ANNUAL SURVEY ON INFOCOMM USAGE IN HOUSEHOLDS AND BY INDIVIDUALS FOR 2019

Infocomm Media Development Authority
10 Pasir Panjang Road
#03-01 Mapletree Business City
Singapore 117438
Republic of Singapore
Tel: (65) 6211-0888
Fax: (65) 6211-2222
Website: www.imda.gov.sg

CONTENTS

TABLES

CHARTS

PART I:

SURVEY OBJECTIVE AND METHODOLOGY

1. Survey Objective

The Annual Survey on Infocomm Usage in Households ("Survey") has been conducted by IMDA since the 1990s. The objective of the Survey is to assess the extent of infocomm adoption in Singapore resident households[1] and residents.

2. Methodology

Data was collected from about 3,000 households and about 3,000 residents via face-to-face interviews. The sample of addresses for household was provided by the Singapore Department of Statistics based on a random selection using a two-stage stratified design by geographical location and housing type. The sample of individuals was provided by Ministry of Home Affairs based on stratified random sampling design by age and ethnicity group. Fieldwork for the survey was conducted between September to December 2019.

3. Concepts and Definitions

The definitions of the key terms used in this report are as follows:

Term	Definition
Household	Household refers to a group of two or more persons living together in the same house and sharing common food or other arrangements for essential living. It also includes a person living alone or a person living with others but having his own food arrangements. Although persons may be living in the same house, they may not be members of the same household.
Resident	Singapore Citizen or Permanent Resident.
Resident Household	Resident households are households with at least one resident (Singapore Citizen or Permanent Resident).
School-going children	School-going children refer to current students who are enrolled between primary education and pre-university / junior college education level.
Computer	Computer includes desktops, laptops, notebooks and tablets.

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

Term	Definition
Computer access at home	Refers to having access to functional computers at home regardless of ownership (i.e. they may be owned by the household or employers and used at home).
Computer ownership	Computer ownership refers to computer owned by household.
Private housing	Private housing refers to landed properties, private condominiums and apartments.
Public housing	Public housing refers to HDB flats.
Broadband	Internet connection speeds equal to, or greater than, 256 kbit/s, in one or both directions and includes connections using ADSL, cable modem, 3G, 3.5G/HSDPA and fibre broadband.
Cable modem	A modem designed to operate over cable TV lines and enables Internet access.

4. Notes on Data

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

PART II:

SURVEY FINDINGS – INFOCOMM ACCESS IN HOUSEHOLDS, AND INFOCOMM ADOPTION AND USAGE BY INDIVIDUALS

Summary

Some noteworthy findings from the survey:

- There is continued growth of household Internet and broadband access over the years; Internet-enabled phones maintained to be the top equipment of choice for accessing Internet at home while the use of computers continued to dip;

- Fibre broadband remained the top Internet connection choice with 94% of resident households using it, a marked 16 percentage-point increase from 2017;

- Internet usage rates rose significantly from 2017, especially among young children and senior citizens;

- Top three primary internet activities among Singapore residents were related to communication, leisure and getting information; the same as in the last three years;

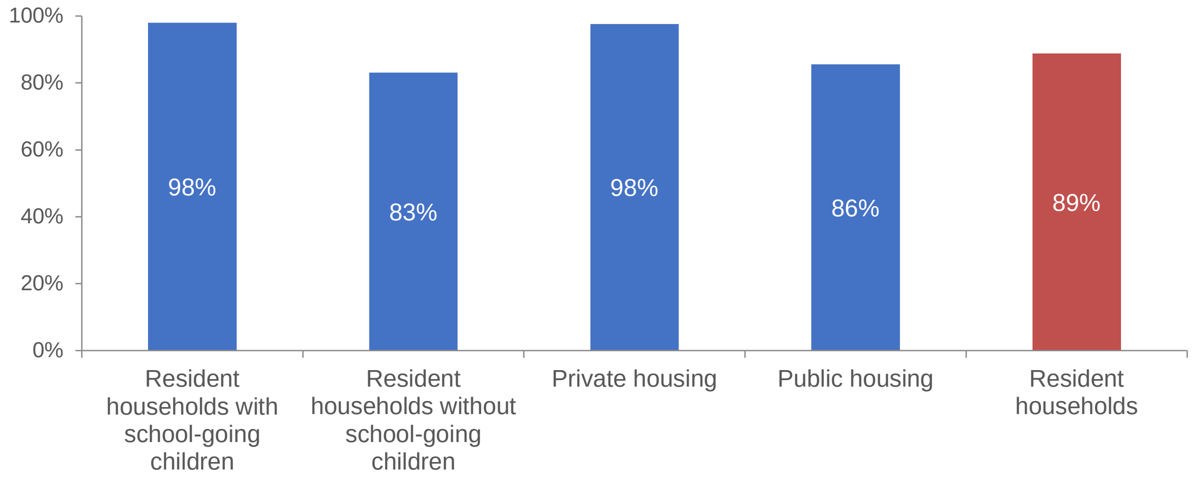
- Online shopping saw significant increase and online shoppers were mainly aged 15-49, with the most online purchase being apparel. Food or groceries and transportation were becoming more common online purchases.

A. Computer, Internet and Broadband Access within Households

About 89% of resident households had computer access, and about 98% of households with school-going children had computer access at home.

Computer access in resident households was 89% in 2019. A higher proportion of households with school-going children had computer access at home as compared to households without school-going children (Chart A1).

Chart A1: Computer Access at Home by Various Housing Types, 2019



Base: Resident households in Singapore

"Lack of skills" and "no need to use" were the top two reasons for households not having access to a computer in the last three years.

Table A1: Main Reason for not Having Access to a Computer at Home, 2017 – 2019

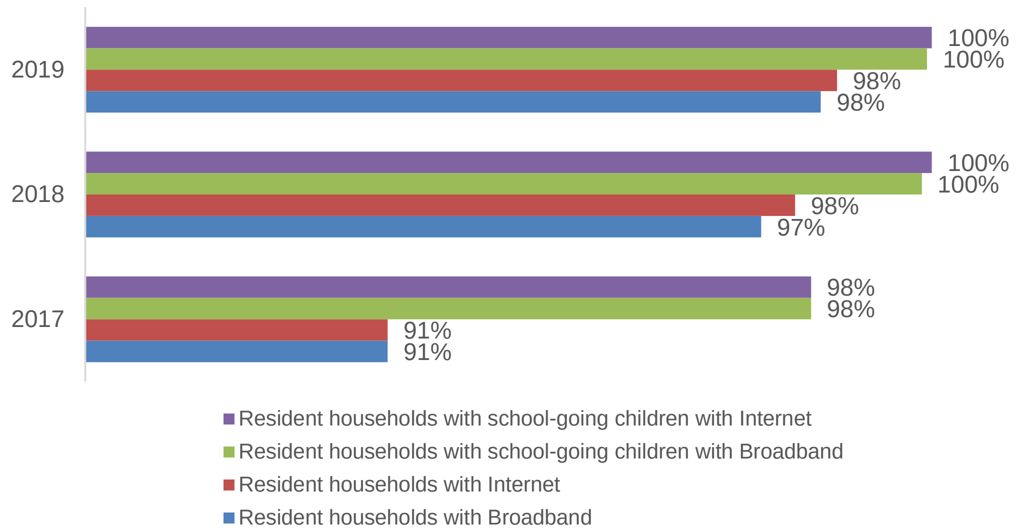
No.	Main Reason	2017	2018	2019
1	Lack of skills	23%	41%	38%
2	No need to use	33%	29%	35%
3	Old age is a barrier to learn computer skills	17%	9%	7%
4	Usually use mobile phone to access Internet	10%	11%	8%
5	Too costly to purchase a computer	9%	8%	10%

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

Growing household internet and broadband access over the years

Home internet and Broadband access rates were 98.4% and 98.2% respectively in 2019, about 7 percentage-points higher than in 2017. For households with school-going children, Internet and broadband access rates were both near 100% in 2019, about 2 percentage-points higher than in 2017. (Chart A2)

Chart A2: Internet and Broadband Access at Home, 2017 – 2019

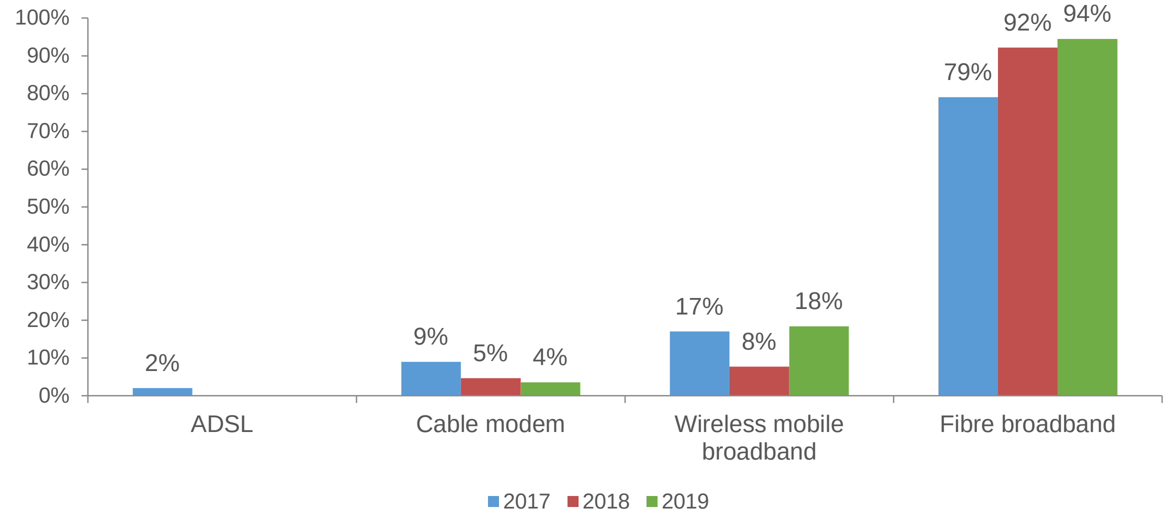


Base: Resident households in Singapore

About 9 in 10 resident households had fibre broadband internet connection at home

Fibre broadband continued to be the top Internet connection of choice used by 94% of resident households, about 15 percentage-points jump from 2017. The proportion of households using wireless mobile broadband remained low at 18%, similar to 2017 percentage, despite a dip last year. (Chart A3)

Chart A3: Type of Internet Connection within Households , 2017 – 2019



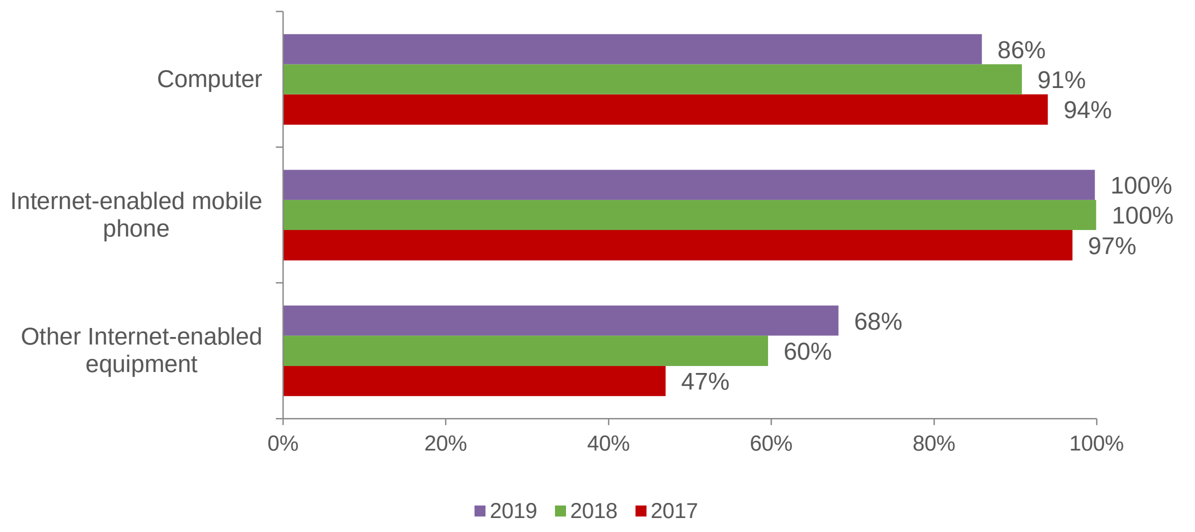
Base: Resident households with Internet access at home
(via cable modem, wireless broadband and fibre broadband)

Internet enabled phones maintained as the top equipment of choice for accessing internet at home while the use of computers continued to drop

For second consecutive, almost 100% of the resident households reported using an Internet-enabled mobile phone to access the Internet at home (Chart A4). The use of other internet-enabled equipment (e.g. Game console with internet connection, Smart TV, internet-enabled MP3/MP4 and Network Attached Storage) continued to climb over the years as well.

In contrast, the usage of computers faced a downtrend trend, with 86% of resident households using it to access the Internet at home in 2019, about a 8 percentage point drop from 2017.

Chart A4: Equipment Used to Access to the Internet at Home, 2017 – 2019



Base: Resident households with Internet access at home

“Lack of interest/ no need to use” was the key reason stated among households without internet access over the last three years

Consistently over the past 3 years, households without home Internet access cited “*Lack of interest/no need to use*” and “*Lack of knowledge/skills/confidence*” as the main two reasons for not using the Internet. (Table A2).

Table A2: Main Reason for not Having Internet Access at Home, 2017 – 2019

No.	Main Reason	2017	2018	2019
1	Lack of interest/No need to use	64%	62%	68%
2	Lack of knowledge/skills/confidence	16%	27%	23%
3	Costly equipment costs	5%	5%	4%
4	Have access to Internet elsewhere	9%	1%	2%
5	Subscription to the Internet is too costly	3%	1%	2%

Base: Resident households that did not have access to internet at home

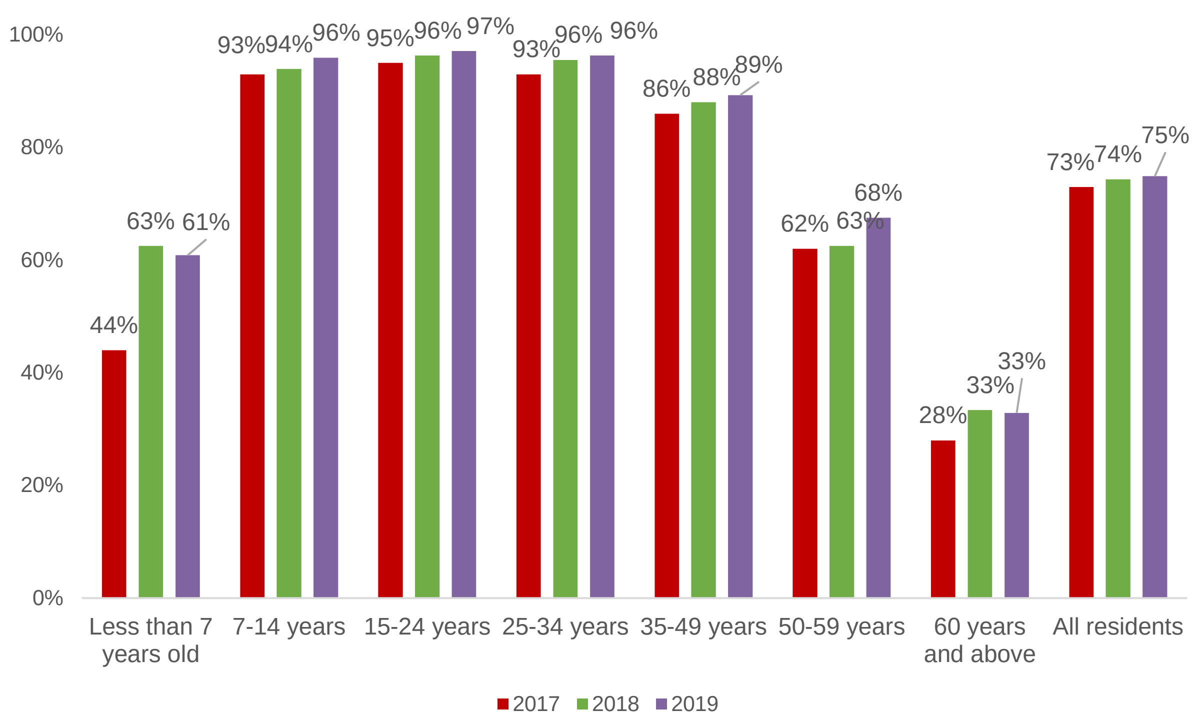
B. Recent Computer and Internet Usage by Individuals

Slight increase in computer usage rates by residents from 2017

In 2019, about 75% of residents used the computer in the last three months (defined as computer users) with higher proportion of usage reported by younger residents aged 7-34 years old. (Chart B1).

Between 2018 and 2019, there were slight increases of 1-2 percentage-points in computer usage by individuals aged 7-49 years old. The most significant jump in usage was seen among the 50-59 years old, with a 5 percentage point increase from 2018.

Chart B1: Proportion of Computer Users by Age Group, 2017 – 2019



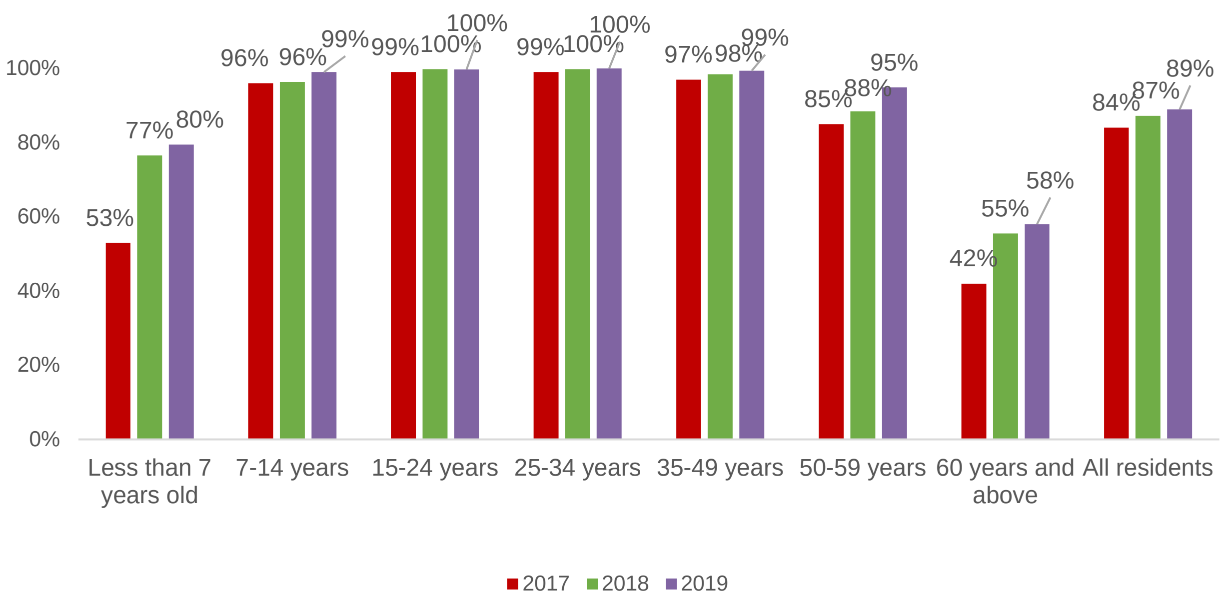
Base: Residents who used the Computer in the last three months.

Internet usage rates rose significantly from 2017, especially among young children and senior citizens

In 2019, about 89% of residents used the Internet in the last three months (defined as Internet users) and almost all residents aged 7-49 years old were internet users. The proportion of internet users across age groups in 2019 increased when compared to 2018.

Between 2018 and 2019, the greatest increase was witnessed among the 50-59 years old, with a 6 percentage point jump in the usage. The groups with rather considerable increases were those aged less than 7 years old and the 60 years and above. Both groups saw 3 percentage point increases in their usage of the Internet. (Chart B2).

Chart B2: Proportion of Internet Users by Age Group, 2017 – 2019

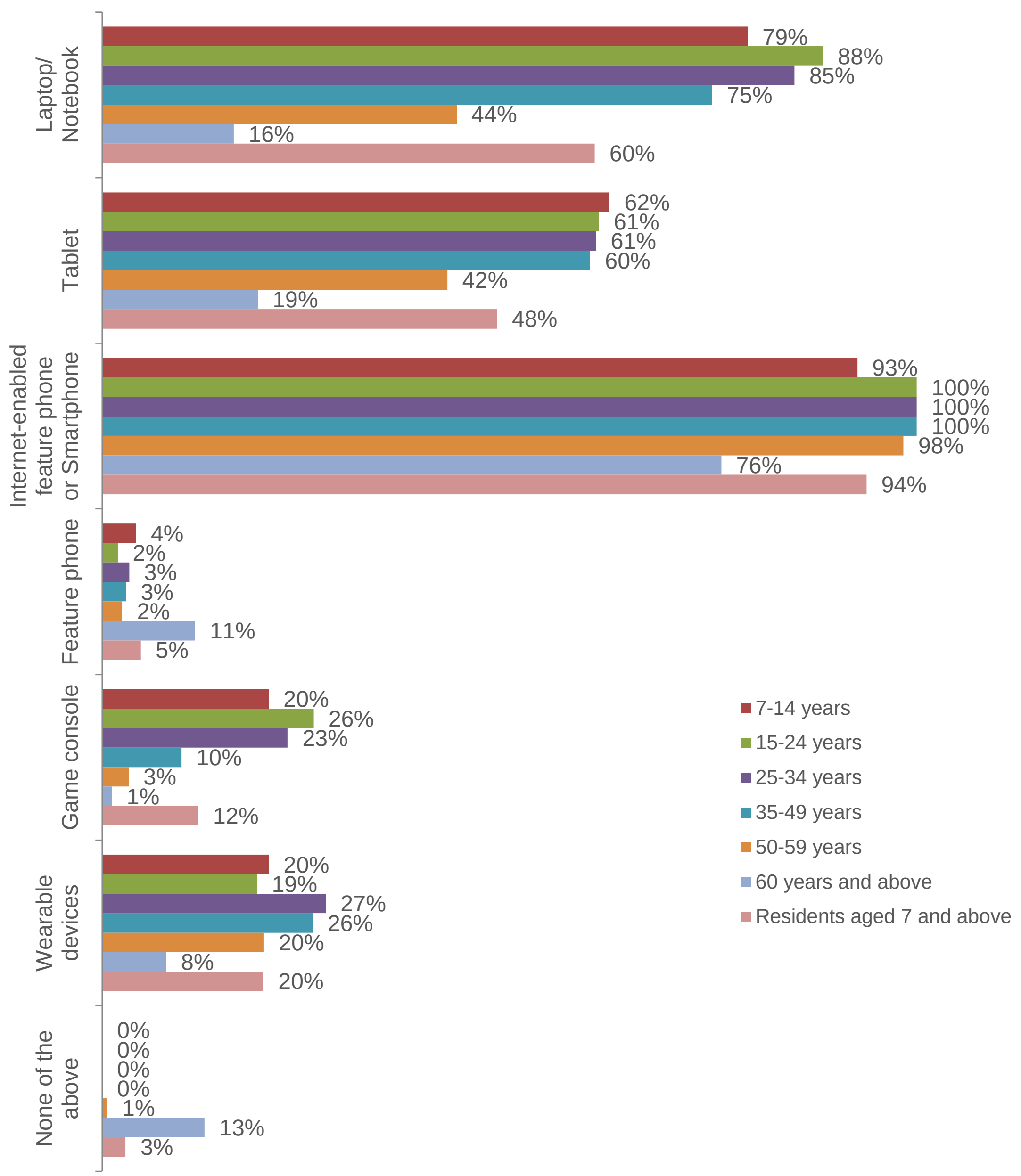


Base: Residents who used the Internet in the last 3 months.

Continued growth in senior citizens and youths using smartphone to access the Internet

In 2019, 98% and 76% of senior citizens aged 50 to 59 years, and 60 years and above respectively used an Internet-enabled feature phone or smartphone in the past three months, with increases of 3 and 2 percentage-points respectively (Chart B3). Another group that saw sustained growth (3 percentage-points) in the use of smartphone was those aged 7-14 years old. The highest smartphone usage was among residents aged 15 to 49 years old (100%).

Chart B3: Portable Equipment Used by Age Group, 2019

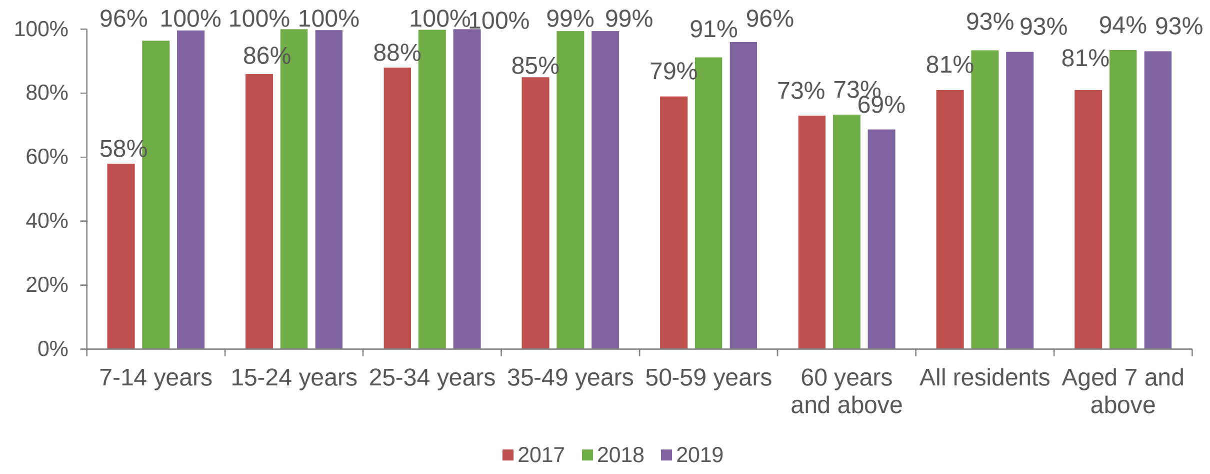


Base: Residents aged 7 and above

The use of portable infocomm equipment to connect to the Internet wirelessly remained similar in 2019 with increases seen among the 50-59 years old and 7-14 years old

In 2019, the 7-14 years old and 50-59 years old reported 100% and 96% respectively in the use of portable infocomm equipment to connect to the Internet wirelessly (Chart B4). This reflected 4 and 5 percentage-points increase from 2018.

Chart B4: Portable Equipment Used to Connect to the Internet wirelessly by Age Group, 2017-2019



Base: Residents of aged 7 and above who had used a portable equipment in the past 3 months.

Lack of knowledge, skills or confidence was still the top reason cited by non-internet users in 2019, though the proportion of mentions continued to drop (Table B1)

Table B1: Main Reason for not using Internet, 2017 – 2019

No.	Main Reason	2017	2018	2019
1	Lack of knowledge /skills / confidence	**77%**	**60%**	**55%**
	Do not know how to use computer, internet-enabled feature phone	47%	53%	46%
	Do not know how to use the internet	23%	-	-
	Lack of confidence	2%	3%	3%
	Language skills are inadequate	5%	3%	7%
2	Too old to learn	**14%**	**8%**	**12%**
3	Not interested / No need to use	**9%**	**27%**	**29%**
4	Concerns about costs and risks of use	**-**	**5%**	**3%**

Note: "Do not know how to use the internet" was removed in 2018; "Concerns about costs and risks of use" was newly added in 2018

Base: Residents who had never used the internet before

Top three primary internet activities among Singapore residents were communication, leisure and getting information

The top three primary Internet activities[2] of Internet users, consistently over the last three years, were related to communication, leisure activities and getting information (Table B2). The range of increase in the proportion using Internet for the top 10 activities was 1-6 percentage-points. The greatest increase (6 percentage-points) was seen for the purchasing or ordering goods or services.

Table B2: Primary Internet Activity Groups of Internet Users, 2017 – 2019

Primary Internet Activity Group	Residents aged 7 and above		
	2017	2018	2019
Communication	94%	95%	96%
Leisure Activities	90%	91%	92%
Getting Information	84%	85%	85%
Purchasing or ordering goods or services	55%	60%	66%
Online Banking	59%	60%	62%
Dealing with government organisations / public authorities	44%	45%	46%
Education or learning activities	24%	26%	27%
Creating Content	26%	26%	24%

Base: Internet users aged 7 and above who had used the internet in the past 3 months

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

Using instant messaging was the top mobile online activity for 2018.

In 2019, among online activities on mobile equipment, communication uses (using instant messaging, and using social networks) remained the top two activities (Table B3). Getting information or general web browsing was the third most conducted online activity.

The two activities with the greatest increases from 2018 were getting information or general web browsing and purchasing or ordering goods or services online, with 5 and 6 percentage-points increases respectively. These activities were most engaged among the 25-34 years old.

Table B3: Top Ten Internet Activities on Mobile Equipment by Age Group, 2019

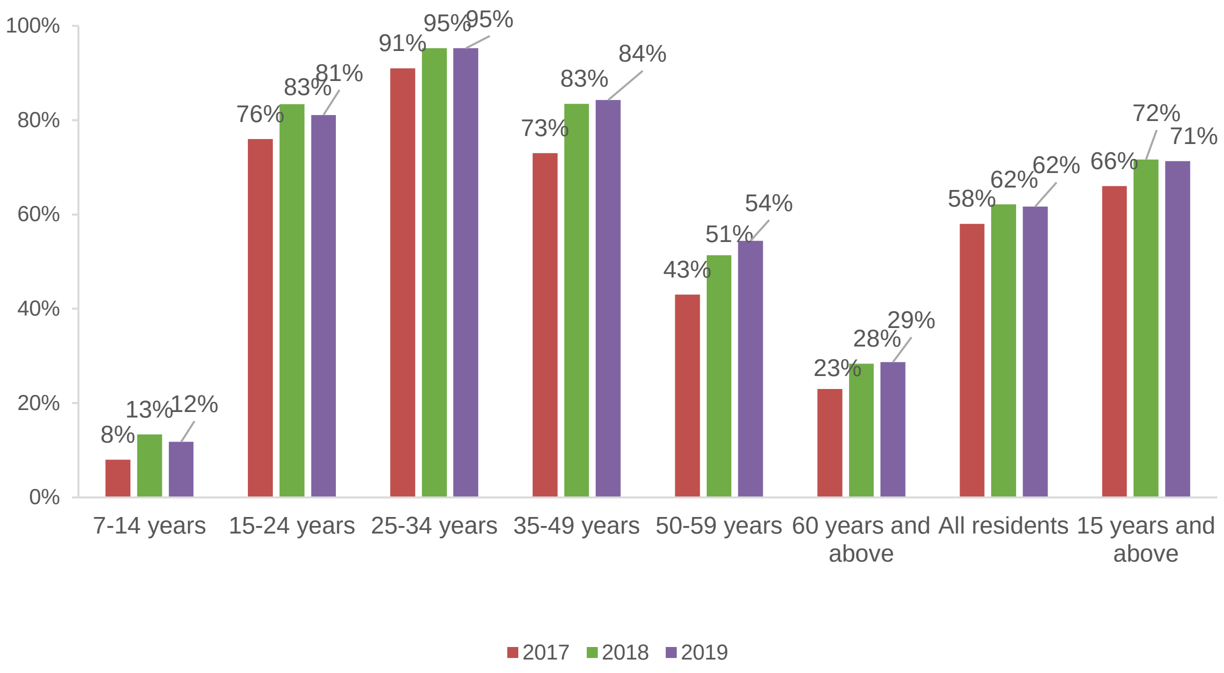
Activity	7-14 years	15-24 years	25-34 years	35-49 years	50-59 years	60 years & above	All age groups
Instant messaging	71%	97%	96%	95%	90%	80%	90%
Social networks	53%	89%	85%	86%	85%	51%	78%
Getting information or general Web browsing	65%	87%	91%	85%	71%	51%	77%
For purchasing or ordering goods or services	12%	81%	95%	84%	54%	29%	66%
Sending or receiving emails	31%	82%	86%	78%	54%	38%	66%
Downloading or watching movies, short films or images	68%	79%	73%	64%	58%	51%	65%
Telephoning over the Internet (VoIP) - Voice	50%	72%	69%	66%	54%	49%	61%
Checking account information	3%	72%	89%	77%	49%	30%	60%
Reading online news	28%	60%	69%	63%	50%	40%	55%
Transferring of funds	2%	63%	83%	71%	43%	22%	54%

Base: Residents aged 7 and above who had used mobile equipment in the past 3 months

Online shopping was on the rise and online shoppers were mainly from the 15-49 age group

In 2019, seven in ten Internet users aged 15 and above who used the Internet in the past three months had made an online purchase before (defined as online shoppers). In the last three years, the highest proportions of online shoppers came from Internet users in the age groups 25-34 years, followed by 35-49 years and 15-24 years old. (Chart B5).

Chart B5: Online Shoppers by Age Group, 2017 – 2019

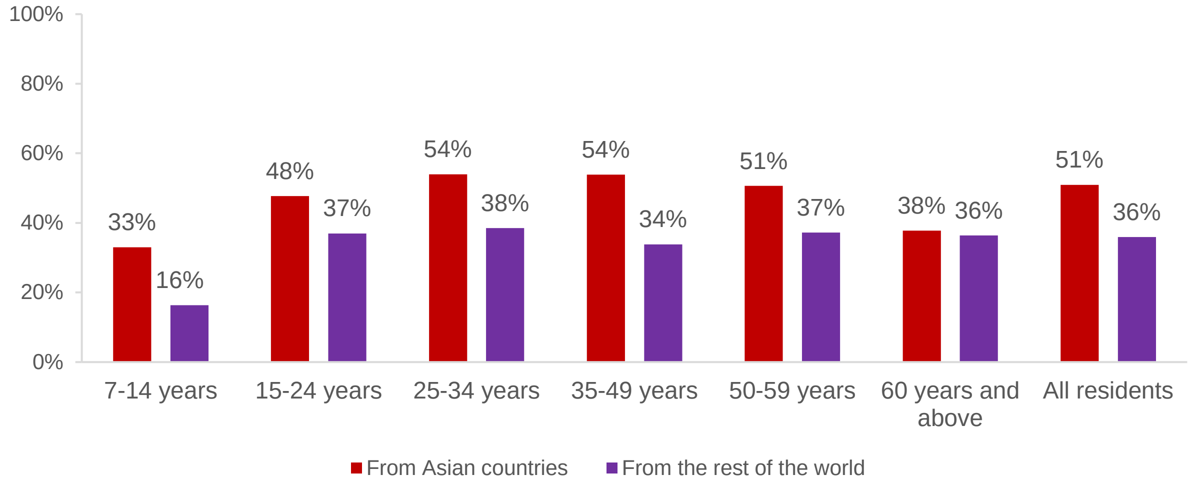


Base: Internet users aged 7 and above who used the Internet in the last 3 months

Most online shoppers purchased goods or services from sellers not located in Singapore - 51% from other Asian countries, and 36% from the rest of the world.

In 2019, 51% of individuals who ordered goods or services over the internet chose sellers located in other Asian countries. This was a marked increase of 12 percentage-points from 2018. In fact, across all of the age groups, the online purchases were more concentrated in sellers from other Asian countries as compared to sellers from the rest of the world (Chart B6).

Chart B6: Cross-border online purchases by Individuals, 2019



Base: Online shoppers aged 7 and above who had made at least one online purchase in the past 3 months

Apparel remained as the most popular item purchased online in the last three years while online purchases of food or groceries and transportation rose in popularity in 2019

About 65% of individuals purchased apparel online, a rather consistent proportion as compared to 68% in 2018 (Table B4). The online purchase of food and groceries saw a 12 percentage-points increase from 2018, which was the most significant increase as compared to other online purchases.

Transportation was a newly surveyed item in 2019 and the proportion of individuals who booked transport online was closely similar to that of online food or groceries purchases. The age groups that did online purchases for food or transport were mainly concentrated in the range of 15 to 49 years old.

Table B4: Top Ten Goods or Services Purchased Online by Age Group, 2019

Items	7-14 years	15-24 years	25-34 years	35-49 years	50-59 years	60 years & above	15 years & above	All age groups
Clothing, footwear, sporting goods or accessories	64%	68%	71%	67%	58%	46%	65%	65%
Food or groceries (e.g. Food panda, Grab Food, Redmart, Honestbee, Fairprice Online)	28%	42%	51%	48%	36%	35%	45%	45%
Transportation (e.g. Grab, Go-Jek, Comfort Delgro)	29%	46%	52%	42%	35%	33%	44%	44%
Travel product(s) (e.g. air ticket, accommodation,)	4%	24%	38%	42%	35%	34%	36%	35%
Ticket(s) for entertainment event(s) (e.g. cinema, theatre, concert, sports game)	8%	31%	37%	29%	26%	21%	30%	30%
Household or electronic items (e.g. air cleaner, vacuum cleaner, speakers)	0%	15%	22%	27%	21%	19%	22%	22%
IT and telecommunication services (excluding software) (e.g. subscription of Internet access service, mobile phone services and pay TV)	8%	15%	16%	15%	6%	5%	13%	13%
Booking(s) for sports facility (e.g. sports hall, football field, tennis court)	13%	16%	16%	11%	5%	2%	12%	12%
Computer equipment or parts (including peripheral equipment, such as harddrive, mouse, screen/monitor)	17%	15%	12%	11%	8%	6%	11%	11%
Computer or video games (in digital form)	29%	17%	17%	9%	1%	0%	11%	11%

Base: Online shoppers aged 7 and above who had made at least one online purchase in the past 3 months

Near eight in ten online shoppers paid for online purchases using credit cards in the last two years

Credit card payment was the preferred choice of payment for goods or services purchased online, accounting for 77% of the overall online shoppers in 2019 (Table B5). It was a popular payment method across a wide range of age groups, from 25 to 60 years old and above.

This was followed by payment via direct debit and mobile wallet, accounting for 35% and 26% of the overall shoppers respectively. Notably, these two payment modes saw 10 percentage-points increase from 2018. Higher proportions of those who were aged 15 to 34 years old used these two payment methods.

Table B5: Payment Methods for Goods or Services Purchased Online by Age Group, 2019

Payment Method	7-14 years	15-24 years	25-34 years	35-49 years	50-59 years	60 years & above	15 years & above	All age groups
Credit cards	46%	51%	81%	84%	83%	85%	77%	77%
Direct debit / Pay using bank account	12%	53%	39%	28%	28%	29%	35%	35%
Mobile Wallet	4%	28%	29%	28%	24%	9%	27%	26%
Cash on delivery	58%	29%	18%	17%	23%	19%	21%	21%
Internet fund transfer	0%	14%	17%	21%	14%	5%	17%	16%
Peer-to-peer fund transfer	0%	23%	19%	18%	6%	3%	16%	16%
eNETS virtual account	0%	9%	13%	9%	4%	3%	9%	9%
Payment using mobile phone or through the telecommunication bills	4%	3%	5%	3%	2%	0%	3%	3%
Gift-cards	16%	1%	1%	0%	0%	0%	1%	1%

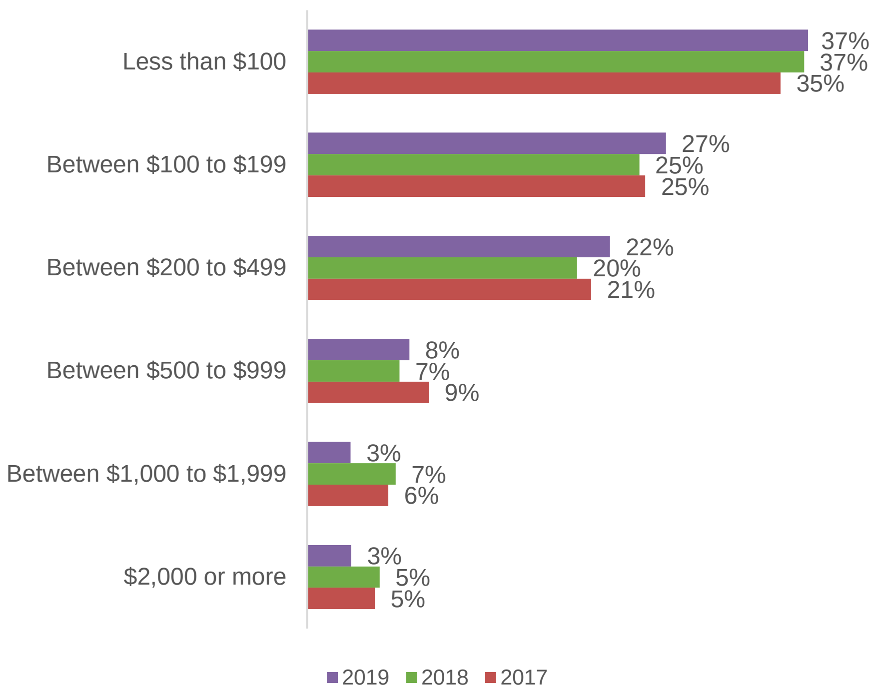
Base: Online shoppers aged 7 and above who had made at least one online purchase in the past 3 months

Around 6 in 10 of online shoppers spent at least $100 in the past three months on online purchases

In 2019, around 63% of the online shoppers spent at least $100 in the past three months on their online purchases (Chart B7). This was similar to the finding in 2018.

The trend of spending larger amount increase with age as reflected in the table below. Particularly, those aged 35-49 years old were more likely to spend $1,000 or more as compared to the other age groups (Table B6).

Chart B7: Value of Online Purchases, 2017 – 2019



Base: Online shoppers aged 15 years and above who had made at least one online purchase in the past 3 months.

Table B6: Value of Online Purchases by Age Group, 2019

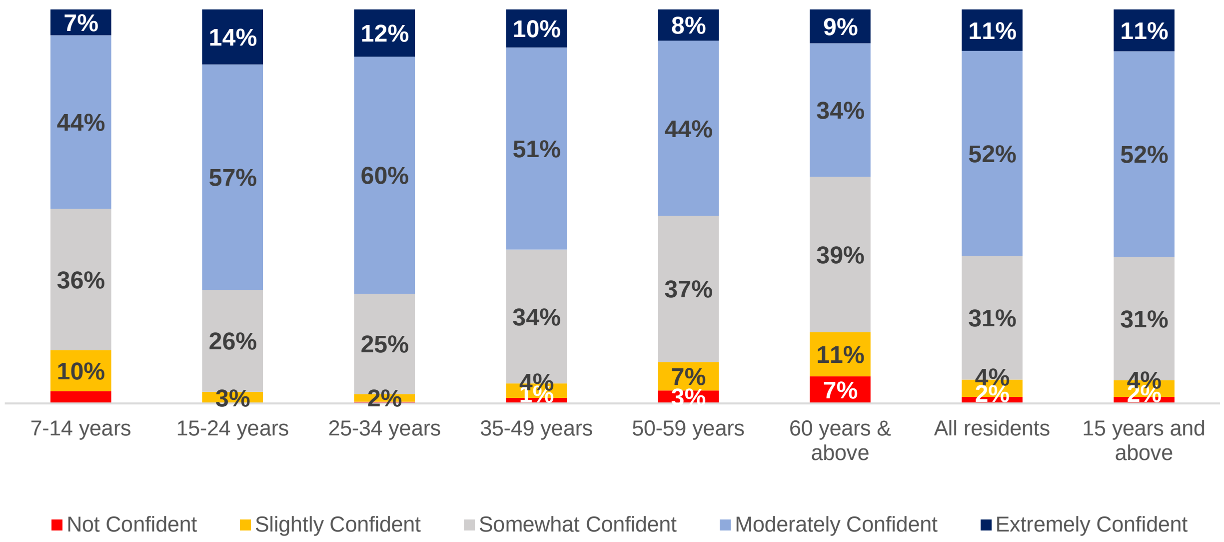
Value of Online Purchases	Less than 7 years old	7-14 years	15-24 years	25-34 years	35-49 years	50-59 years	60 years & above	All age groups
Less than S$100	0%	0%	53%	37%	34%	29%	29%	37%
Between S$100 to S$199	0%	0%	23%	25%	27%	31%	30%	27%
Between S$200 to S$499	0%	0%	18%	26%	23%	21%	24%	22%
Between S$500 to S$999	0%	0%	5%	5%	8%	11%	14%	8%
Between S$1,000 to S$1,999	0%	0%	1%	4%	4%	3%	2%	3%
S$2,000 or more	0%	0%	1%	2%	5%	4%	2%	3%
Total	0%	0%	100%	100%	100%	100%	100%	100%

Base: Online shoppers aged 15 years and above who had made at least one online purchase in the past 3 months.

Higher confidence seen among younger residents in making online transaction

In 2019, around 6 in 10 (63%) of residents were extremely and moderately confident when making online transactions. The highest confidence was seen among the 25-34 years old (72%) while for the 60 and above, it was the lowest (42%) (Chart B8).

Chart B8: Level of Confidence in Online Transactions, 2019



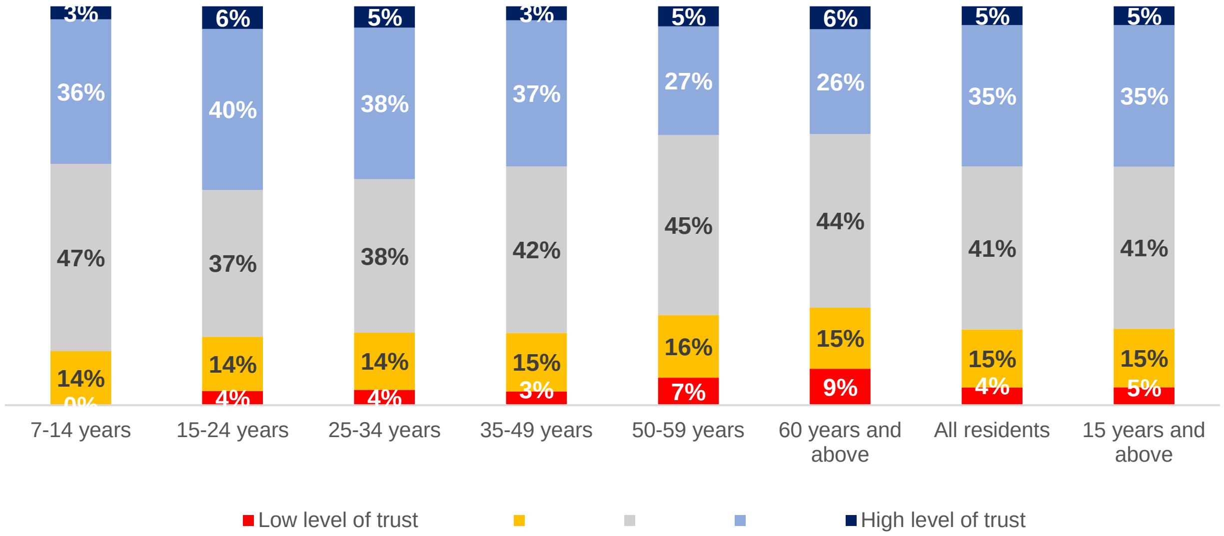
Base: Residents aged 7 and above who had made at least one online transaction in the past 3 months

Around 4 in 10 trusted that their privacy will be respected when performing online transactions

In terms of the level of trust that their privacy will be respected when performing any online transactions over the Internet, 40% of residents indicated moderate and high levels of trust (Chart B9).

Notably, the highest proportion (24%) of residents aged 60 years and above selected the bottom two ratings of the 5-point scale.

Chart B9: Level of Trust that Privacy will be respected when Performing Online Transactions, 2019



Base: Residents aged 7 and above who had made at least one online transaction in the past 3 months

Card payment through terminals such as CEPAS and NETS terminals were the most common e-payment modes and the use of them continued to grow

In 2019, around 7 in 10 of the residents used CEPAS or NETS payment, with 8 and 5 percentage-points growth in use respectively from 2018 (Table B7).

E-payment modes with the most significant increases in use were bank account transfer (E.g FAST, PayNow) via mobile app and QR Code (E.g. NETS QR, LiquidPay, FAVEPay, GrabPay, DBS PayLah, Singtel Dash, OCBC Pay Anyone), which saw increases of 10 and 9 percentage-points from 2018. Both modes were more commonly used among the 25-34 years old.

Table B7: E-Payment Adoption Rate, 2019

E-payment	Less than 7 years old	7-14 years	15-24 years	25-34 years	35-49 years	50-59 years	60 years & above	15 years & above	All age groups
CEPAS (E.g. EZ-Link, NETS Flashpay, concession card) via card payment on terminal	12%	77%	86%	81%	76%	82%	75%	79%	74%
NETS (E.g. ATM card) via card payment on terminal	0%	8%	87%	91%	93%	88%	61%	83%	72%
Credit/Debit Card (E.g. VISA, MasterCard, American Express) via online/Internet payment	0%	7%	66%	88%	83%	54%	18%	61%	52%
Credit Card (E.g Visa, MasterCard, American Express) via card payment on terminal	0%	3%	48%	80%	80%	61%	27%	59%	51%
Bank account transfer (E.g FAST, PayNow) via mobile app	0%	3%	76%	85%	68%	43%	11%	54%	46%
Bank account transfer (E.g. FAST, PayNow) via online/Internet payment	0%	2%	66%	80%	65%	42%	11%	51%	43%
Other card payment on terminal (E.g. Kopitiam, Food Junction)	0%	14%	39%	44%	47%	54%	38%	44%	39%
Bank Debit (E.g. eNETS) via online/Internet payment	0%	1%	54%	68%	52%	28%	10%	41%	35%
QR Code (E.g. NETS QR, LiquidPay, FAVEPay, GrabPay, DBS PayLah, Singtel Dash, OCBC Pay Anyone) via mobile app	0%	2%	48%	48%	39%	21%	6%	31%	26%
Online Payment Service (E.g Alipay, WeChat Pay, Paypal) via online/Internet payment	0%	1%	30%	43%	30%	15%	4%	23%	20%
NFC - Near Field Communication (E.g. Samsung Pay, Android Pay, Google Pay, Apple Pay) via mobile app	0%	1%	29%	36%	20%	9%	2%	18%	15%

Base: All residents (excluded those who don't know)