2.2	58.7	1.7	56.4	1.3
Another person's home	32.1	3.0	54.8	1.9	38.7	1.9
Free Wi-Fi anywhere	50.6	2.0	55.9	1.8	36.3	2.0
Commercial Internet access facility	29.3	3.2	30.0	3.1	26.0	2.6
Community Internet access facility	19.4	4.2	19.6	4.1	18.2	3.2
Place of education	17.2	4.5	13.9	5.1	12.0	4.1

*Multiple responses*

Device to access Internet						
	2014		2016		2018	
	Percentage	RSE	Percentage	RSE	Percentage	RSE
Smartphone	74.3	1.2	89.4	0.7	93.1	0.4
Netbook/Notebook/Laptop	51.4	2.0	36.3	2.7	44.2	1.7
PC/Desktop	35.3	2.8	29.3	3.2	28.1	2.4
Tablet	25.5	3.5	18.0	4.4	20.4	3.0
Smart TV	1.9	14.6	6.7	7.6	12.3	4.1
Feature phone	12.5	5.4	9.4	6.3	8.6	5.0
TV streaming box	-	-	5.6	8.4	7.6	5.3
Game console	1.2	18.5	2.5	12.6	4.7	6.8
Smartwatch	-	-	-	-	2.4	9.8

*Multiple responses*

Online activities				
	2016		2018	
	Percentage	RSE	Percentage	RSE
Communicate by text	96.3	0.4	96.5	0.3
Visit social networking platform	89.3	0.7	85.6	0.6
To get information	86.9	0.8	85.5	0.6
Watch or download video/online TV	70.0	1.3	77.6	0.8
Work related	56.3	1.8	61.9	1.2
Communicate by voice/video	32.0	3.0	60.6	1.2
Study	67.6	1.4	60.2	1.2
Read online publication	N/A	N/A	56.3	1.3
Online banking and financial activity	41.7	2.4	54.2	1.4
Online shopping/booking	48.8	2.1	53.3	1.4
Listen or download music/online radio	N/A	N/A	46.8	1.6
Government services	45.9	2.2	44.5	1.7
Online games	41.6	2.4	35.2	2.1
Cloud storage	22.1	3.8	27.9	2.4
Online job application	35.4	2.8	27.5	2.5
Selling goods/services	18.3	4.3	16.9	3.4
Maintain blogs/homepages	17.0	4.5	9.8	4.6

*Multiple responses*

Social networking account ownership, as percentage of social networking users				
	2016		2018	
	Percentage	RSE	Percentage	RSE
Facebook	97.3	0.4	97.3	0.3
Instagram	56.1	1.9	57.0	1.4
YouTube	45.3	2.4	48.3	1.7
Google+	28.3	3.4	31.1	2.4
Twitter	26.6	3.6	23.8	2.9
LinkedIn	9.1	6.8	13.3	4.2
Others	0.9	22.8	0.7	19.9

*Multiple responses*

Communication apps account ownership, as percentage of communication apps users		
	2018	
	Percentage	RSE
WhatsApp	98.1	0.2
Facebook Messenger	55.6	1.4
WeChat	36.8	2.0
Telegram	25.0	2.7
Skype	14.2	3.8
Line	10.2	4.6
KakaoTalk	2.1	10.5
Others	1.1	14.5

*Multiple responses*

Reason for not using online banking		
	2018	
	Percentage	RSE
Prefer to go to physical ATM/bank branch	42.4	2.6
Lack of confidence or skills	34.5	3.1
Privacy and security issue	25.5	3.8
Not interested	25.1	3.9
Do not have a bank account	13.2	5.8
Others	6.7	8.4

*Multiple responses*

Online banking: Frequency		
	2018	
	Percentage	RSE
Daily	10.9	5.9
Weekly	28.9	3.2
Monthly	52.8	2.0
Few times a year	6.8	7.7
Once a year	0.6*	26.6

Online banking: Device used for online banking		
	2018	
	Percentage	RSE
Smartphone	73.5	1.2
Netbook/Notebook/Laptop	37.2	2.7
PC/Desktop	23.3	3.7
Tablet	7.5	7.2
Feature phone	1.8	15.3
Others	0.8	22.8

*Multiple responses*



Online banking: Frequently used features		
	2018	
	Percentage	RSE
Check account/statement	84.9	0.9
Transfer funds	80.6	1.0
Pay bills	72.5	1.3
Pay loans/credit card	45.0	2.3
Top up prepaid phone	35.6	2.8
Manage investment or insurance	21.1	4.0
Standing instruction	20.2	4.1
Redeem points/reward	13.0	5.3
Others	0.1**	57.7

*Multiple responses*

Online content sharing among Internet users		
	2018	
	Percentage	RSE
Have shared content online	61.8	1.2
Did not share content online	38.2	1.9

Type of online content shared		
	2018	
	Percentage	RSE
Educational content	71.3	1.2
Entertainment and humorous content	69.6	1.3
News	63.9	1.5
Public service announcement	62.6	1.5
Aid effort	55.9	1.7
Latest promotion and discount	43.0	2.2
Political related issue	32.1	2.8

*Multiple responses*

Online content sharing platform		
	2018	
	Percentage	RSE
Social media	73.8	1.2
Group messaging (group chat)	70.6	1.2
Private messaging	46.6	2.1
Email	15.8	4.5
Blog/personal website	6.3	7.5
Forum	3.4	10.4
Others	0.3*	37.7

*Multiple responses*

Purpose of online content sharing		
	2018	
	Percentage	RSE
Content is beneficial	87.2	0.7
Raise awareness about an issue	82.3	0.9
Entertain/for fun	64.1	1.4
Share interests and hobbies	57.7	1.7
Generate discussion	55.8	1.7
Get likes and followers	20.7	3.8
Promote product and service	20.2	3.8
Others	0.4*	31.6

*Multiple responses*

Action taken before sharing content online		
	2018	
	Percentage	RSE
Understand the content	90.8	0.6
Ensure the content is not obscene, menacing or offensive	85.8	0.8
Ensure the validity of the content	79.4	1.0
Verify whether the content is from reliable source or not	77.0	1.1
None of the above	4.4	9.0

*Multiple responses*

Parents among Internet users with child/children aged 5 to 17 that used Internet				
	2016		2018	
	Percentage	RSE	Percentage	RSE
Yes	18.4	4.3	28.5	2.5
No	81.6	1.0	71.5	1.0

Parents awareness on parental control				
	2016		2018	
	Percentage	RSE	Percentage	RSE
Yes	51.0	4.7	62.4	2.3
No	49.0	4.8	37.6	3.8

Action taken by parents to ensure child online safety		
	2018	
	Percentage	RSE
Set rules and limits of Internet usage to the child	75.5	1.7
Stayed nearby the child when he/she used the Internet	75.4	1.7
Discussed with your child about online safety	71.1	1.9
Checked the child's social media account and/or browser history	57.5	2.6
Used parental control service in child's device	12.2	8.0
None	7.4	10.5

*Multiple responses*

Gender distribution of Internet users						
	2014		2016		2018	
	Percentage	RSE	Percentage	RSE	Percentage	RSE
Female	41.7	2.4	42.6	2.4	41.0	1.8
Male	58.3	1.7	57.4	1.8	59.0	1.3

Age group distribution of Internet users						
	2014		2016		2018	
	Percentage	RSE	Percentage	RSE	Percentage	RSE
Below 15	1.6	15.9	0.4*	32.7	0.5	21.3
15-19	13.9	5.1	12.6	5.4	7.6	5.3
20-24	24.2	3.6	21.4	3.9	15.6	3.5
25-29	19.3	4.2	16.7	4.6	14.3	3.7
30-34	13.1	5.3	15.4	4.8	15.3	3.6
35-39	8.7	6.6	10.5	6.0	10.6	4.4
40-44	7.3	7.3	8.0	6.9	10.8	4.4
45-49	4.6	9.3	6.2	7.9	7.1	5.5
50-54	7.3	7.3	3.7	10.5	6.7	5.7
55-59			2.4	13.0	4.9	6.7
60-64			1.4	17.3	3.7	7.8
65 and above			1.2	18.7	2.8	9.0

Urban-rural distribution of Internet users						
	2014		2016		2018	
	Percentage	RSE	Percentage	RSE	Percentage	RSE
Urban	67.2	1.4	67.2	1.4	70.0	1.0
Rural	32.8	2.9	32.8	2.9	30.0	2.3

Employment distribution of Internet users				
	2016		2018	
	Percentage	RSE	Percentage	RSE
Self employed	15.6	4.7	18.7	3.2
Employed	54.6	1.9	51.8	1.5
Unemployed	10.4	6.0	12.0	4.1
Full time student	17.1	4.5	12.1	4.1
Retired	2.2	13.6	5.5	6.3

Educational attainment distribution of Internet users						
	2014		2016		2018	
	Percentage	RSE	Percentage	RSE	Percentage	RSE
Degree or higher (include Advanced Diploma)	15.5	4.8	19.8	4.1	26.1	2.6
Diploma	17.0	4.5	16.9	4.5	18.5	3.2
STPM/STAM/Certificate/UEC-Senior Middle Three	9.2	6.4	9.3	6.4	7.0	5.5
SPM/SPVM	36.4	2.7	31.7	3.0	30.3	2.3
Sijil 4 Thanawi /SMA	0.3*	35.3	0.2*	47.0	0.1*	50.0
PT3/PMR/UEC-Junior Middle Three	8.2	6.8	7.6	7.1	5.7	6.2
Secondary school	7.7	7.1	9.5	6.3	6.1	6.0
Primary school	5.0	8.9	4.5	9.4	5.3	6.4
None	0.7	24.2	0.5	27.7	1.0	14.8

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## LIST OF ABBREVIATIONS

ATM	Automated teller machine
BNM	Bank Negara Malaysia
CATI	Computer Assisted Telephone Interview
DOSM	Department of Statistics Malaysia
GDP	Gross domestic product
ITU	International Telecommunication Union
IUS	Internet Users Survey
KDB	<i>Klik Dengan Bijak</i>
MCMC	Malaysian Communications and Multimedia Commission
MSISDN	Mobile Station International Subscriber Directory Number
NBI	National Broadband Initiative
NFCP	National Fiberisation and Connectivity Plan
OTT	Over-the-top
PSTN	Public switched telephone network
RM	Ringgit Malaysia
RSE	Relative sampling error
SMS	Short message service
SRS	Simple random sample
VoIP	Voice-over-Internet protocol

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- Communications & Multimedia: Pocket Book of Statistics, a half yearly statistical bulletin of the Communications & Multimedia industry (ISSN: 2180-4656),
- Postal & Courier Services: Pocket Book of Statistics, a yearly statistical bulletin of the Postal & Courier industry (ISSN: 2231-9913)

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