

Case Number: NCCT109008

Digital Convergence Survey

Report Commissioned by:

National Communications Commission

Taiwan Institute of Economic Research

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I. Purpose

The rapid development in information and communications technologies has driven the overall digital economy to flourish. With the trend toward convergence, the communications industry is vital to the national economy and development. In particular, how consumers use communications services in the communications market is not only closely related to the business operations and technological development in the overall communications industry, but its impact is also expanding to numerous other industries.

A survey on the communications provides an overview of the national development and consumer behavior. A mechanism of surveys and investigations on the market and consumer behavior has been established for a long time in many developed countries worldwide, such as Ofcom, the communications regulator in the UK, the Ministry of Internal Affairs and Communications in Japan, KCC in Korea and IMDA in Singapore. In these countries, related information is regularly collected and documented to provide important statistics about the communications industry. A regular survey can serve as a key indicator of overall national development on one hand and offer an understanding of the consumer behavior and the market on the other.

The National Communications Commission (NCC) of Taiwan conducted its first comprehensive communications market survey in 2017. The survey aims to obtain first-hand objective and detailed data on consumer behavior and the status of innovative applications through a comprehensive and in-depth investigation of the demand side. In addition, the obtained information obtained will serve as an indicator of the development of Taiwan's digital economy, as well as the basis for the development of future policies and regulations.

II. Survey Methods

A. Questionnaire Design

The questionnaires used in this survey are designed with reference to the way Ofcom, the British communications regulator, has surveyed consumer behavior and trends in the communications market, and are modified based on the latest development of Taiwan's convergence.

B. Population and Sampling Strategy

1. Survey population

The survey was conducted in Taiwan proper, Penghu, Kinmen and Matsu, with people aged 16 and over (those who were born on and before December 31, 2004) being approached.

2. Sampling method

Using the principle of PPS (probabilities proportional to size) sampling, sampling was performed in three stages. In the first and second stages, samples were allocated based on the proportion of the population in the area; while in the third stage, samples were selected using convenience sampling.

The stratified sampling used in this research is based on the classifications established by Peichun Hou et al. (2008), where villages, towns, cities and districts are grouped into seven levels based on the development. Thus, Taiwan's 358 townships and districts are divided into seven levels. They are city cores, commercial and industrial areas, emerging cities and townships, traditional industry townships, less-developed townships, established townships and remote townships. The primary sampling units were townships, the secondary sampling units were villages, and the third sampling units were gathering places in the townships where an interview point was set up.

Table 1 Levels of Townships and Districts

Level Code	Names of Districts and Townships
1	Songshan District of Taipei City, Xinyi District of Taipei City, Da'an District of Taipei City, Zhongzheng District of Taipei City, Datong District of Taipei City, Wanhua District of Taipei City, Yonghe District of New Taipei City, Central District of Taichung City, West District of Taichung City, North District of Taichung City, East District of Tainan City, West Central District of Tainan City, Yancheng District of Kaohsiung City, Sanmin District of Kaohsiung City, Xinxing District of Kaohsiung City, Qianjin District of Kaohsiung City, Lingya District of Kaohsiung City
2	Zhongshan District of Taipei City, Wenshan District of Taipei City, Nangang District of Taipei City, Neihu District of Taipei City, Shilin District of Taipei City, Beitou District of Taipei City, Banqiao District of New Taipei City, Sanchong District of New Taipei City, Zhonghe District of New Taipei City, Xinzhuang District of New Taipei City, Tamsui District of New Taipei City, Luzhou District of New Taipei City, Linkou District of New Taipei City, Taoyuan City of Taoyuan County, Zhongli City of Taoyuan County, Zhubei City of Hsinchu County, East District of Hsinchu City, North District of Hsinchu City, South District of Taichung City, Xitun District of Taichung City, Nantun District of Taichung City, Beitun District of Taichung City, North District of Tainan City, Gushan District of Kaohsiung City, Zuoying District of Kaohsiung City, Fengshan District of Kaohsiung City

3	Xindian District of New Taipei City, Shulin District of New Taipei City, Yingge District of New Taipei City, Sanxia District of New Taipei City, Xizhi District of New Taipei City, Tucheng District of New Taipei City, Taishan District of New Taipei City, Yangmei City of Taoyuan County, Luzhu Township of Taoyuan County, Dayuan Township of Taoyuan County, Guishan Township of Taoyuan County, Bade City of Taoyuan County, Longtan Township of Taoyuan County, Pingzhen City of Taoyuan County, Zhudong Township of Hsinchu County, Hukou Township of Hsinchu County, Xinfeng Township of Hsinchu County, Qionglin Township of Hsinchu County, Baoshan Township of Hsinchu County, Xiangshan District of Hsinchu City, Zhunan Township of Miaoli County, Toufen Township of Miaoli County, Fengyuan District of Taichung City, Shalu District of Taichung City, Wuqi District of Taichung City, Tanzi District of Taichung City, Daya District of Taichung City, Wuri District of Taichung City, Longjing District of Taichung City, Taiping District of Taichung City, Dali District of Taichung City, Shanhua District of Tainan City, Rende District of Tainan City, Guiren District of Tainan City, Yongkang District of Tainan City, Annan District of Tainan City, Anping District of Tainan City, Nanzi District of Kaohsiung City, Xiaogang District of Kaohsiung City, Daliao District of Kaohsiung City, Dashe District of Kaohsiung City, Renwu District of Kaohsiung City, Niasong District of Kaohsiung City, Gangshan District of Kaohsiung City
4	Zhongzheng District of Keelung City, Qidu District of Keelung City, Nuannuan District of Keelung City, Renai District of Keelung City, Zhongshan District of Keelung City, Anle District of Keelung City, Xinyi District of Keelung City, Wugu District of New Taipei City, Shenkeng District of New Taipei City, Bali District of New Taipei City, Miaoli City of Miaoli County, East District of Taichung City, Changhua City of Changhua County, Yuanlin Township of Changhua County, Douliu City of Yunlin County, East District of Chiayi City, West District of Chiayi City, Xinying District of Tainan City, South District of Tainan City, Qianzhen District of Kaohsiung City, Qijin District of Kaohsiung City, Pingtung City of Pingtung County, Yilan City of Yilan County, Luodong Township of Yilan County, Hualien City of Hualien County, Ji'an Township of Hualien County
5	Ruifang District of New Taipei City, Sanzhi District of New Taipei City, Shimen District of New Taipei City, Jinshan District of New Taipei City, Wanli District of New Taipei City, Daxi Township of Taoyuan County, Xinwu Township of Taoyuan County, Guanyin Township of Taoyuan County, Xinpu Township of Hsinchu County, Guanxi Township of Hsinchu County, Hengshan Township of Hsinchu County, Beipu Township of Hsinchu County, Yuanli Township of Miaoli County, Tongxiao Township of Miaoli County, Houlong Township of Miaoli County, Gongguan Township of Miaoli County, Tongluo Township of Miaoli County, Touwu Township of Miaoli County, Sanyi Township of Miaoli County, Zaoqiao Township of Miaoli County, Sanwan Township of Miaoli County, Dajia District of Taichung City, Qingshui District of Taichung City, Houli District of Taichung City, Shengang District of Taichung City, Shigang District of Taichung City, Waipu District of Taichung City, Da'an District of Taichung City, Dadu District of Taichung City, Wufeng District of Taichung City, Lugang Township of Changhua County, Hemei Township of Changhua County, Xianxi Township of Changhua County, Shengang Township of Changhua County, Fuxing Township of Changhua County, Xiushui Township of Changhua County, Huatan Township of Changhua County, Fenyan Township

	<p>of Changhua County, Xihu Township of Changhua County, Tianzhong Township of Changhua County, Datsuen Township of Changhua County, Puyan Township of Changhua County, Puxin Township of Changhua County, Yongjing Township of Changhua County, Shetou Township of Changhua County, Beidou Township of Changhua County, Pitou Township of Changhua County, Nantou City of Nantou County, Puli Township of Nantou County, Caotun Township of Nantou County, Dounan Township of Yunlin County, Huwei Township of Yunlin County, Linnei Township of Yunlin County, Taibao City of Chiayi County, Minxiong Township of Chiayi County, Shuishang Township of Chiayi County, Zhongpu Township of Chiayi County, Yanshui District of Tainan City, Liuying District of Tainan City, Madou District of Tainan City, Xiaying District of Tainan City, Liujia District of Tainan City, Guantian District of Tainan City, Jiali District of Tainan City, Xuejia District of Tainan City, Xigang District of Tainan City, Qigu District of Tainan City, Jiangjun District of Tainan City, Beimen District of Tainan City, Xinhua District of Tainan City, Xinshi District of Tainan City, Anding District of Tainan City, Shanshang District of Tainan City, Guanmiao District of Tainan City, Linyuan District of Kaohsiung City, Dashu District of Kaohsiung City, Qiaotou District of Kaohsiung City, Yanchao District of Kaohsiung City, Alian District of Kaohsiung City, Luzhu District of Kaohsiung City, Hune District of Kaohsiung City, Jiading District of Kaohsiung City, Yongan District of Kaohsiung City, Mituo District of Kaohsiung City, Ziguan District of Kaohsiung City, Chaozhou Township of Pingtung County, Donggang Township of Pingtung County, Hengchun Township of Pingtung County, Wandan Township of Pingtung County, Changzhi Township of Pingtung County, Linluo Township of Pingtung County, Jiuru Township of Pingtung County, Neipu Township of Pingtung County, Xinyuan Township of Pingtung County, Su'ao Township of Yilan County, Toucheng Township of Yilan County, Jiaoxi Township of Yilan County, Zhuangwei Township of Yilan County, Yuanshan Township of Yilan County, Dongshan Township of Yilan County, Wujie Township of Yilan County, Taitung City of Taitung County</p>
6	<p>Shiding District of New Taipei City, Pinglin District of New Taipei City, Pingxi District of New Taipei City, Shuangxi District of New Taipei City, Gongliao District of New Taipei City, Emei Township of Hsinch County, Zhuolan Township of Miaoli County, Dahu Township of Miaoli County, Nanzhuang Township of Miaoli County, Xihu Township of Miaoli County, Shitan Township of Miaoli County, Tai'an Township of Miaoli County, Dongshi District of Taichung City, Xinshe District of Taichung City, Heping District of Taichung City, Ershui Township of Changhua County, Erlin Township of Changhua County, Tianwei Township of Changhua County, Fangyuan Township of Changhua County, Dacheng Township of Changhua County, Zhutang Township of Changhua County, Xizhou Township of Changhua County, Zhushan Township of Nantou County, Jiji Town of Nantou County, Mingjian Township of Nantou County, Lugu Township of Nantou County, Zhongliao Township of Nantou County, Yuchi Township of Nantou County, Guoshing Township of Nantou County, Shuili Township of Nantou County, Xinyi Township of Nantou County, Xiluo Township of Yunlin County, Tuku Township of Yunlin County, Beigang Township of Yunlin County, Gukeng Township of Yunlin County, Dapi Township of Yunlin County, Citong Township of Yunlin County, Erlun Township of Yunlin County, Lunbei Township of Yunlin County, Dongshi Township of</p>

	<p>Yunlin County, Baozhong Township of Yunlin County, Taixi Township of Yunlin County, Yuanchang Township of Yunlin County, Sihou Township of Yunlin County, Kouhu Township of Yunlin County, Shuilin Township of Yunlin County, Puzi City of Jiayi County, Budai Township of Jiayi County, Dalin Township of Chiayi County, Xikou Township of Chiayi County, Xingang Township of Chiayi County, Liujiao Township of Chiayi County, Dongshi Township of Chiayi County, Yizhu Township of Chiayi County, Lucao Township of Chiayi County, Zhuqi Township of Chiayi County, Meishan Township of Chiayi County, Fanlu Township of Chiayi County, Baihe District of Tainan City, Houbi District of Tainan City, Dongshan District of Tainan City, Danei District of Tainan City, Yujing District of Tainan City, Nanxi District of Tainan City, Nanhua District of Tainan City, Zuozhen District of Tainan City, Longqi District of Tainan City, Tianliao District of Kaohsiung City, Qishan District of Kaohsiung City, Meinong District of Kaohsiung City, Liugui District of Kaohsiung City, Jiaxian District of Kaohsiung City, Shanlin District of Kaohsiung City, Neimen District of Kaohsiung City, Ligang Township of Pingtung County, Yanpu Township of Pingtung County, Gaoshu Township of Pingtung County, Wanluan Township of Pingtung County, Zhutian Township of Pingtung County, Xinpi Township of Pingtung County, Fangliao Township of Pingtung County, Kanding Township of Pingding Township, Linbian Township of Pingtung County, Nanzhou Township of Pingtung County, Jiadong Township of Pingtung County, Checheng Township of Pingtung County, Manzhou Township of Pingtung County, Fangshan Township of Pingtung County, Huxi Township of Penghu County, Baisha Township of Penghu County, Xiyu Township of Penghu County, Wangan Township of Penghu County, Qimei Township of Penghu County, Sanxing Township of Yilan County, Fenglin Township of Hualien County, Yuli Township of Hualien County, Shoufeng Township of Hualien County, Guangfu Township of Hualien County, Fengbin Township of Hualien County, Ruisui Township of Hualien County, Fuli Township of Hualien County, Chenggung Township of Taitung County, Guanshan Township of Taitung County, Beinan Township of Taitung County, Luye Township of Taitung County, Chishang Township of Taitung County, Donghe Township of Taitung County, Changbin Township of Taitung County, Taimaili Township of Taitung County</p>
7	<p>Wulai District of New Taipei City, Fuxing Township of Taoyuan County, Jianshi Township of Hsinchu County, Wufeng Township of Hsinchu County, Renai Township of Nantou County, Mailiao Township of Yunlin County, Dapu Township of Chiayi County, Alishan Township of Chiayi County, Maolin District of Kaohsiung City, Taoyuan District of Kaohsiung City, Namaxia District of Kaohsiung City, Liuqiu Township of Pingtung County, Sandimen Township of Pingtung County, Wutai Township of Pingtung County, Majia Township of Pingtung County, Taiwu Township of Pingtung County, Laiyi Township of Pingtung County, Chunri Township of Pingtung County, Shizi Township of Pingtung County, Mudan Township of Pingtung County, Magong City of Penghu County, Datong Township of Yilan County, Nan'ao Township of Yilan County, Xincheng Township of Hualien County, Xiulin Township of Hualien County, Wanrong Township of Hualien County, Zhuoxi Township of Hualien County, Dawu Township of Taitung County, Ludao Township of Taitung County, Haiduan Township of Taitung County, Yanping Township of Taitung County, Jinfeng Township of Taitung County, Daren Township of Taitung County, Lanyu Township of Taitung County</p>

Table 2 Geographic Stratifications

Geographic Area	Level Code	Combined Level Code
Taipei City, New Taipei City, Keelung, Yilan	1	1
	2	2
	3, 4	3
	5, 6, 7	4
Taoyuan, Hsinchu, Miaoli	1, 2	1
	3, 4	2
	5, 6, 7	3
Taichung, Changhua, Nantou	1, 2	1
	3, 4	2
	5	3
	6, 7	4
Yunlin, Chiayi, Tainan	1, 2, 3	1
	4, 5	2
	6, 7	3
Kaohsiung, Pingtung, Penghu	1, 2	1
	3, 4	2
	5, 6, 7	3
Hualien, Taitung	4, 5	1
	6, 7	2

(1) Pilot Test

A stratified three-stage probability proportional to size sampling was adopted for the pre-test interviews. Since few completed samples were expected during the pretest, the stratification system used in this project's formal survey was adjusted in order to meet the project deadline and save survey costs. With the Hualien and Taitung area excluded, only one geographic stratum was sampled within each of the five geographic areas: "Taipei City, New Taipei City, Keelung, Yilan," "Taoyuan, Hsinchu, Miaoli," "Taichung, Changhua, Nantou," "Yunlin, Chiayi, Tainan," and "Kaohsiung, Pingtung, Penghu." Once the proportions of population in the geographic areas were calculated based on the demographic data provided by the Ministry of the Interior at the end of December 2019, the numbers of samples for all geographic areas were determined based on the proportions, with the numbers of townships and the expected number of completed samples within each township adjusted. The actual number of successful samples was 30.

(2) Formal survey

Prior to conducting the formal survey, the proportions of population in the geographic areas were calculated based on demographic data provided by the Ministry of the Interior at the end of December 2019, and the number of samples for all geographic areas were determined based on the proportions, with the number of townships and the expected number of completed samples within every township adjusted. Consequently, a total of 1,100 samples were expected to be completed in each of the four investigations. In view of the small population and extremely uneven distribution of population in the Hualien and Taitung area, stratified two-stage PPS (probabilities proportional to size) sampling was actually used, while stratified three-stage PPS sampling was used in other areas. During the third stage, a survey point was set up at gathering places (such as village office, activity center, and market) in the townships selected to conduct the survey with local residents.

The sampling units in each stage are explained as below.

- During two-stage sampling, the primary sampling units were “township” and then “people.” All of the “districts and townships” in the geographic stratum were included.
- During three-stage sampling, the primary sampling units were “townships,” and the second sampling units were “villages.” The last sampling units were “people.”

During the implementation of the survey, the gender and age structures of all communities were strictly controlled with the view to ensuring that the structure of the survey results is similar to that of the target population. In case of any inconsistency between obtained samples and the population, the results were weighted based on variables like gender, age, and community. The weighted sample number in every age group could not exceed the original sample number by 60 percent.

(3) Allocation of samples

To meet the request of the agency that commissioned this project, at least 1,160 valid samples were investigated in each questionnaire with a sampling error of within ± 3 percent at a 95 percent confidence level.

Table 3 Plan for Allocation of Samples at Survey Sites in All Communities

Geographic stratum	Level	No. of People Aged 16 and above	Population Percentage	Planned Allocation of Samples	No. of Townships and Districts Selected	No. of Villages Selected	Expected No. of Samples by Village	Total No. of Samples by Village
Taipei City, New Taipei City, Keelung, Yilan	Level 1	1,221,392	18.82%	66	3	2	11	6
	Level 2	3,205,432	49.40%	174	7	2	12	14
	Level 3	1,658,774	25.56%	90	4	2	11	8
	Level 4	403,164	6.21%	22	1	2	11	2
	Subtotal	6,488,762	32.06%	353	14			30
Taoyuan, Hsinchu, Miaoli	Level 1	1,176,640	36.79%	64	3	2	11	6
	Level 2	1,499,522	46.89%	82	3	2	14	6
	Level 3	521,746	16.32%	28	1	2	14	2
	Subtotal	3,197,908	15.80%	174	7			14
Taichung, Changhua, Nantou	Level 1	923,773	23.57%	50	2	2	13	4
	Level 2	1,283,279	32.74%	70	3	2	12	6
	Level 3	1,279,001	32.63%	70	3	2	12	6
	Level 4	433,564	11.06%	24	1	2	12	2
	Subtotal	3,919,617	19.37%	213	9			18
Yunlin, Chiayi, Tainan	Level 1	930,101	31.90%	51	2	2	13	4
	Level 2	1,214,657	41.65%	66	2	2	17	4
	Level 3	771,364	26.45%	42	2	2	10	4
	Subtotal	2,916,122	14.41%	159	6			12
Kaohsiung, Pingtung, Penghu	Level 1	1,134,075	35.00%	62	2	2	15	4
	Level 2	993,762	30.67%	54	2	2	14	4
	Level 3	1,111,938	34.32%	60	2	2	15	4
	Subtotal	3,239,775	16.01%	176	6			12
Hualien, Taitung	Level 1	251,969	53.14%	14	1	1	14	1
	Level 2	222,160	46.86%	12	1	1	12	1
	Subtotal	474,129	2.34%	26	2			2
Total		20,236,313	100.00%	1,100	44			88

Since the original allocation of the survey site sampling is based on proportions of the entire population, calculated decimal numbers have to be rounded to the nearest integers when the survey was actually performed. Moreover, to meet a specific requirement this year that the number of weighted samples in every age group must not exceed the original number of samples by 60 percent, the samples were allocated and adjusted accordingly in this project. The adjusted allocation of survey site sampling is shown in the table below.

Table 4 Plan for Allocation of Samples at Survey Sites in All Communities after Adjustment by Age

				Originally Planned Allocation of Samples at Survey Sites						Adjustment of Site Allocation Based on Age Distribution in the Population (Expected No. by Site)							
Geographic stratum	Level	No. of People Aged 16 and above	Population Percentage	Planned Allocation of Samples	No. of Townships and Districts Selected	No. of Villages Selected	Expected No. of Samples by Village	Total No. of Samples by Village	Expected No. of Samples by Level	Expected No. of Samples with Ages 16-25	Expected No. of Samples with Ages 26-35	Expected No. of Samples with Ages 36-45	Expected No. of Samples with Ages 46-55	Expected No. of Samples with Ages 56-65	Expected No. of Samples with Ages 66 and Above	Expected No. of Samples by Village	Expected No. of Completed Samples in Each Level by Age Group
Taipei City, New Taipei City, Keelung, Yilan	Level 1	1,221,392	18.82%	66	3	2	11	6	66	1	2	2	2	2	2	11	66
	Level 2	3,205,432	49.40%	174	7	2	12	14	168	2	2	2	2	2	2	12	168
	Level 3	1,658,774	25.56%	90	4	2	11	8	88	2	2	2	2	2	1	11	88
	Level 4	403,164	6.21%	22	1	2	11	2	22	2	2	2	2	2	1	11	22
	Subtotal	6,488,762	32.06%	353	14			30	344	7	8	8	8	8	6	45	344
Taoyuan, Hsinchu, Miaoli	Level 1	1,176,640	36.79%	64	3	2	11	6	66	2	2	2	2	2	1	11	66
	Level 2	1,499,522	46.89%	82	3	2	14	6	84	3	3	2	2	2	2	14	84
	Level 3	521,746	16.32%	28	1	2	14	2	28	2	2	2	3	2	1	12	24
	Subtotal	3,197,908	15.80%	174	7			14	178	7	7	6	7	6	4	37	174
Taichung, Changhua, Nantou	Level 1	923,773	23.57%	50	2	2	13	4	52	2	2	2	2	3	2	13	52
	Level 2	1,283,279	32.74%	70	3	2	12	6	72	2	2	2	2	2	2	12	72
	Level 3	1,279,001	32.63%	70	3	2	12	6	72	2	2	2	2	2	2	12	72
	Level 4	433,564	11.06%	24	1	2	12	2	24	2	3	2	2	2	1	12	24
	Subtotal	3,919,617	19.37%	213	9			18	220	8	9	8	9	8	7	49	220
Yunlin, Chiayi, Tainan	Level 1	930,101	31.90%	51	2	2	13	4	52	3	3	2	2	2	1	13	52
	Level 2	1,214,657	41.65%	66	2	2	17	4	68	2	3	3	3	3	3	17	68
	Level 3	771,364	26.45%	42	2	2	10	4	40	1	1	2	2	2	2	10	40
	Subtotal	2,916,122	14.41%	159	6			12	160	6	7	7	7	7	6	40	160
Kaohsiung, Pingtung, Penghu	Level 1	1,134,075	35.00%	62	2	2	15	4	60	3	3	2	3	2	2	15	60
	Level 2	993,762	30.67%	54	2	2	14	4	56	2	3	3	2	2	2	14	56
	Level 3	1,111,938	34.32%	60	2	2	15	4	60	3	3	3	2	2	2	15	60
	Subtotal	3,239,775	16.01%	176	6			12	176	8	9	8	7	6	6	44	176
Hualien, Taitung	Level 1	251,969	53.14%	14	1	1	14	1	14	2	3	3	3	2	1	14	14
	Level 2	222,160	46.86%	12	1	1	12	1	12	2	3	2	2	2	1	12	12
	Subtotal	474,129	2.34%	26	2			2	26	4	6	5	5	4	2	26	26
Total		20,236,313	100.00%	1,100	44			88	1,104							0	1,100

3. Survey period

The interviews took place in the selected areas between April 15 and June 5, 2020.

Table 5 Implementation of Formal Sampling

Sampling Frame		Selected	By Survey Site	By Survey Site
Area	Level	District or Township for Survey	No. of Expected Samples (1,160 samples in total)	No. of Completed Samples (1,163 samples in total)
Taipei City, New Taipei City, Keelung, Yilan	Level 1	Xinyi District of Taipei City	22	22
		Zhongzheng District of Taipei City	22	22
		Datong District of Taipei City	22	22
	Level 2	Wenshan District of Taipei City	24	24
		Banqiao District of New Taipei City	24	24
		Xinzhuang District of New Taipei City	24	24
		Nangang District of Taipei City	24	24
		Tamsui District of New Taipei City	24	24
		Luzhou District of New Taipei City	24	24
		Linkou District of New Taipei City	24	24
	Level 3	Xindian District of New Taipei City	22	22
		Ren'ai District of Keelung City	22	22
		Zhongshan District of Keelung City	22	22
		Yilan City of Yilan County	22	22
	Level 4	Yuanshan Township of Yilan County	22	22
	Subtotal		344	344
Taoyuan, Hsinchu, Miaoli	Level 1	Taoyuan District of Taoyuan City	22	22
		East District of Hsinchu City	22	22
		North District of Hsinchu City	22	22
	Level 2	Hukou Township of Hsinchu County	28	28
		Longtan District of	28	28

Sampling Frame		Selected	By Survey Site	By Survey Site
Area	Level	District or Township for Survey	No. of Expected Samples (1,160 samples in total)	No. of Completed Samples (1,163 samples in total)
		Taoyuan City		
		Bade District of Taoyuan City	28	28
	Level 3	Dahu Township of Miaoli Count	24	24
		Subtotal	174	174
Taichung, Changhua, Nantou	Level 1	Xitun District of Taichung City	26	26
		South District of Taichung City	26	26
	Level 2	Changhua City of Changhua County	24	24
		Taiping District of Taichung City	24	24
		Longjing District of Taichung City	24	24
	Level 3	Nantou City of Nantou County	24	24
		Puxin Township of Changhua County	24	24
		Puli Township of Nantou County	24	24
	Level 4	Mingjian Township of Nantou County	24	24
		Subtotal	220	220
Yunlin, Chiayi, Tainan	Level 1	Yongkang District of Tainan City	26	26
		West Central District of Tainan City	26	26
	Level 2	West District of Chiayi City	34	34
		Douliu City of Yunlin County	34	34
	Level 3	Xingang Township of Chiayi County	20	20
		Puzi City of Chiayi County	20	20
		Subtotal	160	160
Kaohsiung, Pingtung, Penghu	Level 1	Yancheng District of Kaohsiung City	30	30
		Gushan District of Kaohsiung City	30	30
	Level 2	Xiaogang District of Kaohsiung City	28	28

Sampling Frame		Selected	By Survey Site	By Survey Site
Area	Level	District or Township for Survey	No. of Expected Samples (1,160 samples in total)	No. of Completed Samples (1,163 samples in total)
		Pingtung City of Pingtung County	28	28
	Level 3	Meinong District of Kaohsiung City	30	32
		Baisha Township of Penghu County	30	30
		Subtotal	176	178
Hualien, Taitung	Level 1	Ji'an Township of Hualien County	14	14
	Level 2	Chenggong Township of Taitung County	12	13
		Subtotal	26	27
Kinmen, Matsu		Kinmen County	30	30
		Lianjiang County	30	30
		Subtotal	60	60
Grand total			1,160	1,163

The differences between the actual number of completed samples and the planned number of samples at survey sites are explained as below:

- (1) This survey was completely implemented as planned in terms of sites and allocation of samples. However, due to reasons like age control and people's willingness to be interviewed at different sites, fewer survey samples were completed than expected at several sites.
- (2) Although fewer samples were collected than planned at some sites, samples of all areas were verified to represent the population in terms of distribution, through a test prior to weighting (See Table 6).
- (3) Table 6 shows the planned numbers of samples and the actual numbers of valid samples completed by interviewers at selected sites. These numbers are representative prior to weighting. However, the survey analysis and results adopted by this report were tested and weighted based on the registered domicile of interviewees and the data of the entire population. Since the survey did not limit the interviewees to those with their domicile registered where they received the interview and the survey was simultaneously conducted in Taiwan proper, Kinmen and Matsu this year, all the data were consolidated, tested, weighted and grouped based on the registered domicile of the interviewees.

Table 6 Contingency Table for Digital Convergence Survey Site before Weighting

Allocation of Survey Site No.	Allocation of Samples		No. of Samples before Weighting		Chi-Square Test before Weighting
	No. of People	Percentage	No. of People	Percentage	
Total	1,100	100.0%	1,103	100.0%	The Chi-square value is 0.259, and p-value (= 0.998) is below the accepted significance level of 5%, meaning no significant difference between the distribution of samples and the original allocation of samples.
Survey Site					
Taipei City, New Taipei City, Keelung, Yilan	344	31.5%	344	31.2%	
Taoyuan, Hsinchu, Miaoli	174	15.6%	174	15.8%	
Taichung, Changhua, Nantou	220	19.6%	220	19.9%	
Yunlin, Chiayi, Tainan	160	14.9%	160	14.5%	
Kaohsiung, Pingtung, Penghu	176	16.0%	178	16.1%	
Hualien, Taitung	26	2.4%	27	2.4%	

C. Implementation of Survey

1. Timeline

Before the survey was formally launched, preparations for questionnaires and related affairs were undertaken from February. After the questionnaires were modified based on the conclusions from the meeting with the agency that commissioned this study, the survey formally began on April 15, 2020. The timeline was:

- (1) Preparation period: February 20 to April 14, 2020
- (2) Survey period:
 - Phase 1: April 2 to April 10, 2020.
 - Phase 2: April 15 to June 5, 2020.
- (3) Review period: June 5 to June 14, 2020

2. Survey method

Face-to-face interviews were employed for this survey; a computer-assisted interview survey system was used during the interview, and was supplemented with printed questionnaires.

3. Statistical analysis method

(1) Sample representativeness and weighting

After the survey results were reviewed, the NPAR Chi-square test was used to examine the difference between the allocation of samples and the structure of the population in terms of age, gender, and population percentage, to enhance the representativeness and reliability of the survey so that these samples could reflect the population structure. In case a significant difference in structure was identified between the samples and the population, weighting was used to make the sample structure identical to that of the population.

The raking method was used to adjust the sampling weights based on variables in the order of gender, age and area of registered household until no significant difference existed between the allocation of samples and the population in every variable.

All the data in the results were multiplied by the adjustment weight. $\frac{N_i}{N} / \frac{n'_i}{n}$,

N_i and n'_i represent the number of the population and the number of sample population weighted in the Cross Group i , while N and n represent the number of the total population and the number of the total sample population weighted. This way, the sampling distribution was completely the same as the population distribution after weighting. The last weight was gained by multiplying all the adjustment weights.

(2) Reliability analysis

Reliability refers to trustworthiness or consistency of a survey. Namely, when the survey is performed under the same or similar conditions, consistent or stable results can be obtained. Cronbach's (1951) α reliability coefficient is currently the most used reliability indicator. Nunnally (1967) suggests that a reliability of 0.7 or higher, also known as high reliability, is acceptable.

(3) Frequency

How people understand and rate each of the aspects can be realized through the data presented in allocation of frequencies and percentages in all questions.

(4) Cross analysis and Chi-square test

A cross analysis table was established with the basic data for "all the issues" to realize whether a difference existed between the respondents with different backgrounds in all the issues. Pearson's Chi-square test was used in the cross table. The Chi-square test value (W) is defined as below:

$$W = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \sim \chi^2((r-1)(c-1)), \text{ wherein}$$

O_{ij} is the observed frequency from Row j, Column i, and

E_{ij} is the expected frequency from Row j, Column i.

When p-value in the Chi-square test is less than 0.05, the two variables are not independent at a 95% confidence level. That is, a significant statistic difference exists between the respondents with different backgrounds in the issue.

(5) Analysis of variance (ANOVA)

The total variation can be divided into the variation between groups and the variation within groups. Analysis of variance is used to calculate the rate of variation between groups to variation within groups. If the variation between groups is significantly greater than the variation within groups, significant differences among group means exist between two or more groups. If the variation between groups is not highly different from the variation within groups, few differences exist among groups. The ANOVA F-test calculations are as below.

$$F = \frac{MS_b}{MS_w} = \frac{SS_b / k - 1}{SS_w / n - k}$$
, where n represents the number of samples and k represents the number of groups,

$$SS_b = n \sum_{i=1}^k (\bar{X}_i - \bar{X})^2$$
 is the total sum of squared deviations of group means from grand mean, and

$$SS_w = \sum_{i=1}^k \sum_{j=1}^{n_i} (X_{ij} - \bar{X}_i)^2$$
 is the total sum of the squared deviations within groups.

4. Sample structure

As of June 14, 2020, the survey for this research has been implemented and reviewed by the research team, with 1,103 questionnaires completed¹ as valid samples. The sample structure is shown in Table 7.

¹ This survey was conducted in Taiwan, Penghu, Kinmen and Matsu. Since Kinmen's and Matsu's populations are too small for analysis, the samples of Taiwan proper (including Penghu) were separated from those of Kinmen and Matsu. The numbers were weighted by city or county, and samples were regrouped according to where interviewees register their domicile. (Namely, an interviewee who registered his domicile in Kinmen or Matsu and received the interview in Taiwan would be classified as a valid sample of Kinmen and Matsu; while an interviewee who registered his domicile in Taiwan proper and received the interview in Kinmen or Matsu would be processed as a valid sample of Taiwan proper.) This led to a slight difference between the final numbers of valid samples and the numbers of completed samples shown in Tables 5 & 6, which were sorted by "survey site."

Table 7 Contingency Table for Digital Convergence Survey Samples

Population variables	Population		No. of Samples before Weighting		No. of Samples after Weighting		Chi-Square Test before Weighting	Chi-Square Test after Weighting
	No. of People	Percentage	No. of People	Percentage	No. of People	Percentage		
Total	20,236,313	100.0%	1,103	100.0%	1,103	100.0%		
Gender								
Male	9,957,272	49.2%	538	48.8%	543	49.2%	The Chi-square value is 0.081, and p-value (= 0.776) is below the accepted significance level of 5%, meaning no significant difference between samples and the target population in distribution of gender.	The Chi-square value is 0.000, and p-value (= 0.999) is below the accepted significance level of 5%, meaning no significant difference between samples and the target population in distribution of gender.
Female	10,279,041	50.8%	565	51.2%	560	50.8%		
Age								
Age 16-25	2,848,953	14.1%	185	16.8%	155	14.1%	The Chi-square value is 20.762, and p-value (= 0.000) is below the accepted significance level of 5%, meaning significant difference between samples and the target population in distribution of age.	The Chi-square value is 0.000, and p-value (= 1.000) is below the accepted significance level of 5%, meaning no significant difference between samples and the target population in distribution of age.
Age 26-35	3,226,276	15.9%	202	18.3%	176	15.9%		
Age 36-45	3,901,910	19.3%	208	18.9%	213	19.3%		
Age 46-55	3,581,873	17.7%	200	18.1%	195	17.7%		
Age 56-65	3,389,119	16.7%	171	15.5%	185	16.7%		
Age 66 and above	3,288,182	16.2%	137	12.4%	179	16.2%		
City or County								
New Taipei City	3,496,771	17.3%	158	14.3%	191	17.3%	The Chi-square value is 303.847, and p-value (=0.000) is below the accepted significance level of 5%, meaning significant difference between samples and the target population in distribution of city and county.	The Chi-square value is 0.000, and p-value (=1.000) is below the accepted significance level of 5%, meaning no significant difference between samples and the target population in distribution of city and county.
Taipei City	2,268,067	11.2%	131	11.9%	124	11.2%		
Taoyuan City	1,891,291	9.3%	88	8.0%	103	9.3%		
Taichung City	2,386,347	11.8%	84	7.6%	130	11.8%		
Tainan City	1,637,097	8.1%	48	4.4%	89	8.1%		
Kaohsiung City	2,420,482	12.0%	110	10.0%	132	12.0%		
Yilan County	396,287	2.0%	42	3.8%	22	2.0%		
Hsinch	466,323	2.3%	30	2.7%	25	2.3%		
Miaoli	473,111	2.3%	28	2.5%	26	2.3%		
Changhua	1,096,893	5.4%	62	5.6%	60	5.4%		
Nantou County	436,377	2.2%	61	5.5%	24	2.2%		
Yilan County	597,967	3.0%	44	4.0%	33	3.0%		
Chiayi	452,239	2.2%	48	4.4%	25	2.2%		
Pingtung County	725,792	3.6%	35	3.2%	40	3.6%		
Taitung County	189,642	0.9%	28	2.5%	10	0.9%		
Hualien County	284,487	1.4%	12	1.1%	16	1.4%		
Penghu County	93,501	0.5%	29	2.6%	5	0.5%		
Keelung City	327,637	1.6%	22	2.0%	18	1.6%		
Hsinch City	367,183	1.8%	21	1.9%	20	1.8%		
Chiayi City	228,819	1.1%	22	2.0%	12	1.1%		

Note: The source of the population data is the 2019 December Demographic Data of Households in Each Village provided on the Open Data platform by the Ministry of the Interior.

Note: The numbers of samples by county or city shown in Table 7 were weighted based on the registered domicile and the consistency between numbers of samples before and after weighting was tested.

The change rate of the numbers of sample in all age groups after weighting is shown in Table 8. They are all in compliance with the requirement that no number of sample in any age group shall increased or reduced by more than 60% after weighting.

Table 8 Change Rate of the Numbers of Sample by Age Group after Weighting

Population variables	No. of Samples before Weighting		No. of Samples after Weighting		Change Rate of the No. of Sample by Age Group after Weighting
	No. of People	Percentage	No. of People	Percentage	
Total	1,103	100.0%	1,103	100.0%	
Age					
Age 16-25	185	16.8%	155	14.1%	0.84
Age 26-35	202	18.3%	176	15.9%	0.87
Age 36-45	208	18.9%	213	19.3%	1.02
Age 46-55	200	18.1%	195	17.7%	0.98
Age 56-65	171	15.5%	185	16.7%	1.08
Age 66 and above	137	12.4%	179	16.2%	1.31

D. Research Limitations

To keep on top of how Taiwanese people use communications in the digital economic era, a survey on the Broadband Usage trends in the communications industry was implemented by means of interviews with people aged 16 and over (those who were born on and before December 31, 2004) in Taiwan proper (exclusive of Kinmen County and Lian jiang County), at the request of the NCC. However, the following study limitations exist when actually performing the survey:

1. Sample frame limitations

Based on the requirements of the NCC, at least 1,100 successful samples were to be completed with the allocation of samples proportional to the population of every county or city.

In order to undertake rigorous sampling, research was conducted with reference to the sample structure used in Taiwan Social Change Survey by Academia Sinica. Nonetheless, it may be worth noting that this research differed from the Taiwan Social Change Survey, where household registrations are used as a sampling frame. With no access to Taiwan's household registration database, a household survey seemed impossible. Instead, interviews were carried out at gathering places in townships or cities.

2. Sample recovery restrictions

The survey questionnaires contained 102 questions. In order to meet the

requirement of at least 1,100 successful sample responses, groups of two interviewers were arranged at busy locations, such as parks and crossroads, to perform interviews.

During this survey, the average number of those who did not comply was 8.19. Among the aged 55 and over groups, the average number of refusals was 11.53, making it much harder to achieve the planned number of interviews when compared with young people. Even so, the interviewers were urged to obtain the required number of samples by gender and age, so the weighted number of all age groups would not exceed the original number of samples by more than 60%.

3. Sample Inference Restrictions

After weighting, the sample number of young people, such as ages 16-25, was 0.84 times greater; the sample number of ages 26-35 was 0.87 times greater; the sample number of ages 36-45 was 1.02 times greater; the sample number of middle-aged people such as ages 46-55 was 0.98 times greater; the sample number of ages 56-65 was 1.08 times greater; and the sample number of ages 66 and over was 1.31 times greater.

Non-probability sampling was employed in this research; therefore, care should be taken when using the resulting statistical inferences.

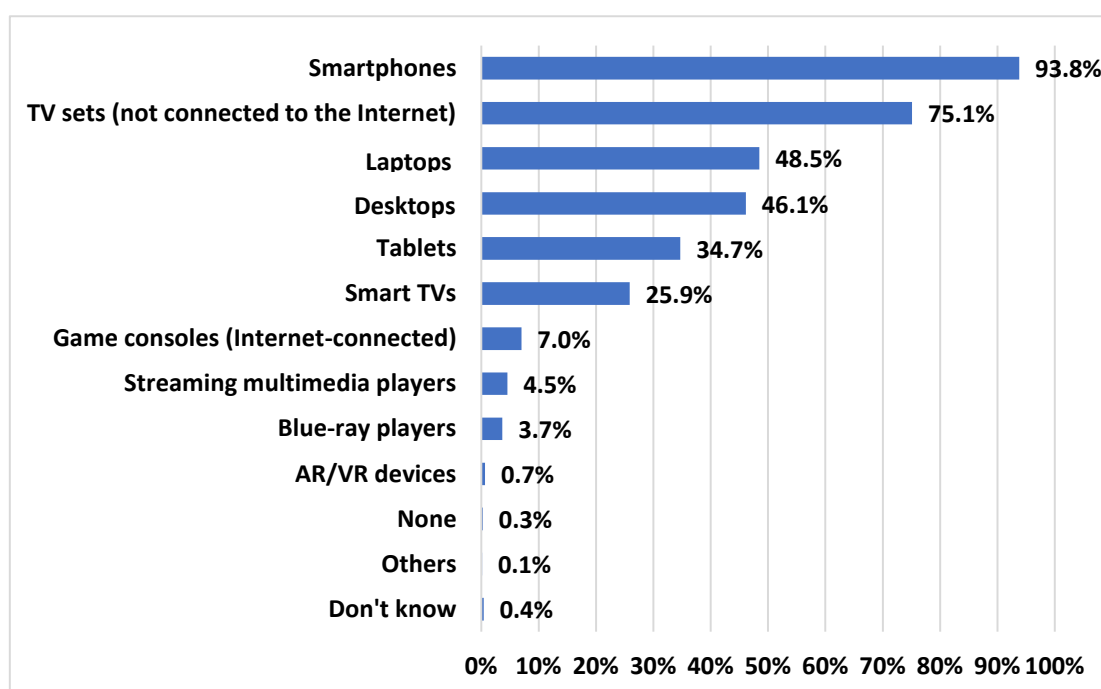
III. Results

A. The Owning and Usage of Equipment at Home

The Owning of Equipment at Home Q3

1. Overall Analysis

In Taiwan, up to 93.8% of people aged 16 and over own a smartphone, followed by TV sets (75.1%), laptops (48.5%), desktops (46.1%) and tablets (34.7%) (see Figure 1).



Base : N= 1,103, multiple-choice

Figure 1 The Owning of Equipment at Home

2. Comparative Analysis

(1) Analysis of regional differences

The cross analysis finds that, except for people in Yilan, Hualien, and Taitung (83.6%), more than 90% of people own a smart phone. Except for people in Yilan, Hualien and Taitung (37.1%) as well as Taipei City, New Taipei City and Keelung (69.6%), more than 70% of people own a TV set, with the highest rate 84.6% in Taichung, Changhua and Nantou. Except for people in Kaohsiung, Pingtung and Penghu (36%) as well as Yilan, Hualien and Taitung (37.1%), more than 50% of people own a laptop, with the highest rate 54.4% in Taoyuan, Hsinchu and Miaoli.

(2) Analysis of basic differences

When analyzed by gender, most men (92.6%) and women (95%) own a smartphone.

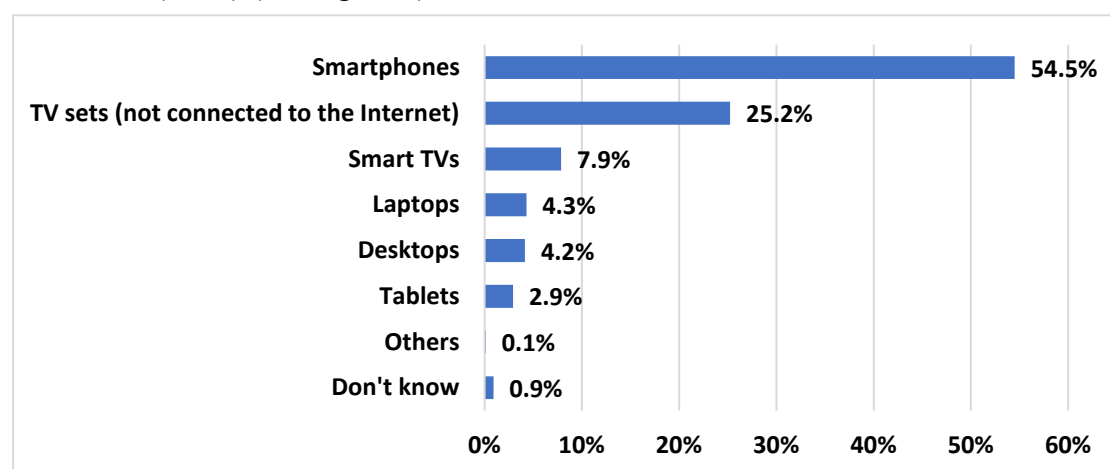
When analyzed by age, except for most people aged 66 and over (85.3%) who own a TV set (not-connected Internet), most people of other age groups mainly own a smartphone.

When analyzed by marital status, most own a smartphone regardless of marital status, with the highest rate 94.7% of those unmarried and the lowest rate 88.9% of those widowed/separated.

Most Frequently Used Devices for Viewing Video Content Q7

1. Overall Analysis

In Taiwan, 54.5% of people aged 16 and over commonly use smartphones as to view video content, followed by TV sets (not connected to the Internet) (25.2%) and smart TVs (7.9%) (see Figure 2).



Base: N = 1,040, single-choice (respondents who have filled out the device used for viewing the video content)

Figure 2 Most Frequently Used Devices for Viewing Video Content

2. Comparative Analysis

(1) Analysis of regional differences

The cross analysis suggests that most people in all regions use smartphones for viewing video content, with the highest rate 62% in Kaohsiung, Pingtung and Penghu and the lowest rate 46.1% in Taipei City, New Taipei City and Keelung.

(2) Analysis of basic differences

The result of Chi-square tests indicates that the most frequently used devices for viewing video content significantly varies by gender and age.

When analyzed by gender, most of men (51.9%) and women (57%) use smartphones to view video content.

When analyzed by age, most people aged 16–25, 26–35, 36–45, 46–55 and 56–65 mainly use smartphones for viewing video content, while most people aged 66 and over use TV sets (not connected to the Internet). Further, the proportion using smartphones most frequently decreases by age, with the highest rate 70.8% of those aged 16–25, and

the lowest rate 21.6% of those aged 66 and over; on the other hand, the proportion of people using TVs (not-connected to the Internet) as most frequently used devices increases by age, with the highest rate 63.7% of those aged 66 and over and the lowest rate 4.5% of those aged 16–25.

When analyzed by marital status, more unmarried (67.1%) than married (48.3%) people use smartphones as their most frequently used devices for viewing video content, while 43.6% of those widowed/separated use TV sets (not-connected Internet).

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that people's most frequently used devices for viewing video content significantly varies by housing tenure.

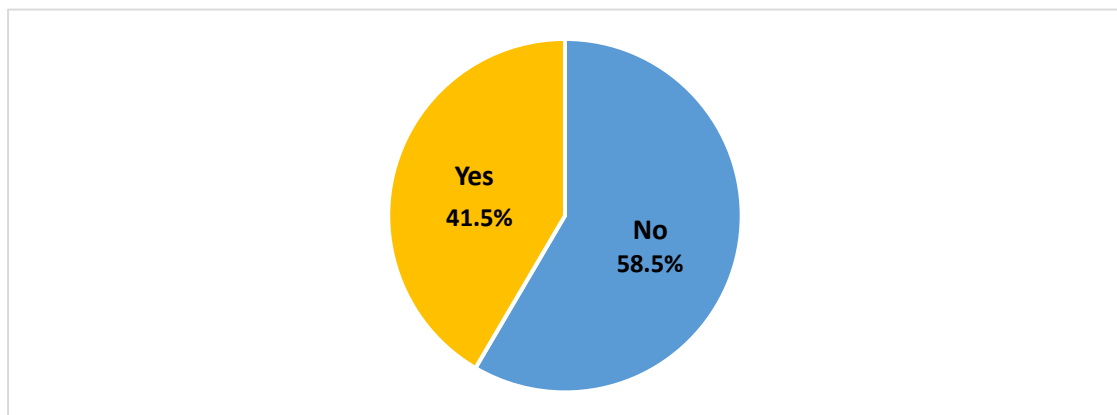
When analyzed by housing tenure, most home owners (51.9%) and house renters (64.8%) mainly use smartphones as their mostly used device for viewing video content, but the proportion of home owners that use TV sets (not connected to the Internet) to see video content is larger than that of house renters (14.6%); however, more house renters (6.8%) than home owners (2.9%) use laptops to view video content.

B. Watching Online Streaming Video

Online Streaming Video Watching Q8 Q10 Q11

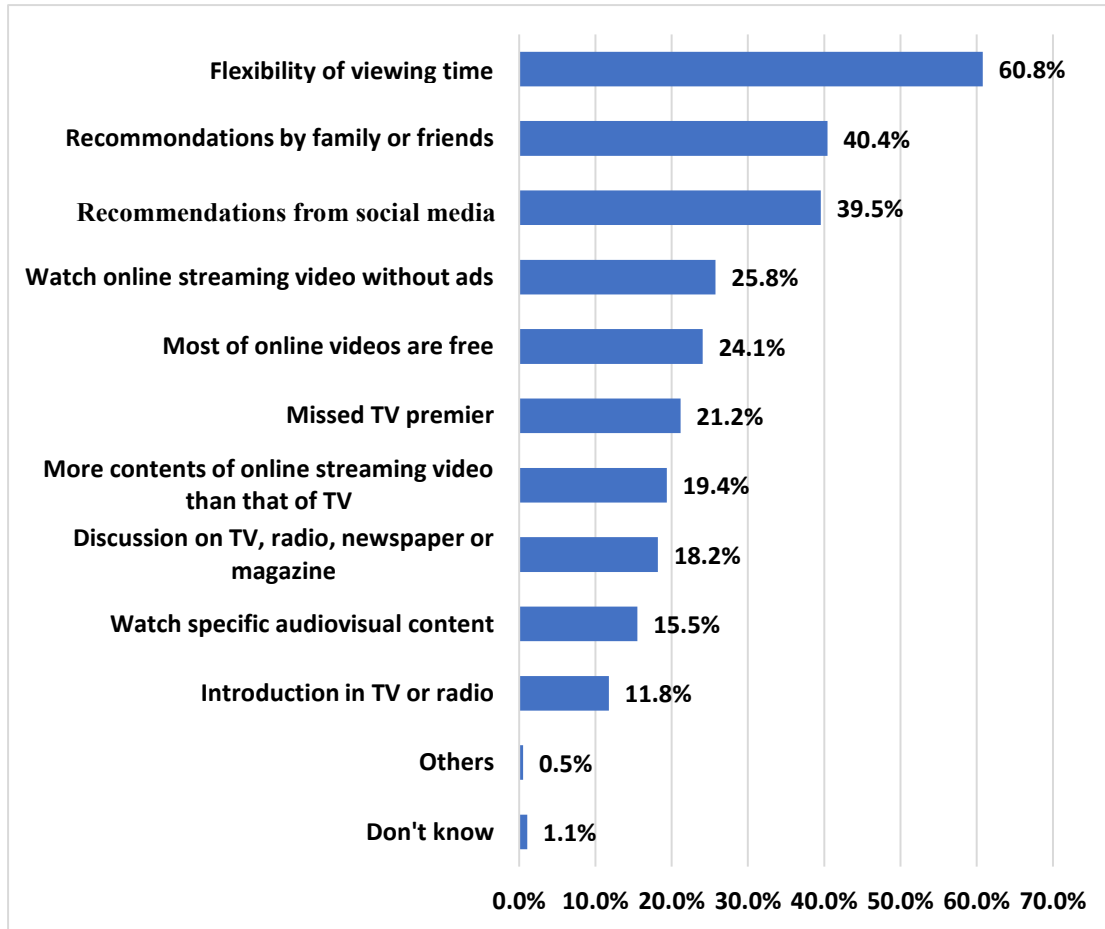
1. Overall analysis

In Taiwan, 41.5% of people aged 16 and over have watched online streaming videos (OTT media services including paid and free services) (see Figure 3). The main reasons for viewing online streaming videos are flexibility of viewing time (60.8%), recommendations from family and friends (40.4%), and recommendations from social media (39.5%) (see Figure 4). On average, every viewer spends 11.86 hours watching online video streaming videos every week (N=458, people who had viewed online streaming videos).



Base : N=1,103, single-choice

Figure 3 Online Streaming Video Viewing Experience



Base : N=458, multiple-choice (people who had viewed online streaming videos)

Figure 4 Reasons for Viewing Online Streaming Videos

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates whether an interviewee had viewed online streaming videos significantly varies by region.

The cross analysis suggests that, except for people in Taoyuan, Hsinchu and Miaoli which has the largest proportion (54.4%) of having the experience of viewing online streaming videos, most people in other regions had not viewed online streaming videos, with the highest rate of 67.2% in Taipei City, New Taipei City and Keelung. Concerning main reasons for viewers to watch online streaming videos, flexibility of viewing time is the major reason for viewers in all regions, with the highest rate 73.1% in Taichung, Changhua, and Nantou and the lowest rate 46.7% in Yilan, Hualien and Taitung. Concerning the average hours OTT content viewers spending watching online streaming videos, viewers in Yilan, Hualien and Taitung spend the most time, with 16.44 hours per week, and those in Taipei City, New Taipei City and Keelung spend the least time, 9.14 hours per week (see Table 9).

Table 9 Average Hours Spent Watching Online Streaming Videos (by Region)

Unit: hour

Region	Average Bill
Taipei City, New Taipei City and Keelung	9.14
Taoyuan, Hsinchu and Miaoli	11.12
Taichung, Changhua and Nantou	11.44
Yunlin, Chiayi and Tainan	12.77
Kaohsiung, Pingtung and Penghu	14.73
Yilan, Hualien and Taitung	16.44
Average	11.86

Source: Results of this research

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether interviewees had viewed online streaming videos or not significantly varies by age and marital status.

More women (43.8%) than men (39.3%) had viewed online streaming videos; most men and women watch online streaming videos for the main reason of flexibility of viewing time. Concerning the average hours spent watching online streaming videos, women spent 12.31 hours per week watching online streaming videos, which is more than the 11.35 hours by men.

When analyzed by age, the proportion of interviewees watched online streaming videos decreases by age, with the highest rate 68.5% of people aged 16–25 and the lowest rate 4.8% of those aged 66 and over. Concerning reasons for watching online streaming videos, except for those aged 56–65 (44.2%) watching online streaming videos for recommendations from family and friends as well as those aged 66 and over (62.7%) for recommendations from social media, viewers of the other age groups watch online streaming videos for the main reason of flexibility of viewing time. Concerning the average hours spent watching online streaming videos, people aged 46–55 spend the most time (13.44 hours) watching online streaming videos and those aged 56–65 spend the least time (9.86 hours) watching online streaming videos.

When analyzed by marital status, except for most unmarried people (63%) who watch online streaming videos, most of those married (68.9%) or widowed/separated (81.4%) had not viewed online streaming videos. Concerning reasons for watching online streaming videos, most viewers regardless of marital status watch OTT content for flexibility of viewing time. Concerning the average hours spent watching online streaming videos, those widowed/separated spend the most time of 14.25 hours watching online streaming videos and those married spend the least time of 11.34 hours watching online streaming videos.

(3) Analysis of differences in social and economic status

The result of Chi-square tests shows that the experience of viewing online

streaming videos significantly varies by housing tenure, education level, profession and individual average monthly income.

When analyzed by housing tenure, the proportion of house renters who had viewed online streaming videos (50.4%) is larger than that of home owners (38.3%).

When analyzed by education level, those with a bachelor's degree (57.1%) and those with a master's degree or higher had the largest proportions of those who had viewed online streaming videos, while interviewees of the other education levels had the largest proportion of those who had not viewed online streaming videos before, with the highest rate 96.2% of those with elementary school education or lower.

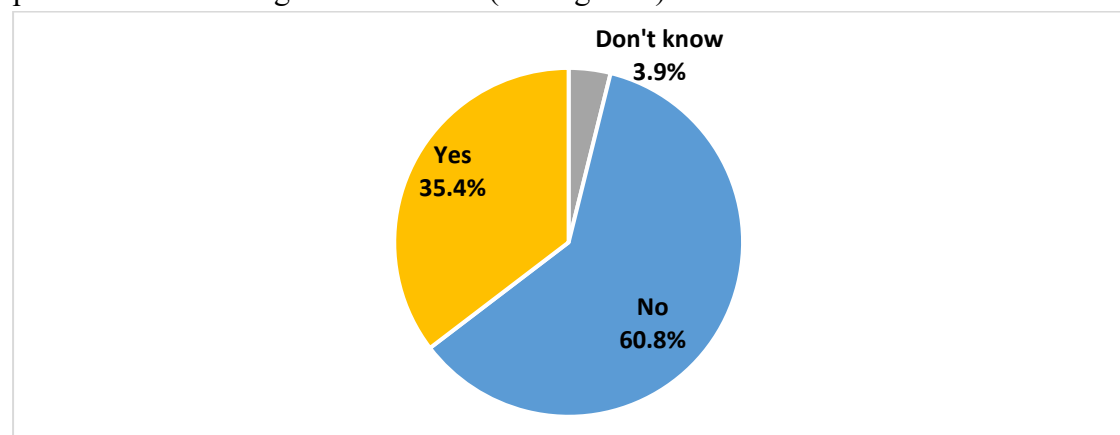
When analyzed by profession, except for more people in the finance and insurance (50.9%), people in the professional, scientific and technology services (57.9%), people in education (57%), people in the public administration and national defense (69.6%), people in the health care and social work services (51.8%), people in other services (56.4%), students (68.8%) and jobseekers (55.3%) who had viewed online streaming videos before, most interviewees of the other professions had not viewed online streaming videos.

When analyzed by average monthly income, except for most of those earning NT\$60,000 and over who had viewed online streaming videos than before, most people in the other income groups had not viewed online streaming videos.

Usage of Paid Online Streaming Video Services Q12 Q13

1. Overall Analysis

In Taiwan, a viewer aged 16 and over is willing to pay a monthly NT\$211 subscription for online streaming video services (N=458, people who had viewed online streaming videos). 35.4% of viewers or their family members currently subscribe to paid online streaming video services (see Figure 5).



Base: N=458, single-choice (people who have viewed online streaming videos)

Figure 5 Whether OTT Content Viewers Pay for Online Streaming Video Services

2. Comparative Analysis

(1) Analysis of regional differences

Concerning the average amount OTT content viewers willing to pay for OTT media services, viewers in Yilan, Hualien and Taitung are willing to pay the most (NT\$255) and those in Taipei City, New Taipei City and Keelung are willing to pay the least amount (NT\$188) (see Table 10). In addition, most OTT content viewers in all regions do not pay for subscriptions to OTT media services, with the highest rate 39.1% in Yilan, Hualien and Taitung and the lowest rate 31% in Yunlin, Chiayi and Tainan.

Table 10 Average Amount Interviewees Willing to Pay for OTT Media Services (by Region)

Unit: NTD

Region	Average Bill
Taipei City, New Taipei City and Keelung	188
Taoyuan, Hsinchu and Miaoli	198
Taichung, Changhua and Nantou	254
Yunlin, Chiayi and Tainan	228
Kaohsiung, Pingtung and Penghu	190
Yilan, Hualien and Taitung	255
Average	211

Source: Results of this research

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether interviewees or their family members subscribe to OTT media services or not significantly varies by marital status.

When analyzed by gender, concerning the average amount interviewees are willing to pay for OTT media services per month, men are willing to pay NT\$228 per month, which is more than the NT\$196 by women. Most of men and women (including their family members) do not subscribe to OTT media services; however, more women (37.3%) are willing to subscribe to OTT media services than men (33.1%)

When analyzed by age, concerning the average amount OTT content viewers are willing to pay for OTT media services per month, people aged 46–55 are willing to spend the most amount of NT\$242 and those aged 66 and over spend the least amount of NT\$141. Most viewers of every age group do not subscribe to OTT media services; among those paying for OTT media services, people aged 36–45 (40.5%) make up the largest proportion of those paying for subscriptions to OTT media services and those aged 66 and over (17.8%) the smallest.

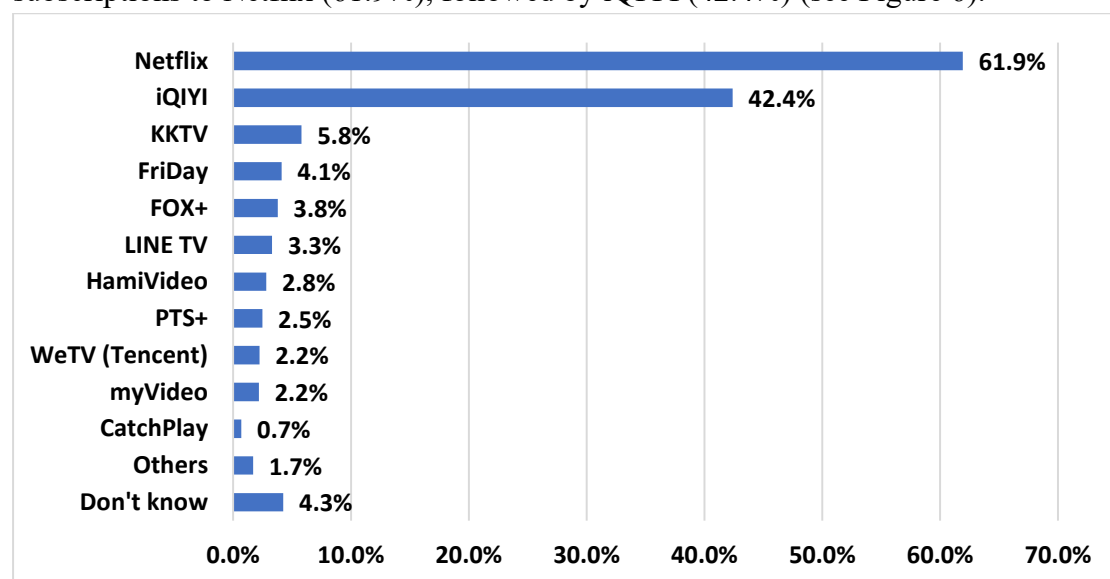
When analyzed by marital status, concerning the average amount OTT content viewers willing to pay for OTT media services per month, those unmarried are willing to spend the most amount of NT\$216 and those widowed/separated spend the least

amount of NT\$179. Most viewers regardless of marital status do not subscribe to OTT media services; among those paying for OTT media services, those unmarried (40.5%) make up the largest proportion of those who subscribe to OTT media services and those widowed/separated (20.9%) the smallest.

Usage of Online Streaming Video Services Q14

1. Overall Analysis

In Taiwan, interviewees aged 16 and over or their family members who pay for subscriptions to online streaming video services constitute the largest proportion of subscriptions to Netflix (61.9%), followed by iQIYI (42.4%) (see Figure 6).



Base: N=162, multiple-choice (people who currently pay for subscriptions to online streaming video services)

Figure 6 Online Streaming Video Services to Which Interviewees Subscribe

2. Comparative Analysis

(1) Analysis of regional differences

The cross analysis suggests that, except for most viewers in Yilan, Hualien and Taitung subscribing to iQIYI (64.9%), most viewers in Taipei City, New Taipei City (70.1%), Taoyuan, Hsinchu and Miaoli (76.3%), Taichung, Changhua and Nantou (48.7%), Yunlin, Chiayi and Tainan (55.3%) and Kaohsiung, Pingtung and Penghu (61.5%) subscribe to Netflix.

(2) Analysis of basic differences

When analyzed by gender, most men (59.3%) and women (63.9%) subscribe to Netflix.

When analyzed by age, most viewers aged 16–25 (68.7%), 26–35 (66.5%) and 36–45 (63.8%) subscribe to Netflix, while most viewers aged 46–55 (48.2%) and 56–65 (45.4%) subscribe to iQIYI. The results of people aged 66 and over were not analyzed

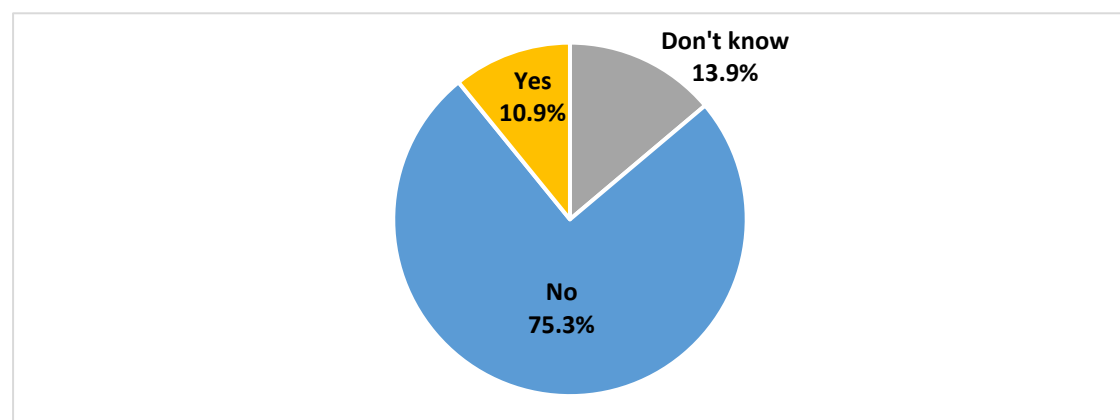
due to the small sample size.

When analyzed by marital status, most of those unmarried (65.6%) and those married (57.1%) subscribe to Netflix, although the results of people aged 66 and over were not analyzed due to the small sample size.

Whether an OTT Content Viewer Would Consider Stopping Subscriptions to Paid Online Streaming Video Services Q16

1. Overall Analysis

In Taiwan, 75.3% of viewers aged 16 and over are not considering to stop subscribing to online streaming video services in the next 12 months while 10.9% of viewers would (see Figure 7).



Base: N=162, single-choice (people who pay for subscriptions to online streaming video services)

Figure 7 Whether Actions Should Be Taken to Appropriately Regulate OTT Media Services

2. Comparative Analysis

(1) Analysis of regional differences

The cross analysis suggests that most people in all regions are not considering to stop subscribing to online streaming video services in the next 12 months, with the highest rate 83.1% in Taoyuan, Hsinchu and Miaoli and the lowest rate 61.2% in Yilan, Hualien and Taitung.

(2) Analysis of basic differences

When analyzed by gender, most of men (72.7%) and women (77.3%) are not considering to stop subscribing to online streaming video services in the next 12 months.

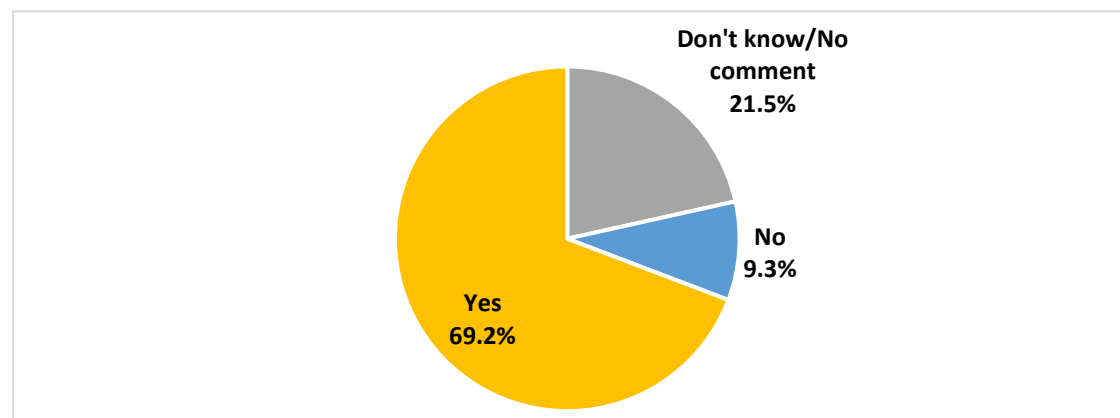
When analyzed by age, most people aged 16–25, 26–35, 36–45, 46–55 and 55–65 are not considering to stop subscribing to online streaming video services in the next 12 months; however, the proportion of people aged 56–65 and considering to stop subscribing to online streaming video services in the next 12 months (34.1%) is the largest of all age groups. The results of people aged 66 and over were not analyzed due to small sample size.

When analyzed by marital status, most unmarried (69.9%) and married people (85.6%) are not considering to stop subscribing to online streaming video services in the next 12 months. The results of those widowed/separated were not analyzed due to the small sample size.

Whether Interviewees Approving of Taking Actions and Actions being Taken to Appropriately Regulate OTT Media Services Q19 Q20

1. Overall Analysis

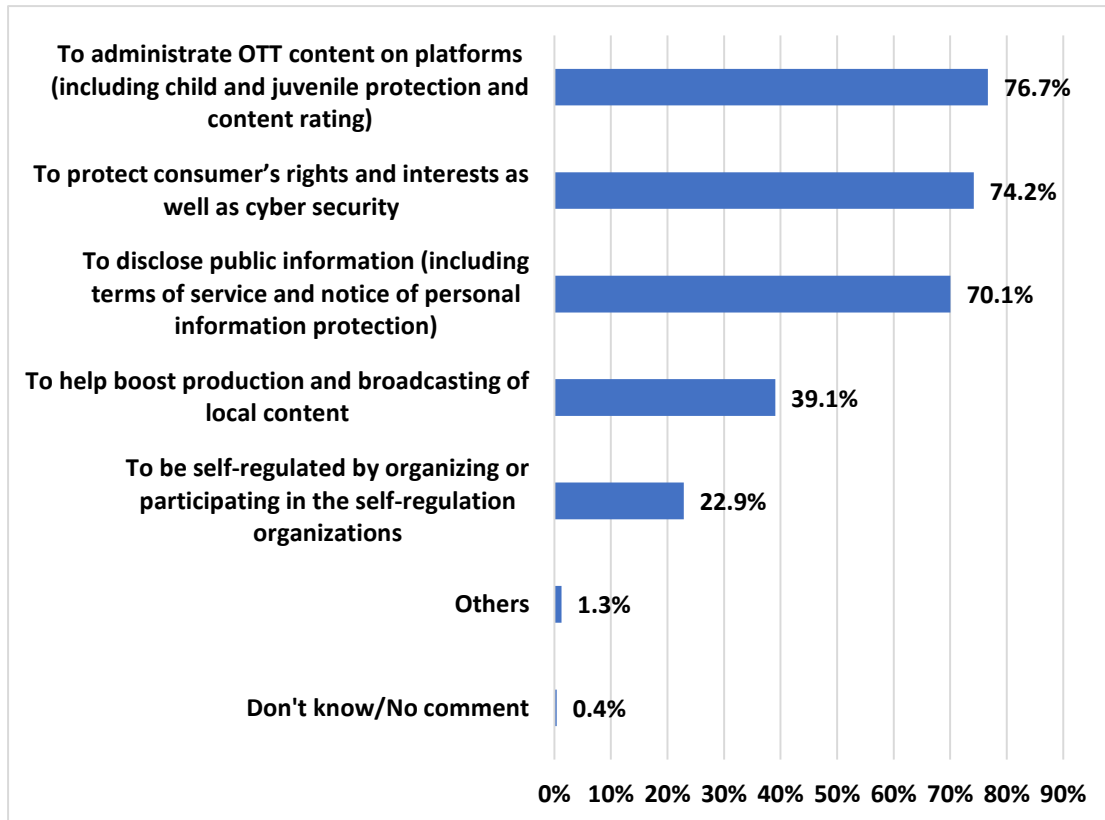
In Taiwan, 69.2% of people aged 16 and over approve of taking actions to appropriately regulate OTT media services to protect consumer's rights and interests or ensure competitiveness of audiovisual content in Taiwan while 9.3% of people disapprove of regulative actions. In addition, 21.5% of people don't know or have no comment about the issue (see Figure 8).



Base: N=458, single-choice (people who have viewed online streaming videos)

Figure 8 Whether Actions Should Be Taken to Appropriately Regulate OTT Media Services

In Taiwan, 76.7% of people aged 16 and over who approve of taking actions to appropriately regulate OTT media services believe the government should administrate OTT content on platforms (including child and juvenile protection and content rating), followed by protecting consumer's rights and interests as well as cyber security (74.2%) and disclosing public information (including terms of service and notice of personal information protection) (70.1%). (see Figure 9)



Base: N=317, multiple-choice (people who believe appropriate actions should be taken to regulate OTT media services)

Figure 9 Actions Which Interviewees Approving of Being Taken by the Government

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether interviewees believe appropriate actions should be taken to regulate OTT media services significantly varies by region.

The cross analysis suggests that most people in all regions believe appropriate actions should be taken to regulate OTT media services, with the highest rate 80.2% in Kaohsiung, Pingtung and Penghu and the lowest rate 61.4% in Taoyuan, Hsinchu and Miaoli. In addition, people in different regions have different views about the actions being taken to regulate OTT media services by the government. People in Taipei City, New Taipei City and Keelung (75%) as well as Kaohsiung, Pingtung and Penghu (81.4%) believe that disclosing public information (including terms of service and notice of personal information protection) to be the most important action; people in Taichung, Changhua and Nantou (79.5%) as well as Yilan, Hualien and Taitung (80.3%) believe that the regulation of OTT content on the platforms (including child and juvenile protection and content rating) to be the major action; people in Taoyuan,

Hsinchu and Miaoli (71.9%) as well as in Yunlin, Chiayi and Tainan (87.2%) believe the protection of consumer rights and interests and cyber security to be the crucial action.

(2) Analysis of basic differences

When analyzed by gender, most men (73%) and women (66%) suppose the government should take actions to appropriately regulate OTT media services; 72.2% of men believe protection of consumer's rights and interests and cyber security to be the important action, while women (81.3%) believe the administration of OTT content on the platforms (including child and juvenile protection and content rating) to be the major action.

When analyzed by age, most people of every age group believe that the government should take action to appropriately regulate OTT media services, with the highest rate 94.2% of those aged 66 and over and the lowest rate 60.4% of those aged 16–25; concerning the actions being taken to regulate OTT media services by the government, except for most people aged 26–35 (75.2%) who believe disclosing public information to be the crucial action and those aged 55–65 (78.7%) who believe the protection of consumer rights and interests and cyber security to be the crucial action, most age groups believe the regulation of OTT content on the platforms to be the significant action.

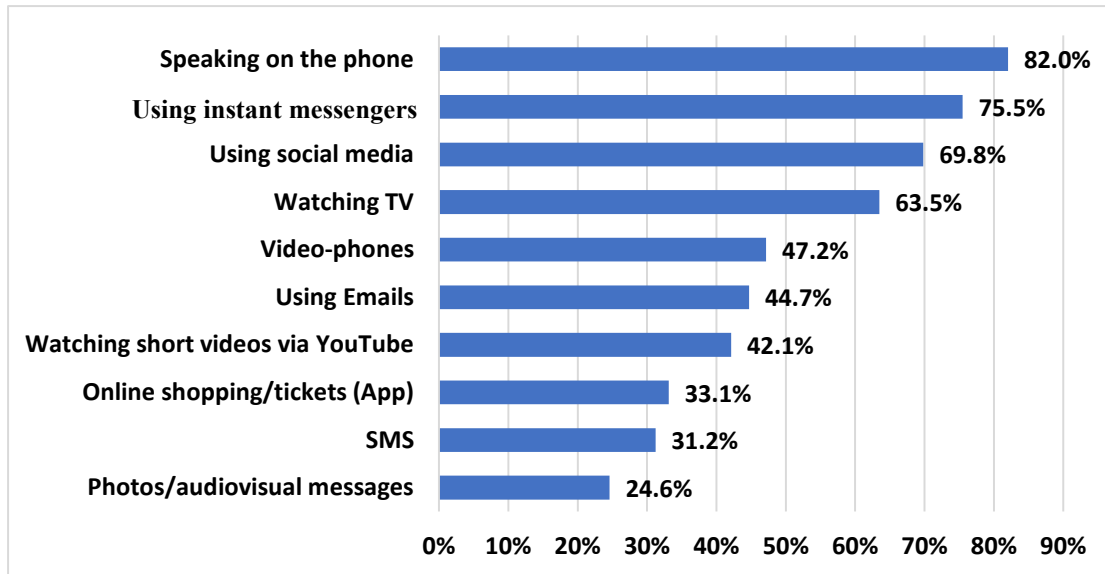
When analyzed by marital status, most people regardless of marital status believe the government should take action to appropriately regulate OTT media services, with the highest rate 77.2% of those widowed/separated and the lowest rate 64.6% of those unmarried; concerning the actions being taken to regulate OTT media services by the government, those widowed/separated (73.4%) believe the protection of consumer rights and interests and cyber security to be the most important action, while most of those unmarried (75.3%) or married (81.4%) believe the regulation of OTT content on platforms to be the significant action.

C. Communicative Behavior

Engaged Communicative Activities Q21

1. Overall analysis

For most people aged 16 and over in Taiwan, speaking on the phone (82%) is the most common communicative behavior, followed by using instant messengers (such as Facebook Messenger, LINE, Skype, WhatsApp and WeChat) (75.5%) and using social media, such as Facebook, Instagram and Twitter (69.8%) (see Figure 10).



Base : N=1,103, multiple-choice

Figure 10 People's Engaged Communicative Activities (Top 10)

2. Comparative Analysis

(1) Analysis of regional differences

The cross analysis suggests that most people in Taipei City, New Taipei City and Keelung (80.8%), Taoyuan, Hsinchu and Miaoli (89.3%), Taichung, Changhua and Nantou (77.5%), Kaohsiung, Pingtung and Penghu (84.6%) and Yilan, Hualien and Taitung (82.7%) speak on the phone, while most people in Yunlin, Chiayi and Tainan (80.4%) use social media as the most common communicative activity. Most interviewees in Taoyuan, Hsinchu and Miaoli make up the largest proportion of people who watch TV (77.2%) and video clips on YouTube (64.7%), which is distinctively larger than the other regions.

(2) Analysis of basic differences

When analyzed by gender, most men (80.9%) and women (83.2%) speak on the phone as the main communicative activity.

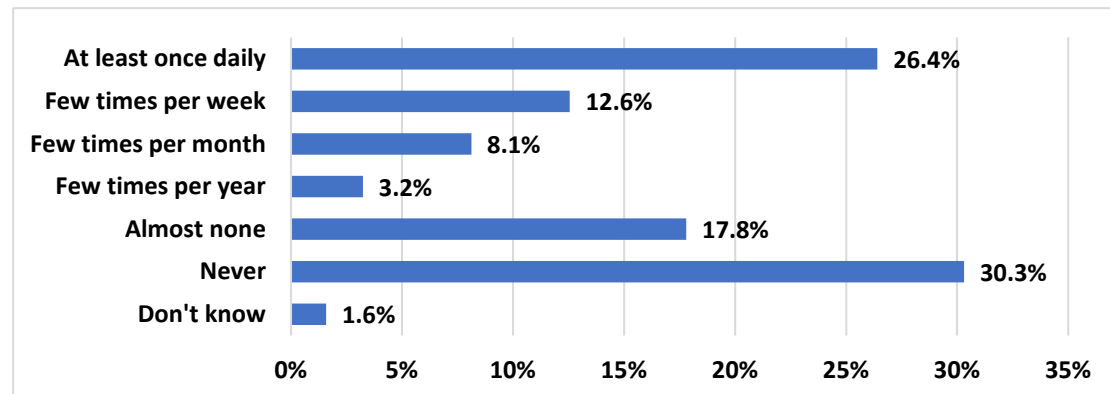
When analyzed by age, people aged 16–25 (90.9%) and 26–35 (85.8%) make up the largest proportions of those using social media as the most common communicative activity, while most people aged 46–55 (78.3%), 56–65 (89.4%) and 66 and over (87.2%) speak on the phone as the most common communicative activity. Those aged 66 and over also make up the smallest proportion of those who use social media, use instant messenger, email or watch video clips on YouTube, which is distinctively smaller than other age groups.

When analyzed by marital status, 85.7% of those unmarried use social media as the most common communicative activity, while most married (83.2%) and those widowed/separated (82.3%) speak on the phone as the most common communicative activity.

Frequency of Using Other Devices for Searching Program Information While Watching TV Q22 Q23

1. Overall Analysis

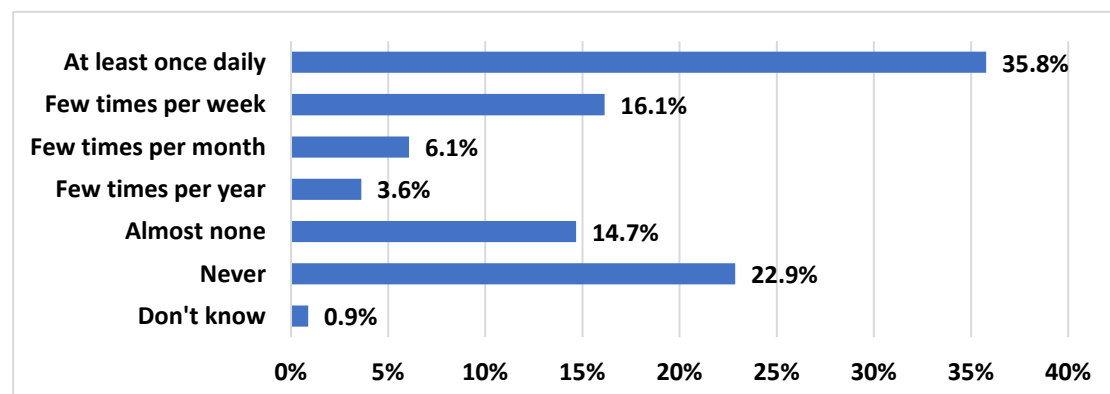
In Taiwan, 30.3% of people aged 16 and over never use other devices (desktops, laptops, tablets or smart phones) to search for program information while watching TV, followed by 26.4% of people who do at least once daily (see Figure 11).



Base : N=797, single-choice (people who have TV sets and any one of desktops, laptops, tablets or smart phones)

Figure 11 Frequency of Using Other Devices for Searching Program Information While Watching TV

In Taiwan, 35.8% of people aged 16 and over use other devices (desktops, laptops, tablets or smart phones) to surf the Internet while watching TV at least once daily, followed by 22.9% of people who never do and 16.1% of those who do few times per week (see Figure 12).



Base : N=797, single-choice (people who have TV sets and any one of desktops, laptops, tablets or smart phones)

Figure 12 Frequency of Using Other Devices to Surf the Internet While Watching TV

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether an interviewee uses other devices to surf the Internet while watching TV significantly varies by region.

When analyzed by region, more people in Taipei City, New Taipei City and Keelung (28.9%), Taichung, Changhua and Nantou (31.3%), Kaohsiung, Pingtung and Penghu (41.4%) as well as Yilan, Hualien and Taitung (45.6%) never use other devices to search for program information while watching TV, while more people in Taoyuan, Hsinchu and Miaoli (33.6%) as well as Yunlin, Chiayi and Tainan (31.6%) do so at least once daily. More people in Taipei City, New Taipei City and Keelung (21.7%), Taoyuan, Hsinchu and Miaoli (51.6%), Taichung, Changhua and Nantou (39.9%) as well as Yunlin, Chiayi and Tainan (45.8%) use other devices to surf the Internet while watching TV at least once daily, while people in Kaohsiung, Pingtung and Penghu (38.2%) as well as Yilan, Hualien and Taitung (42.6%) never do.

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether an interviewee uses other devices to search for program information and surf on the Internet while watching TV significantly varies by age and marital status.

When analyzed by gender, 32% of men and 28.7% of women never use other devices to search for program information while watching TV; of those who use other devices while watching TV, more men (35%) than women (36.5%) do at least once daily.

When analyzed by age, people who aged 16–25 (38.4%), 26–35 (33.8%), 36–45 (34.4%) and 46–55 (31.4%) use other devices to search for program information while watching TV at least once daily, while those aged 56–65 (45.6%) as well as those 66 and over (72%) never do. Concerning whether an interviewee uses other devices to surf the Internet while watching TV, except for those aged 56–65 (29.1%) as well as those 66 and over (61.7%) who never do, people of all age groups use other devices to surf the Internet while watching TV at least once daily, with the highest rate 46.4% of people aged 36–45 and the lowest rate 41.1% of those aged 46–55.

When analyzed by marital status, more unmarried people (36.4%) use other devices to search for program information while watching TV at least once daily, while more married (35.3%) and widowed/separated people (49.9%) never do. Concerning whether an interviewee uses other devices to surf the Internet while watching TV, unmarried (46.8%) and married people (30.9%) do at least once daily, while 39.9% of those widowed/separated people never do.

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether an interviewee uses other devices to search for program information while watching TV significantly varies by education level; and whether an interviewee use other devices to surf the Internet while

watching TV significantly varies by education level and individual average monthly income.

When analyzed by education level, the largest proportions of those with elementary school education or lower (77.8%), high school and secondary education (53.1%), senior high and vocational school education (29.3%) and junior college education (27.3%) never use other devices to search for program information while watching TV, while the largest proportions of those with a bachelor's degree (34.4%) and with a master's degree or higher (49%) do so at least once daily. Concerning people using other devices to surf the Internet while watching TV, the largest proportions of those with elementary school education or lower (81.5%) and high school and secondary school education (39.5%) never do, while the largest proportions of those with senior high and vocational school education (41.2%), junior college (26.7%), people with a bachelor's degree (44.8%) and people with a master's degree or higher (52.7%) do so at least once daily.

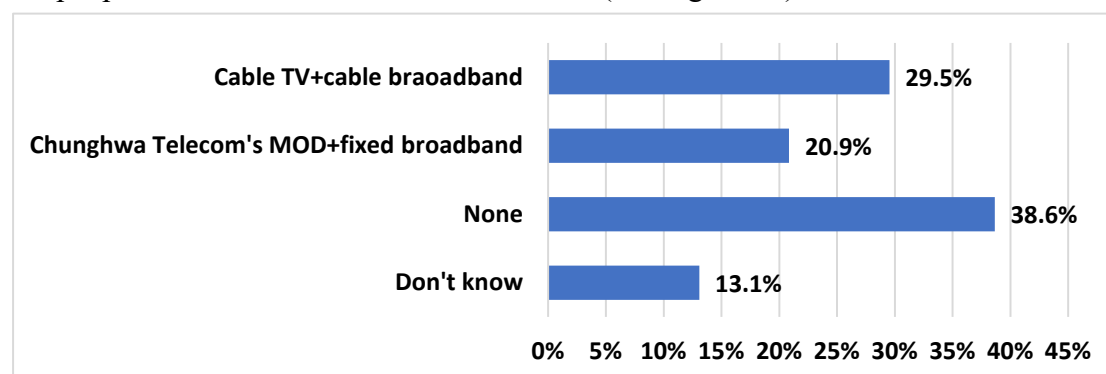
When analyzed by individual average monthly income, except for more people of the NT\$1-NT\$9,999 group (41.5%) and NT\$10,000-NT\$19,999 group (44.7%) who never use other device to surf the Internet, people of other income groups do so at least once daily, with the highest rate 45.7% of those earning NT\$60,000 and over group and the lowest rate 33.1% of those earning NT\$20,000-NT\$29,999.

D. Choosing Communication Services Suppliers

Service Combinations Q25 Q26

1. Overall analysis

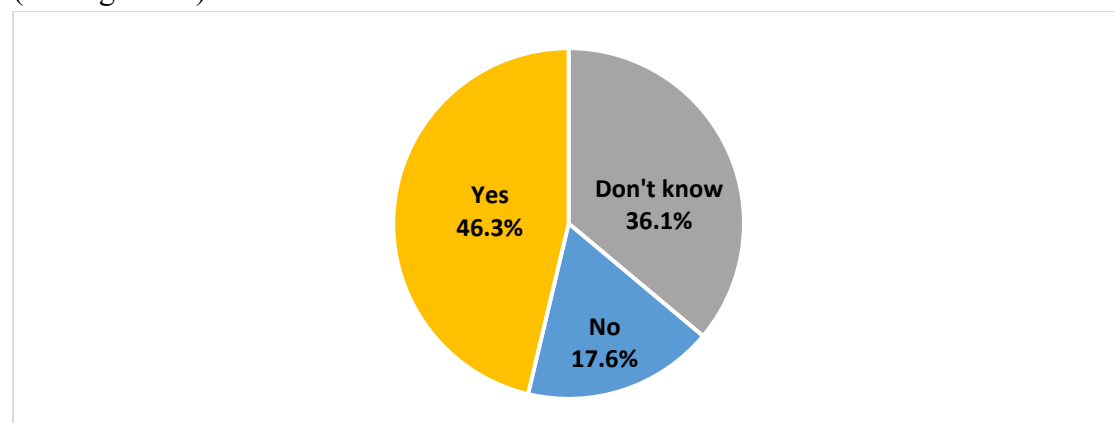
In Taiwan, concerning whether people aged 16 and over use bundled services provided by the same operator, 29.5% of people use cable TV and cable broadband, 20.9% of people use Chunghwa Telecom's MOD and fixed broadband, while 38.6% of people use neither of the bundled services (see Figure 13).



Base : N=1,103, multiple-choice

Figure 13 Services Supplied by the Same Company

Among the bundled services, 46.3% are provided with discounts while 17.6% are not (see Figure 14).



Base : N=533, single-choice (people who use bundled services provided by the same operator)

Figure 14 Services with Discounts

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether bundled services are provided with discounts significantly varies by region.

When analyzed by region, concerning whether people use bundled services provided by the same operator, except for more people in Yunlin, Chiayi and Tainan (32.4%) using cable TV and cable broadband, most people in other regions do not use any services. Among those who use bundled services provided by the same operator at home, except for more people in Yunlin, Chiayi and Tainan (52.7%) not knowing whether their chosen services are provided with discounts or not, most people in other regions use bundled services provided with discounts, with the highest rate 59.2% in Taipei City, New Taipei City and Keelung and the lowest rate 43.8% in Taichung, Changhua and Nantou.

(2) Analysis of basic differences

When analyzed by gender, both more men (39.3%) than women (38%) do not use bundled services provided by the same operator. Among those who use bundled services provided by the same operator at home, the highest proportion of men (47.6%) and women (45%) use bundled services provided with discounts.

When analyzed by age, except for people aged 16–25 (30.7%) and 26–35 (30.3%) who use cable TV and cable broadband, most people of other age groups do not use bundled services provided by the same operator. Among those who use Chunghwa Telecom's MOD and fixed broadband, people aged 26–35 (29.2%) make up the largest proportion and people aged 66 and over (9.2%) the smallest. Among those who use bundled services provided by the same operator, except for most people aged 16–25 (61%) not knowing whether their chosen services are provided with discounts or not,

the largest proportions of other age groups use bundled services provided with discounts, with the highest rate 60.1% of people aged 46–55 and the lowest rate 40.6% of those aged 66 and over.

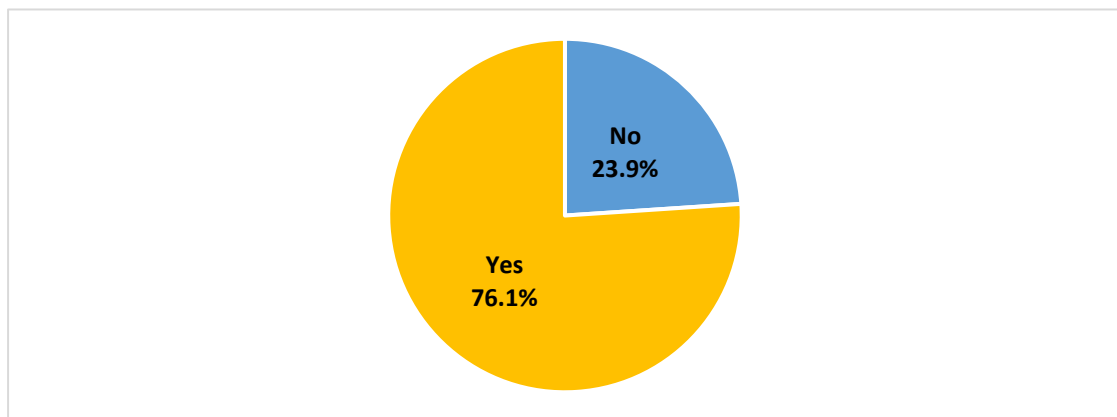
When analyzed by marital status, except for those unmarried people (32.6%) who use cable TV and cable broadband, both those married (44.5%) and those widowed/separated people (44.6%) do not use any bundled services provided by the same operator. Among those who use bundled services provided by the same operator, except for the largest proportion of those unmarried (46.2%) not knowing whether their chosen services provided with discounts or not, the largest proportions of those married (56.3%) and those widowed/separated (44.5%) mainly use bundled services provided with discounts.

E. Online Video Platforms

Viewing Video Content on Online Video Platforms Q36 Q38

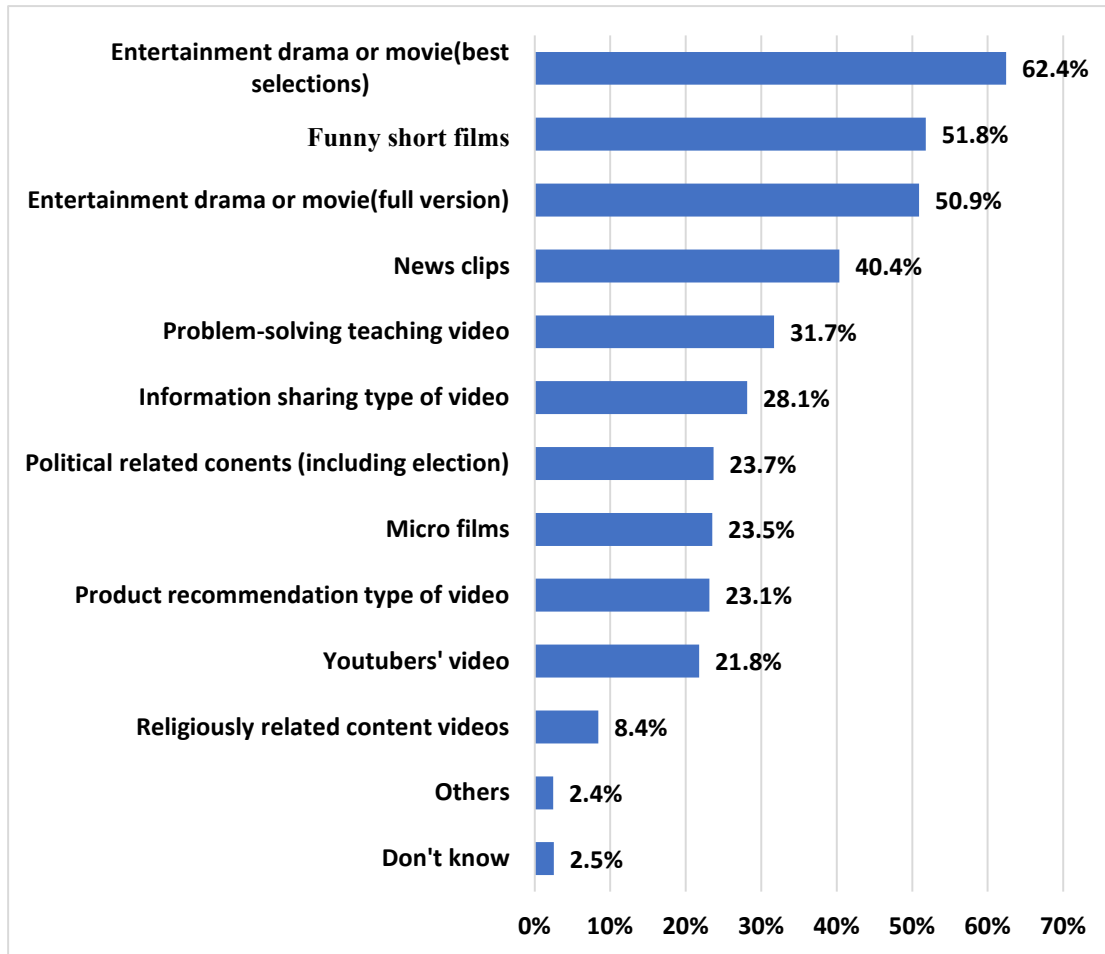
1. Overall Analysis

In Taiwan, 76.1% of people aged 16 and over have viewed video content on online video platforms, while 23.9% of people have not (see Figure 15). Among video content which has been viewed by interviewees, entertainment dramas or movie clips constitute the largest proportion (62.4%), followed by funny short films (51.8%) and entertainment dramas or whole movies (50.9%) (see Figure 16).



Base : N=1,103, single-choice

Figure 15 Whether People Have Viewed Video Content on Online Video Platforms



Base : N=839, multiple-choice (people who have viewed video content on online video platforms)

**Figure 16 Most Frequently Viewed Video Content on Online Video Platforms
(Top 10)**

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether people have viewed video content on online video sharing platforms significantly varies by region.

When analyzed by region, most people in all regions have viewed video content on online video platforms and the proportions are larger than 60% in all regions, with the highest rate 84.7% in Taoyuan, Hsinchu and Miaoli, and the lowest rate 66.3% in Taipei City, New Taipei City and Keelung. Among video content which has been viewed by interviewees, entertainment dramas and video clips make up the largest proportion in Taipei City, New Taipei City and Keelung (60.1%), Taichung, Changhua and Nantou (57.6%), Yunlin, Chiayi and Tainan (71.2%) and Kaohsiung, Pingtung and Penghu (69.1%).

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether people have viewed video content on online video platforms significantly varies by age and marital status.

When analyzed by gender, most men (75.5%) and women (76.6%) have viewed video content on online video platforms. Most men and women have mainly viewed entertainment dramas and video clips, but the proportions that men viewed news short films (43.7%) and political related content (30.5%) are larger than that for women (37.2% and 17.2% respectively).

When analyzed by age, the proportion of people viewing video content on online video platforms decreases by age group. Except for most people aged 66 and over (70.4%) having not viewed video content on online video platforms, most people of other age groups have viewed video content on online video platforms, with the highest rate 96.8% of those aged 16–25 and the lowest rate 67.4% of those aged 56–65. Among video content which has been viewed by interviewees, entertainment dramas and movie clips are most popular among those aged 16–25 (76.3%), 26–35 (72.3%), 36–45 (65.7%) and 46–55 (59.3%). In addition, the proportion of people viewing funny short films decreases by age group, with the highest rate 69.1% of those aged 16–25 and the lowest rate 30.3% of those aged 66 and over. More people aged 66 and over than other age groups have viewed politics and religion related video content.

When analyzed by marital status, most unmarried (93.9%) and married people (68.7%) have viewed video content on online video platforms. Among video content which has been viewed by interviewees, most people have mainly viewed entertainment dramas and movie clips regardless of marital status, with the highest rate 71.3% of those unmarried people and the lowest rate 42.4% of those widowed/separated.

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether people have viewed online video content on video platforms significantly varies by housing tenure, education level, profession and individual average monthly income.

When analyzed by housing tenure, more house renters (83.4%) than home owners (74%) have viewed online video content on video platforms.

When analyzed by education level, except for the largest proportions of those with elementary school or lower education (77.9%) and high school and secondary school education (58.5%) having not viewed video content on online video platforms, most people by education level have viewed online video content on video platforms and the proportion increases with the education level, with the highest rate 96% of people with a master's degree or higher.

When analyzed by profession, except for the largest proportions of housekeepers (52.8%) and the retired (52.8%) having not viewed online video content on video platforms, most people in other professions have viewed online video content on video platforms, with more than 90% of students (97.3%), people who work in the arts, entertainment and recreation services (96%), people in the finance and insurance

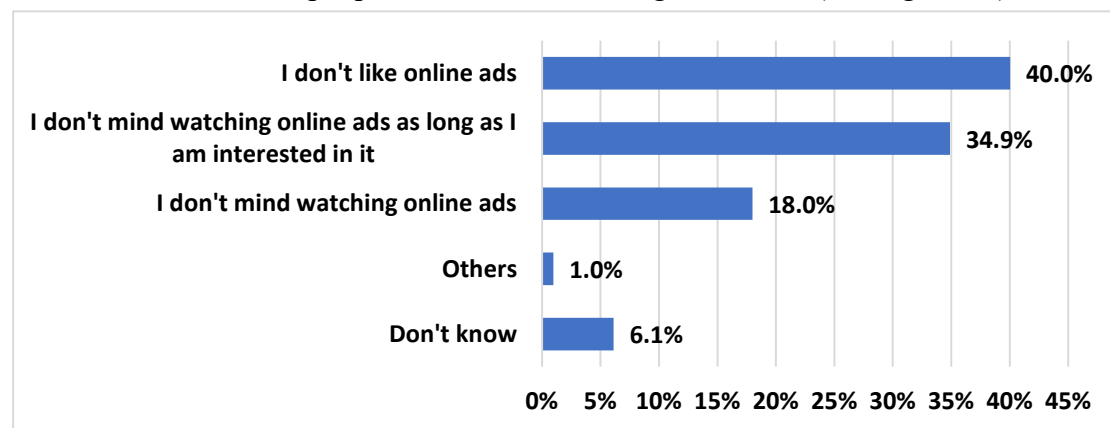
industries (93.8%), jobseekers (92.1%), people who work in education (91.9%) and people work in public administration and national defense (91.8%).

When analyzed by individual average monthly income, most people in every income group have viewed online video content on video platforms, with the highest rate 88.8% of those who earn NT\$60,000 and over and more than 80% of those people who earn NT\$30,000-NT\$39,999 (83.2%) and NT\$40,000-NT\$49,999 (81.9%) have viewed online video content on video platforms.

Status of Viewing Online Advertisement Q40

1. Overall analysis

In Taiwan, 40% of people aged 16 and over don't like online advertisements, 34.9% of people don't mind viewing online advertisements as long as they are interested, and 18% of people don't mind watching online ads (see Figure 17).



Base : N=1,103, single-choice

Figure 17 Attitudes Towards Online Advertisements

2. Comparative Analysis

(1) Analysis of regional differences

When analyzed by region, more people in Taipei City, New Taipei City and Keelung (37.9%) as well as Yunlin, Chiayi and Tainan (43.5%) don't mind viewing online advertisements as long as they are interested, while more people in Taoyuan, Hsinchu and Miaoli (51.7%), Taichung, Changhua and Nantou (40.9%), Kaohsiung, Pingtung and Penghu (33.6%) and Yilan, Hualien and Taitung (41%) don't like online ads.

(2) Analysis of basic differences

The result of Chi-square tests indicates that the attitudes towards online advertising significantly varies by marital status.

When analyzed by gender, 41.5% of men and 38.6% of women don't like online ads.

When analyzed by age, the highest percentages of those aged 26–35 (38.9%) and

36–45 (48.4%) don't mind viewing online advertisements as long as they are interested, while the highest percentages of those aged 16–25 (42.1%), 46–55 (37.3%), 56–65 (49.6%) as well as 66 and over (40.8%) don't like online ads.

When analyzed by marital status, except the largest proportion of those unmarried (41.7%) who don't mind viewing online advertisements as long as they are interested, the largest proportions of those married (42%) and widowed/separated people (36.7%) don't like online ads.

(3) Analysis of differences in social and economic status

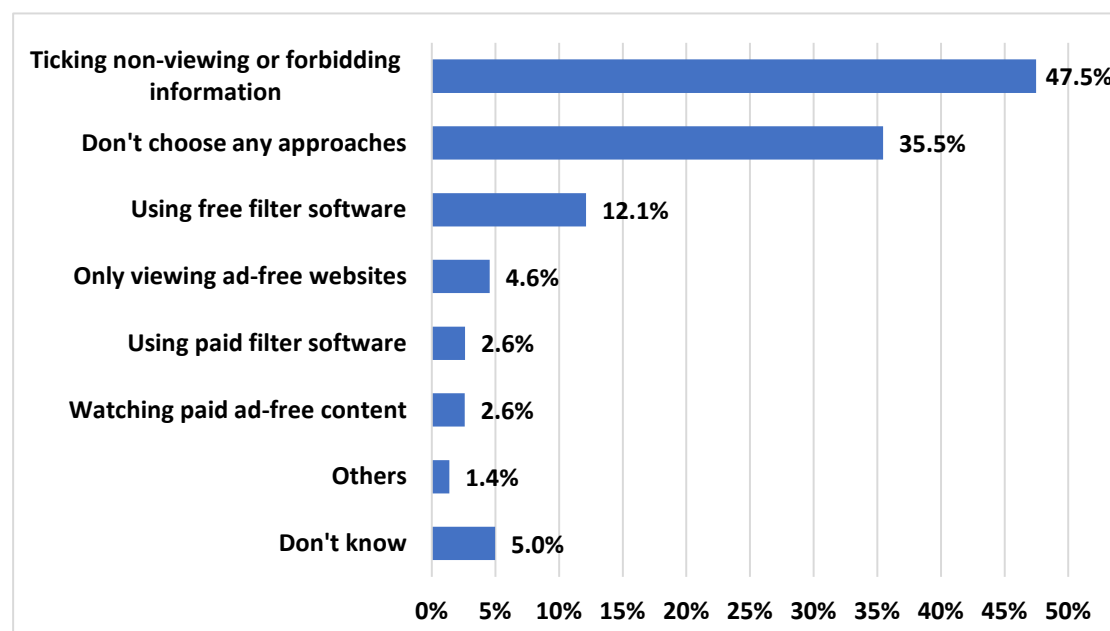
The result of Chi-square tests indicates that attitudes towards online advertisements significantly varies by housing tenure.

When analyzed by housing tenure, 41.8% of home owners don't like online ads, while 40.2% of house renters don't mind viewing online advertisements as long as they are interested.

Actions Taken for Avoiding Viewing Online Advertisements Q41

1. Overall analysis

In Taiwan, 47.5% of people aged 16 and over tick not to view or forbid sharing information to avoid viewing online advertisements, followed by 12.1% of those who use free filter software. Up to 35.5% of people do not take any actions to avoid online advertisements (see Figure 18).



Base : N=1,103, multiple-choice

Figure 18 Actions Taken to Avoid Online Advertisements

2. Comparative Analysis

(1) Analysis of regional differences

When analyzed by region, except for Kaohsiung, Pingtung and Penghu (46.9%) where the largest proportion does not take any action to avoid online ads, most people in other regions tick not to view or forbid sharing information to avoid viewing online advertisements, with the highest rate 62.8% of those in Taoyuan, Hsinchu and Miaoli and the lowest rate 41.7% of those in Taipei City, New Taipei City and Keelung. In addition, fewer people (7.6%) in Kaohsiung, Pingtung and Penghu use free filter software to avoid online ads.

(2) Analysis of basic differences

When analyzed by gender, 45.6% of men and 49.3% of women tick non to view or forbid sharing information to prevent online advertising, but a higher proportion of men (13.1%) use free filter software than women (11.2%).

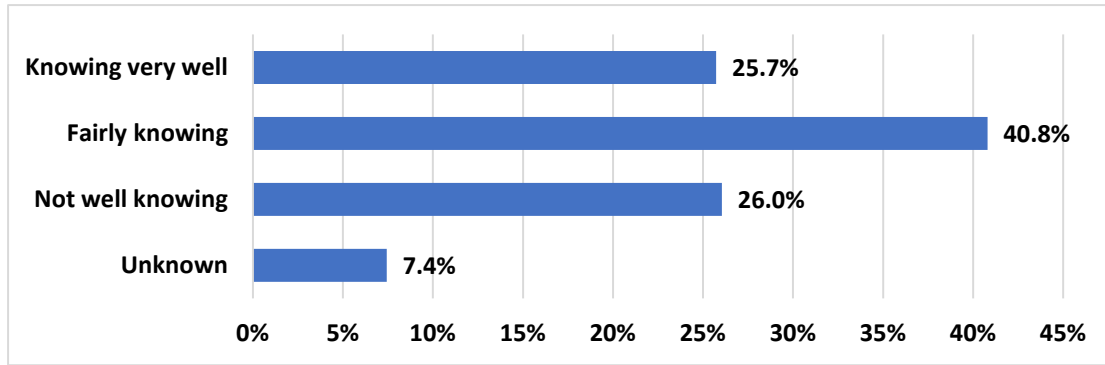
When analyzed by age, except for people aged 66 and over (49.1%) who do not take any action to avoid online advertisements, the largest proportion of those from other age groups tick not to view or forbid sharing information to prevent online advertising, with the highest rate 61.2% of those aged 36–45 and the lowest rate 46.6% of those aged 56–65. In addition, people aged 26–35 (23.8%) make up the largest proportion of using free filter software to avoid online ads and people aged 66 and over the lowest (4.2%).

When analyzed by marital status, unmarried (50.5%) and married people (48.3%) tick non to view or forbid sharing information to prevent online advertising, while most widowed/separated people (45.8%) do not take any actions to prevent online advertising. In addition, more of those unmarried (17.5%) than those married (9.2%) or widowed/separated (8.1%) use free filter software to avoid online advertising.

Whether Interviewees Know How to Report Inappropriate Content on YouTube Q43 Q44

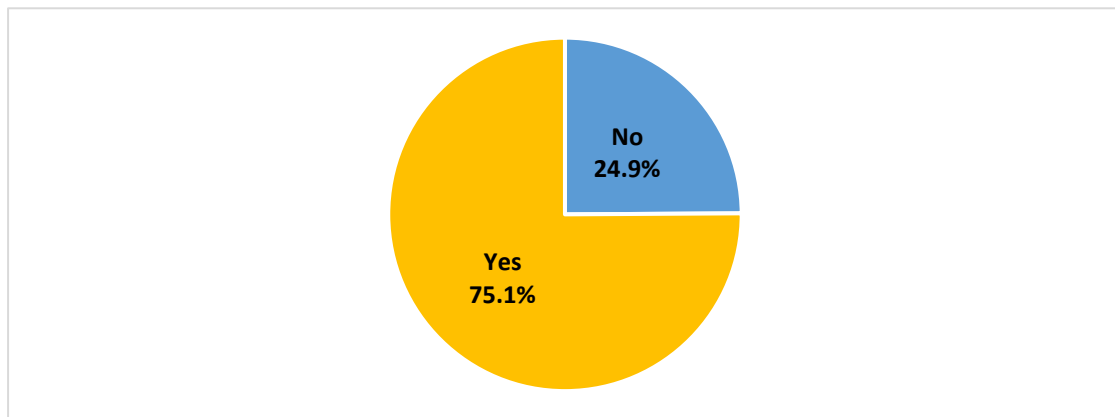
1. Overall analysis

In Taiwan, more than 60% (66.5%) of people aged 16 and over are clear (including knowing very well and fairly knowing) about how to report inappropriate content to YouTube, whereas 33.4% of people are unclear (including unknown and not well knowing) (see Figure 19). 75.1% of people know that there is a report button or a flagging feature on YouTube for reporting inappropriate content, whereas 24.9% do not know (see Figure 20).



Base: N=835, single-choice (people who have viewed video content on YouTube)

Figure 19 Whether or Not Interviewees Know How to Report Inappropriate Content on YouTube



Base: N=835, single-choice (people who have viewed video content on YouTube)

Figure 20 Whether respondents know there is a report button or a flagging feature on YouTube for reporting inappropriate content or not

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether an interviewee knows there is a report button or a flagging feature on YouTube for reporting inappropriate content significantly varies by region.

The result of cross analysis finds that, most people in all regions are clear about how to report inappropriate content to YouTube, with the highest rate 78.7% of people in Taipei City, New Taipei City and Keelung and the lowest rate 53.9% of people in Taichung, Changhua and Nantou. Most people in all regions know there is a report button or a flagging feature on YouTube for reporting inappropriate content, with the highest rate 90.8% of people in Yilan, Hualien and Taitung and the lowest rate 67.5% of people in Kaohsiung, Pingtung and Penghu.

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether an interviewee knows there

is a report button or a flagging feature on YouTube for reporting inappropriate content significantly varies by gender, age and marital status.

When analyzed by gender, most men (71.1%) and women (62.1%) are clear about how to report inappropriate content to YouTube. Both men (79.3%) and women (71.1%) know there is a report button or a flagging feature on YouTube for reporting inappropriate content.

When analyzed by age, except for most people aged 56–65 (54.1%) as well as 66 and over (70.6%) are not clear about how to report inappropriate content to YouTube, people of other age groups are clear about how to report inappropriate content to YouTube, with the highest rate 85.1% of people aged 16–25 and the lowest rate 55.1% of those aged 56–65. Except for most people aged 66 and over (70.8%) not knowing there is a report button or a flagging feature on YouTube for reporting inappropriate content, most people of other age groups know there is a report button or a flagging feature on YouTube for reporting inappropriate content and the proportion decreases by age, with the highest rate 92.6% of people aged 16–25 and the lowest rate 57.7% of those aged 56–54.

When analyzed by marital status, those unmarried (76.3%) and married (62%) are clear about how to report inappropriate content to YouTube, whereas 63.4% of widowed/separated people are unclear about how to report inappropriate content to YouTube. Most people regardless of marital status know there is a report button or a flagging feature on YouTube for reporting inappropriate content, with the highest rate 86.2% of those unmarried and the lowest rate 54.9% of those widowed/separated.

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether people are clear about how to report inappropriate content to YouTube or not significantly varies by education level; whether people know there is a report button or a flagging feature on YouTube for reporting inappropriate content significantly varies by housing tenure, education level, and profession.

When analyzed by housing tenure, most home owners (73.2%) and house renters (82.4%) know there is a report button or a flagging feature on YouTube for reporting inappropriate content.

When analyzed by education level, except for those with elementary school education or lower (61%) and those high school and secondary school education (65.4%) being unclear about how to report inappropriate content to YouTube, most people of other education levels are clear about how to report inappropriate content to YouTube, with the highest rate 77% of those with a bachelor's degree and the lowest rate 61.6% of those senior high and vocational school education. Except for most of those with elementary school education or lower (72.6%) not knowing there is a report button or

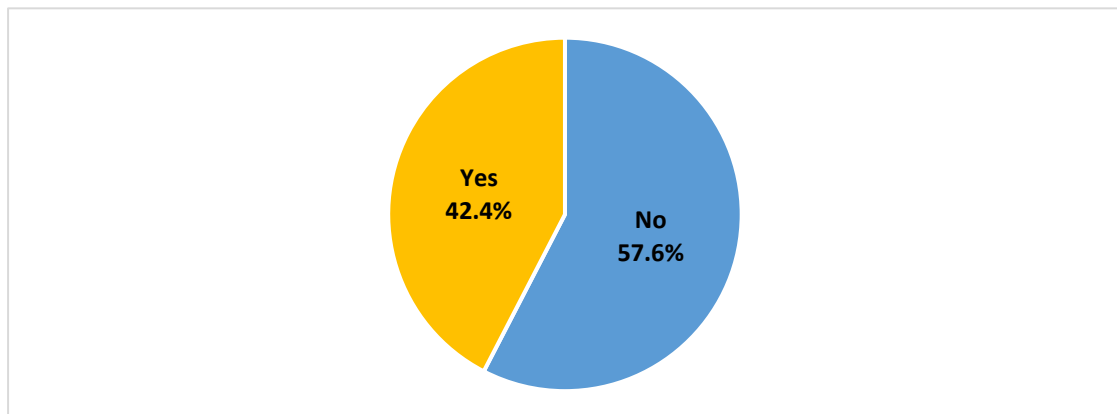
a flagging feature on YouTube for reporting inappropriate content, most people of other education levels know there is a report button or a flagging feature on YouTube for reporting inappropriate content, with the highest rate 85.7% of people with a bachelor's degree and the lowest rate 50.3% of those high school and secondary education.

When analyzed by profession, except for most of those retired (64.9%) not knowing there is a report button or a flagging feature on YouTube for reporting inappropriate content, more people of other professions know there is a report button or a flagging feature on YouTube for reporting inappropriate content.

Methods for Handling Inappropriate Content on YouTube Q45 Q46

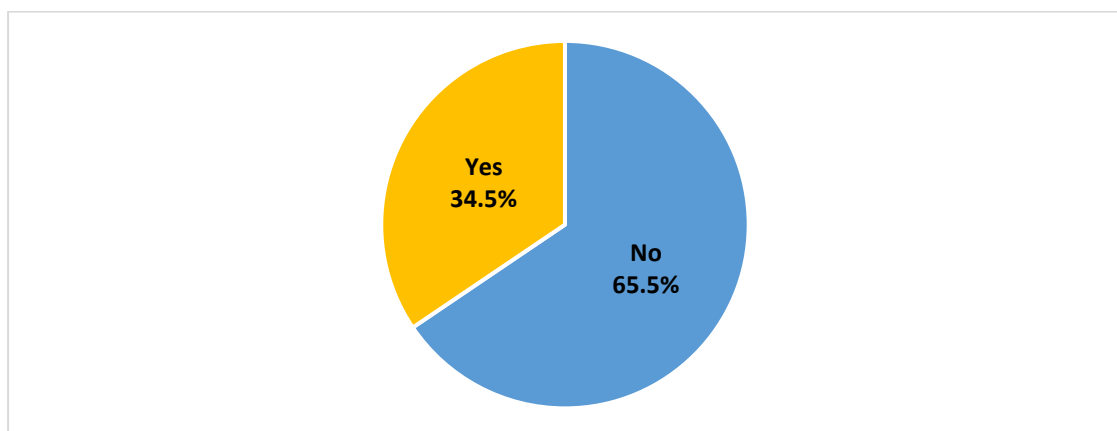
1. Overall Analysis

In Taiwan, 42.4% of people aged 16 and over have viewed inappropriate content on YouTube (see Figure 21). Among them, 34.5% of those have reported the inappropriate content to YouTube (see Figure 22).



Base: N=835, single-choice (people who have viewed video content on YouTube)

Figure 21 Whether an Interviewee Has Viewed Inappropriate Content on YouTube



Base: N=354, single-choice (people who have viewed inappropriate content on YouTube)

Figure 22 Whether an Interviewee Has Reported Inappropriate Content to YouTube

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether an interviewee has viewed inappropriate content on YouTube significantly varies by region.

The result of cross analysis finds that, except for most people in Yilan, Hualien and Taitung (58.6%) having viewed inappropriate content, most people in other regions have not viewed inappropriate content on YouTube, with the highest rate 67.5% of people in Taipei City, New Taipei City and Keelung. Concerning whether an interviewee has reported inappropriate content to YouTube, most people in all regions have not reported inappropriate content to YouTube, with the highest rate 75.5% in Taoyuan, Hsinchu and Miaoli and the lowest rate 54.2% in Taipei City, New Taipei City and Keelung.

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether an interviewee has reported inappropriate content to YouTube significantly varies by age and marital status.

When analyzed by gender, 58.3% of men and 56.9% of women have not viewed inappropriate content on YouTube; 60.4% of men and 70.3% of women have not reported inappropriate content to YouTube.

When analyzed by age, most people of all age groups have not viewed inappropriate content on YouTube, with the highest rate 61.6% of those aged 56–65 and the lowest rate 50.8% of those aged 16–25. Concerning whether an interviewee has reported inappropriate content to YouTube, most people of all age groups have not reported inappropriate content to YouTube, with the highest rate 90.3% of those aged 66 and over and the lowest rate 52.1% of those aged 16–25.

When analyzed by marital status, most people regardless of marital status have not viewed inappropriate content on YouTube, with the highest rate 62.5% of those widowed/separated and the lowest rate 56.3% of those unmarried. Concerning whether an interviewee has reported inappropriate content to YouTube, most people regardless of marital status have not reported inappropriate content to YouTube, with the highest rate 92.7% of those widowed/separated people and the lowest rate 56.4% of those unmarried.

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether an interviewee has viewed inappropriate content on YouTube significantly varies by education level; whether an interviewee has reported inappropriate content to YouTube significantly varies by housing tenure and education level.

When analyzed by housing tenure, more house renters (44.8%) than home owners (30.2%) have reported inappropriate content to YouTube.

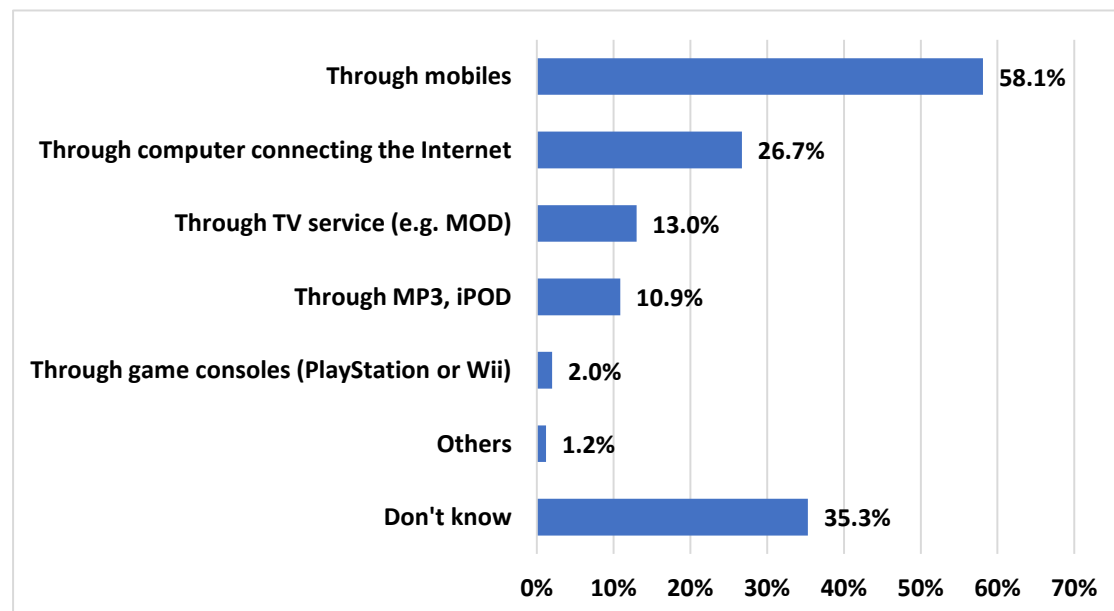
When analyzed by education level, except for most people of the group of elementary school education or lower (70.9%) having viewed inappropriate content on YouTube, most interviewees of other education levels have not viewed inappropriate content on YouTube, with the highest rate 69.5% of those with high school and secondary school education and the lowest rate 54.2% of those senior high and vocational school education. Concerning whether an interviewee has reported inappropriate content to YouTube, most people of all education levels have not reported inappropriate content to YouTube, with the highest rate 96.2% of those with high school and secondary school education and the lowest rate 58% of those with a bachelor's degree.

F. Radio Listening Behavior

Instant Broadcasts Q48 Q49

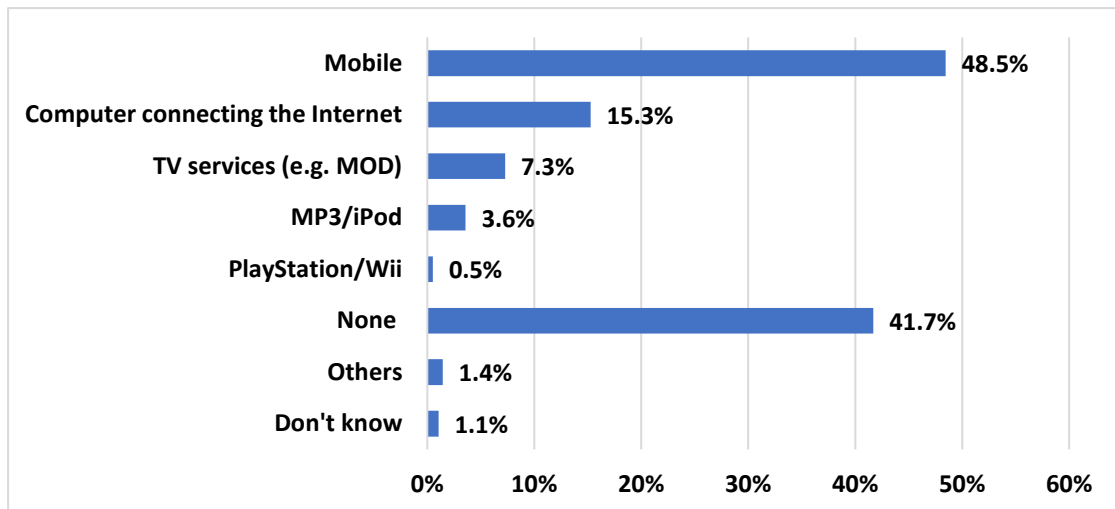
1. Overall Analysis

In Taiwan, people aged 16 and over know there are a few ways to listen to the live radio. Listening to live radio via mobiles (58.1%) make up the largest proportion, followed by listening to the radio via computers with access to the Internet (26.7%). In addition, up to 35.3% of people do not know any way to listen to the live radio (see Figure 23). In Taiwan, most people aged 16 and over listen to live radio via mobiles (48.5%). On the other hand, 41.7% of people do not listen to live radio even if they know how to listen to live radio (see Figure 24).



Base: N=1,103, multiple-choice

Figure 23 Ways that People Know How to Listen to the live Radio



Base: N=713, multiple-choice (people who know how to listen to the live radio)

Figure 24 Channels Used to Listen to Live Broadcasts

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that listening to live radio via mobiles constitute the largest proportion in all regions, with the highest rate 75.8% in Yilan, Hualien and Taitung and the lowest rate 42.6% in Taipei City, New Taipei City and Keelung. Concerning ways that people use to listen to live radio, except for most people in Taipei City, New Taipei City and Keelung (57.9%) not listening to the radio, most people in other regions listen to live radio via mobiles.

(2) Analysis of basic differences

When analyzed by gender, 57.7% of men and 58.5% of women know how to listen to the radio via mobiles, and both men (46.4%) and women (50.5%) listen to the radio mainly via mobiles.

When analyzed by age, except for 70.2% of people aged 66 and over not knowing any ways to listen to live radio, most people of other age groups know how to listen to live radio via mobiles, with the highest rate 72.6% of those aged 26–35 and the lowest rate 49.8% of those aged 56–65. Concerning ways that people use to listen to the live radio, people aged 16–25 (47.9%), 26–35 (56.3%), 36–45 (50%) and 46–55 (48.7%) listen to the radio via mobiles, whereas people aged 56–65 (47.1%) as well as 66 and over (51.6%) do not listen to live radio.

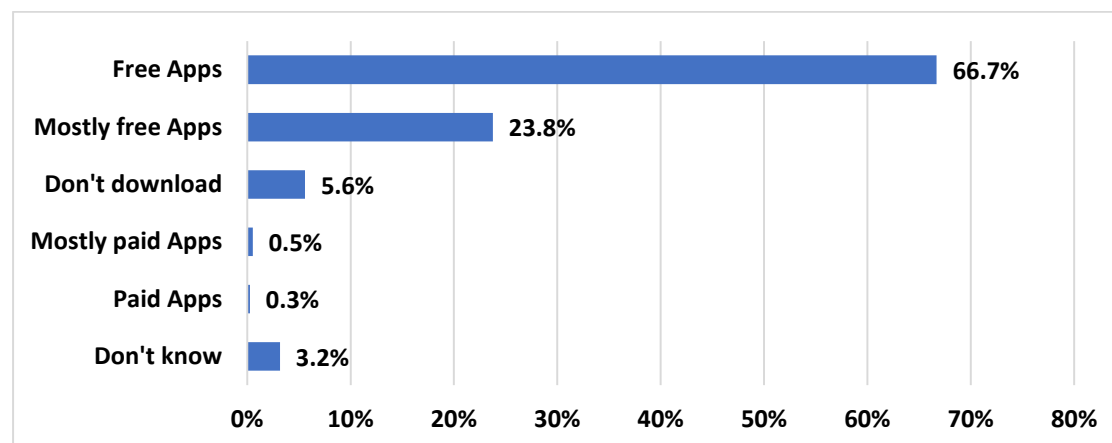
When analyzed by marital status, most people regardless of marital status listen to live radio via mobile; besides, up to 49.5% of those widowed/separated people do not know any way to listen to the live radio. Concerning ways that people use to listen to live radio, except for the largest proportion of married people (46.8%) not listening to the live radio, those unmarried (52.9%) and those widowed/separated people (60.3%) listen to live radio mainly via mobiles.

G. Apps Usage via Mobiles

Downloading Apps via Mobiles Q55

1. Overall Analysis

In Taiwan, most people aged 16 and over have downloaded free apps (66.7%) in the past 12 months, followed by mostly free apps (23.8%) (see Figure 25).



Base: N=842, single-choice (people who know how to download Apps via mobiles)

Figure 25 Apps Downloaded Over the Past 12 Months

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that most people in all regions downloaded free apps over the past 12 months, with the highest rate 84.8% in Yilan, Hualien and Taitung and the lowest rate 57.4% in Taoyuan, Hsinchu and Miaoli.

(2) Analysis of basic differences

When analyzed by gender, most men (64.1%) and women (69.1%) downloaded free apps over the past 12 months.

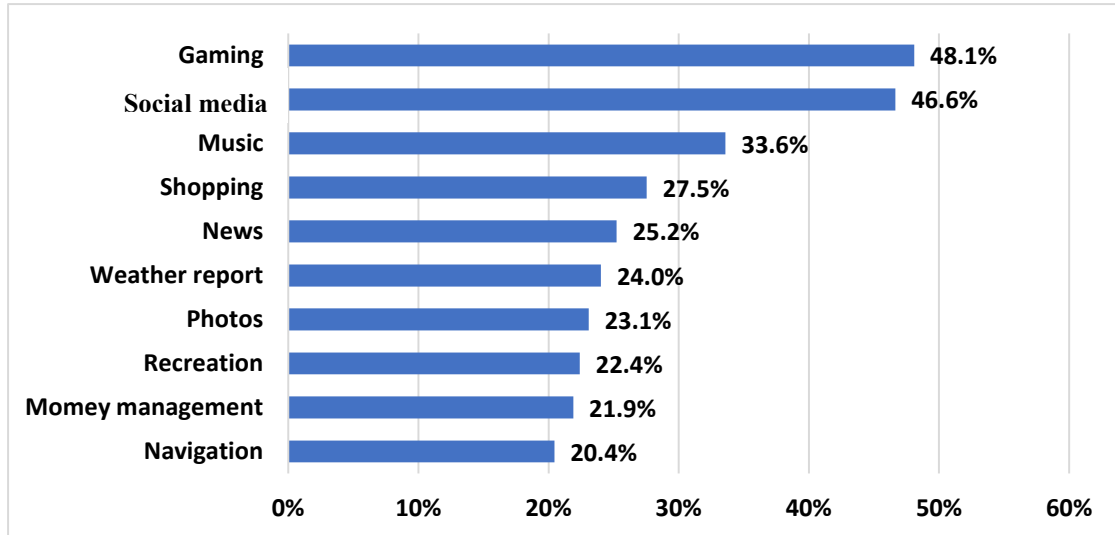
When analyzed by age, most people of all age groups downloaded free apps over the past 12 months, with the highest rate 77.5% of those aged 56–65 and the lowest rate 63.1% of those aged 66 and over.

Regardless of marital status, more than 65% have downloaded free apps over the past 12 months, but 12.5% of those widowed/separated have not downloaded apps in the past 12 months, which is distinctively more than those unmarried or married.

Apps Usage Q57

1. Overall Analysis

In Taiwan, more frequently used apps by people aged 16 and over are games (48.1%), social media (46.6%) and music (33.6%) (see Figure 26).



Base: N=719, multiple-choice (people who know types of Apps they have downloaded)

Figure 26 Frequently Used Mobile Apps (Top 10)

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that, except for more people in Taipei City, New Taipei City and Keelung (44.2%) as well as Taoyuan, Hsinchu and Miaoli (79.5%) using social media, most people in other regions mainly play games, with the highest rate 57.5% in Yilan, Hualien and Taitung and 47.8% in Taichung, Changhua and Nantou.

(2) Analysis of basic differences

When analyzed by gender, 55.6% of men have frequently played games over the past 12 months, while 44.8% of women frequently used social media.

When analyzed by age, games are popular with people aged 16–25 (75.5%), 26–35 (58.4%) and 36–45 (50.6%), while social media are popular with those aged 46–55 (46.8%), 56–65 (50.2%) as well as 66 and over (39.8%).

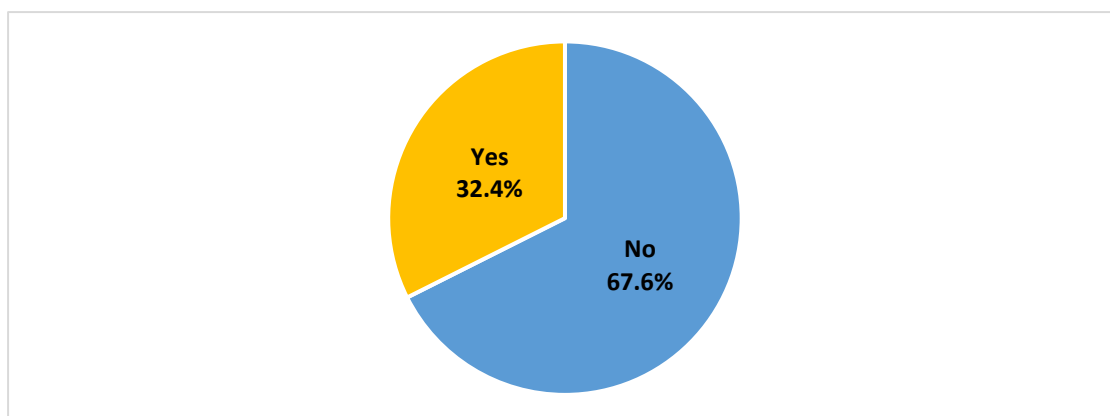
When analyzed by marital status, games are popular with those unmarried (65%), while social media are popular with those married (47.6%) and widowed/separated (38.2%).

H. Using Mobile Payments

Mobile Payment Usage Q58

1. Overall Analysis

In Taiwan, 32.4% of people aged 16 and over use mobile payments, while up to 67.6% of people do not use mobile payments (see Figure 27).



Base: N=1,103, single-choice

Figure 27 Whether an Interviewee Uses Mobile Payment

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether people use mobile payments or not significantly varies by region.

The result of cross analysis finds that, most people do not use mobile payments in all regions. Among those who use mobile payment, the proportion of those in Taoyuan, Hsinchu and Miaoli (40%) is the largest and the proportion of those that do in Taichung, Changhua and Nantou is the smallest (25.1%).

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether people use mobile payments or not significantly varies by age and marital status.

When analyzed by gender, most men (68.5%) and women (66.7%) do not use mobile payment.

When analyzed by age, except for most people aged 26–35 (54%) using mobile payments, most people of other age groups do not use mobile payments, with the highest rate 98.5% of those aged 66 and over and the lowest rate 50.1% of those aged 36–45.

When analyzed by marital status, the highest proportions regardless of marital status do not use mobile payments; among those who use mobile payments, the rate of those unmarried (46.2%) who use mobile payments is the highest and those widowed/separated (14.1%) the lowest.

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether people use mobile payments significantly varies by housing tenure, education level, profession and average monthly individual income.

When analyzed by housing tenure, most home owners (71.4%) and house renters (51.5%) do not use mobile payments; among those who use mobile payment, the rate

of house renters (48.5%) using mobile payments is higher than that of home owners (28.6%).

When analyzed by education level, the proportion of people using mobile payments decreases by education level. Among people with a master's degree or higher, the proportion of those who use mobile payments (53.7%) is higher than that of those who do not use mobile payment. Most people of other education levels do not use mobile payments, with the highest rate 98.5% of those with elementary school education or lower, and the lowest rate 65.6% of those with junior college education.

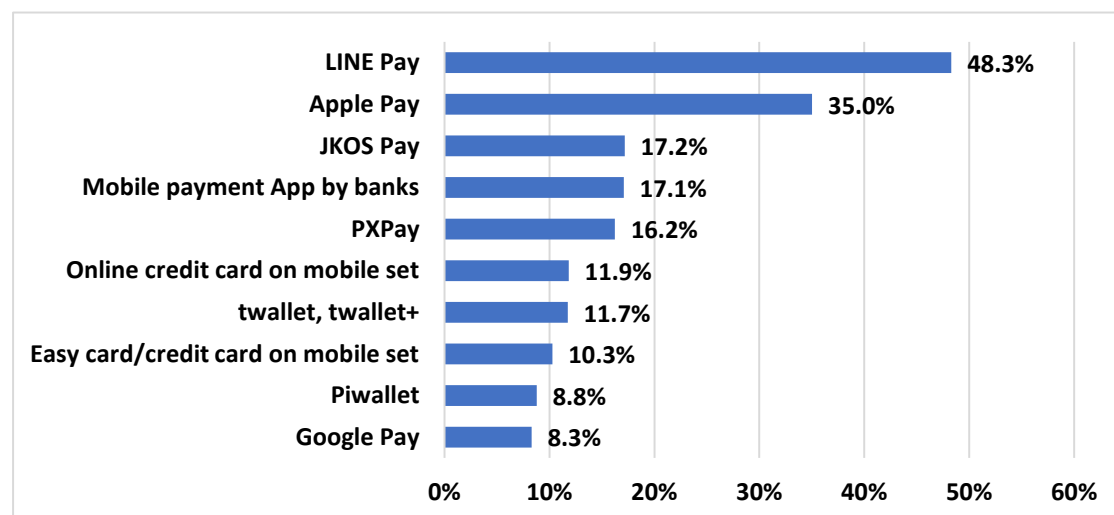
When analyzed by profession, except for more of those who work in finance and insurance (60.2%), those who work in the arts, entertainment and recreation (59%), those who work in the professional, scientific and technology services (55.2%) and those who work in education (51.3%) who use mobile payments, most people in other industries do not use mobile payments, with more than 80% of those who work in the support service industries (80.6%), housekeepers (83.1%) and those retired (96%).

When analyzed by individual average monthly income, most people of all income groups do not use mobile payments; the proportion of people using mobile payments approximately increases by income. Among those who use mobile payments, the rate of those earning NT\$60,000 or more (47.9%) using mobile payment is the highest, and those earning NT\$1-NT\$9,999 the lowest (14.5%).

Frequently Used Mobile Payment Services Q59

1. Overall Analysis

In Taiwan, 48.3% of those aged 16 and over most frequently use LINE Pay mobile payment service, followed by Apple Pay (35%) and JKOS Pay (17.2%) (see Figure 28).



Base : N=358, multiple-choice (people who use mobile payment services)

Figure 28 Frequently Used Mobile Payment Services in Taiwan (Top 10)

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that, except for people in Kaohsiung, Pingtung and Penghu (32.7%) using PXPAY and people in Yilan, Hualien and Taitung (40.2%) using WeChat Pay, most people in other regions use LINE Pay the most frequently, with the highest rate 64.6% of those in Taipei City, New Taipei City and Keelung and the lowest rate 43.7% of those in Taichung, Changhua and Nantou.

(2) Analysis of basic differences

When analyzed by gender, both men (46.8%) and women (49.7%) use LINE Pay the most frequently used mobile payment service; more women (21.1%) than men (11%) use PXPAY.

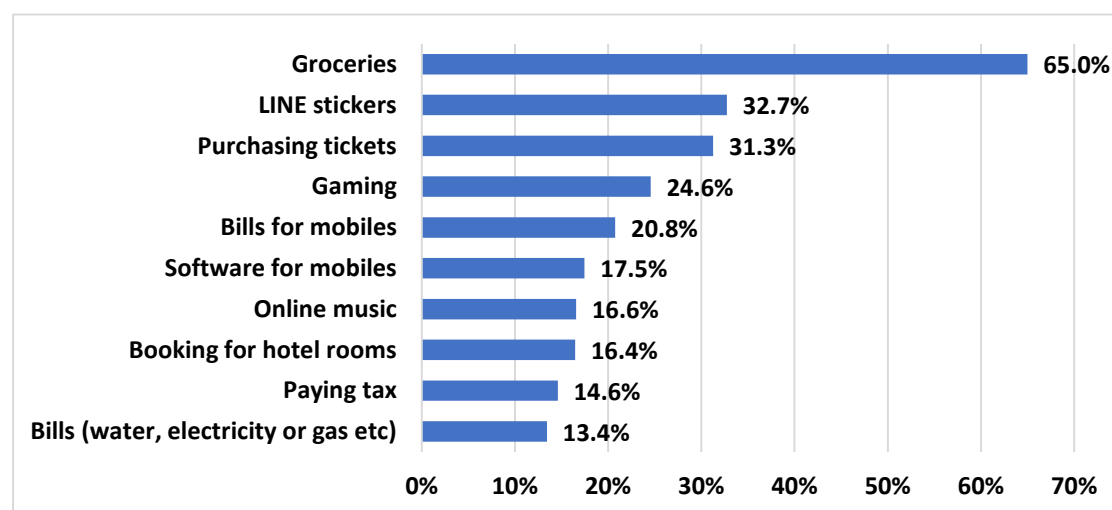
When analyzed by age, except for those aged 66 and over (28.1%) using MyFamiPay as the most frequently, more people of other age groups use mainly LINE Pay, with the highest rate 64.4% of those aged 16–25 and the lowest rate 35.7% of those aged 56–65.

When analyzed by marital status, more people regardless of marital status use LINE Pay, with the highest rate 53.3% of those unmarried and the lowest rate 36.3% of those widowed/separated.

When People Use Mobile Payment Services Q60

1. Overall Analysis

In Taiwan, most people aged 16 and over use mobile payments to buy groceries (65%), followed by LINE stickers (32.7%) and tickets (31.3%) (see Figure 29).



Base : N=358, multiple-choice (people who use mobile payment services)

Figure 29 When Mobile Payments Are Used (Top 10)

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that most people in all regions use mobile

payment to buy groceries, with the highest rate 73.5% among those in Taipei City, New Taipei City and Keelung and the lowest rate 49% among those in Taoyuan, Hsinchu and Miaoli.

(2) Analysis of basic differences

When analyzed by gender, most men (59.5%) and women (70%) use mobile payment to buy LINE stickers. In addition, more men (31.9%) than women (17.8%) use mobile payments for gaming.

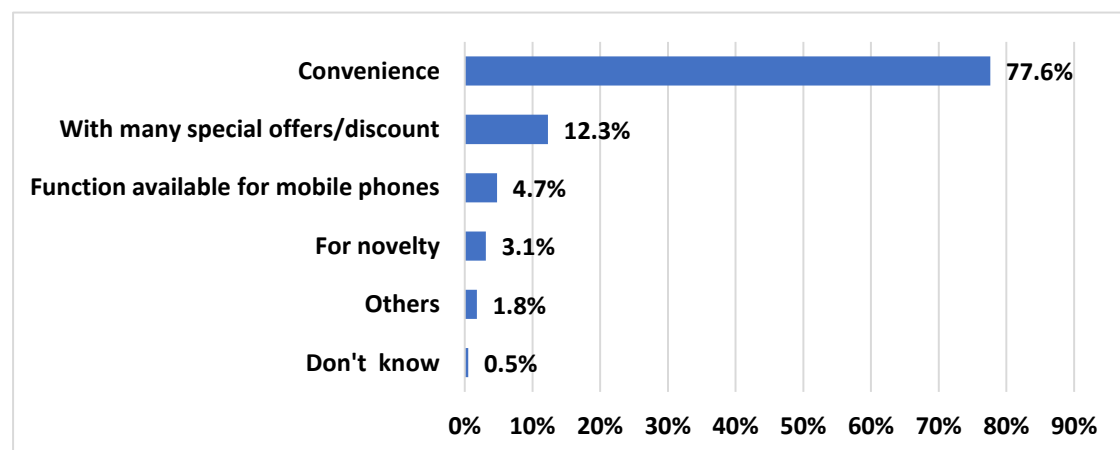
When analyzed by age, most people of all age groups use mobile payments mainly to buy groceries, with the highest rate 74.6% of those aged 56–65 and the lowest rate 52.3% of those aged 66 and over. In addition, the proportion of those using mobile payments to buy LINE stickers decreases by age, with the highest rate 47% of those aged 16–25 and none of those aged 66 and over using mobile payments to by LINE stickers.

When analyzed by marital status, most people regardless of marital status use mobile payments to buy groceries, with the highest rate 70.7% of those married and the lowest rate 57.3% of those widowed/separated.

Reasons for Using or Not Using Mobile Payments Q62 Q63

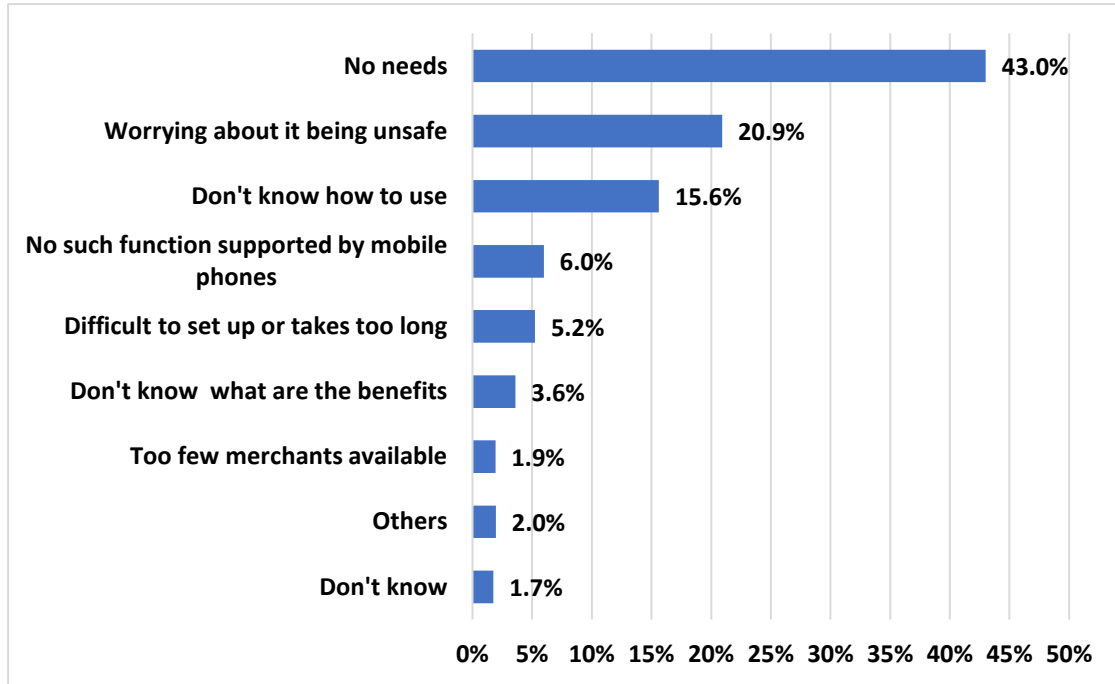
1. Overall Analysis

Up to 77.6% of people in Taiwan aged 16 and over use mobile payments mainly for convenience, followed by many special offers/discounts (12.3%) and function available for mobile phones (4.7%) (see Figure 30). Among the main reasons for not using mobile payment services, not needing mobile payment services (43%) make up the largest proportion, followed by concerns about security (20.9%) and not knowing how to use it (15.6%) (see Figure 31).



Base: N=358, single-choice (people who use mobile payment services)

Figure 30 Main Reasons for Using Mobile Payment Services



Base : N=745, single-choice (people who do not use mobile payment services)

Figure 31 Main Reasons for Not Using Mobile Payment Services

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that more than 70% of people in all regions use mobile payment services mainly for convenience, with the highest rate 97.2% in Yilan, Hualien and Taitung and the lowest rate 72.2% in Kaohsiung, Pingtung and Penghu. On the other hand, most people in all regions do not use mobile payments mainly because they have no need for mobile payments, with the highest rate 66.5% in Yilan, Hualien and Taitung and the lowest rate 37.1% in Taipei City, New Taipei City and Keelung.

(2) Analysis of basic differences

The result of Chi-square tests indicates that the main reasons why people use or do not use mobile payments significantly varies by gender; the main reasons why people do not use mobile payments also significantly varies by marital status.

When analyzed by gender, both men (83%) and women (72.6%) use mobile payments mainly for convenience; both men (42.9%) and women (43.1%) do not use mobile payments mainly because they have no need for mobile payment services. Besides, more women (26.4%) than men (15.4%) worries about mobile payment security.

When analyzed by age, more than 60% of people of all age groups use mobile payments mainly for convenience, with the highest rate 82.1% of those aged 26–35 and the lowest rate 63.1% of those aged 66 and over. On the other hand, most people of all

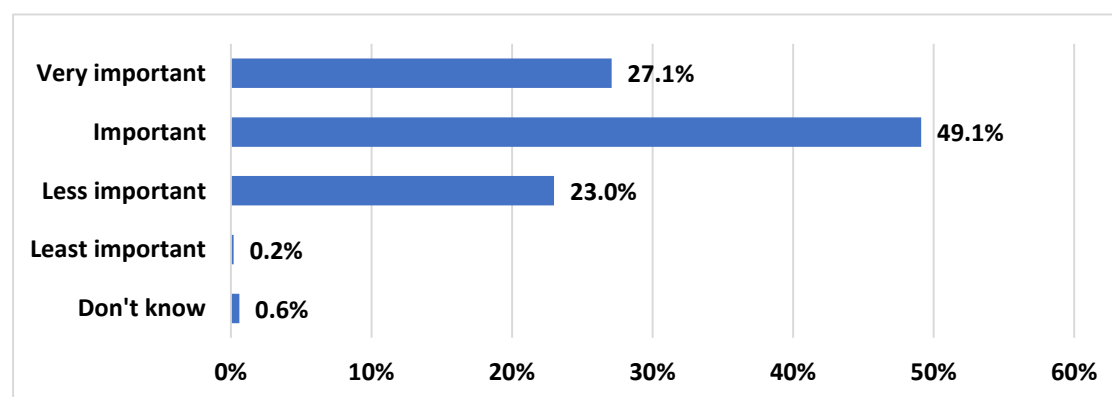
age groups do not use mobile payments mainly because they have no need for mobile payment services, with the highest rate 55.7% of those aged 16–25 and the lowest rate 35.9% of those aged 66 and over. In addition, the proportion of people not knowing how to use mobile payments approximately increases by age, with the highest rate 27.9% of those aged 66 and over and the lowest rate 6.1% of those aged 16–25.

When analyzed by marital status, most people regardless of marital status use mobile payments mainly for convenience, with the highest rate 96.6% of those widowed/separated and the lowest rate 72.9% of those married. On the other hand, most people regardless of marital status do not use mobile payments mainly because they have no need for mobile payment services. The proportions of people worrying the security of mobile payments (22.6%) and not knowing how to use mobile payments (20.8%) are larger than the proportions of those who are unmarried or widowed/separated.

The Importance of Mobile Payments Q64

1. Overall Analysis

In Taiwan, up to 76.2% of people aged 16 and over believe mobile payments are important (including very important and fairly important), while 23.2% of people believe mobile payments are not important (including least important and less important) (see Figure 32).



Base : N=358, single-choice (people who use mobile payment services)

Figure 32 The Importance of Mobile Payments

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether people believe mobile payments are important or not significantly varies by region.

The result of cross analysis finds that more people in all regions believe mobile payments are important, with the highest rate of 86.6% in Taipei City, New Taipei City and Keelung and the lowest rate of 64.6% in Yunlin, Chiayi and Tainan.

(2) Analysis of basic differences

When analyzed by gender, 76.9% of men and 75.5% of women believe mobile payments are important.

When analyzed by age, most people of all age groups believe mobile payments are important, with the highest rate 79% of people aged 26–35 and the lowest rate 71.8% of those aged 46–55.

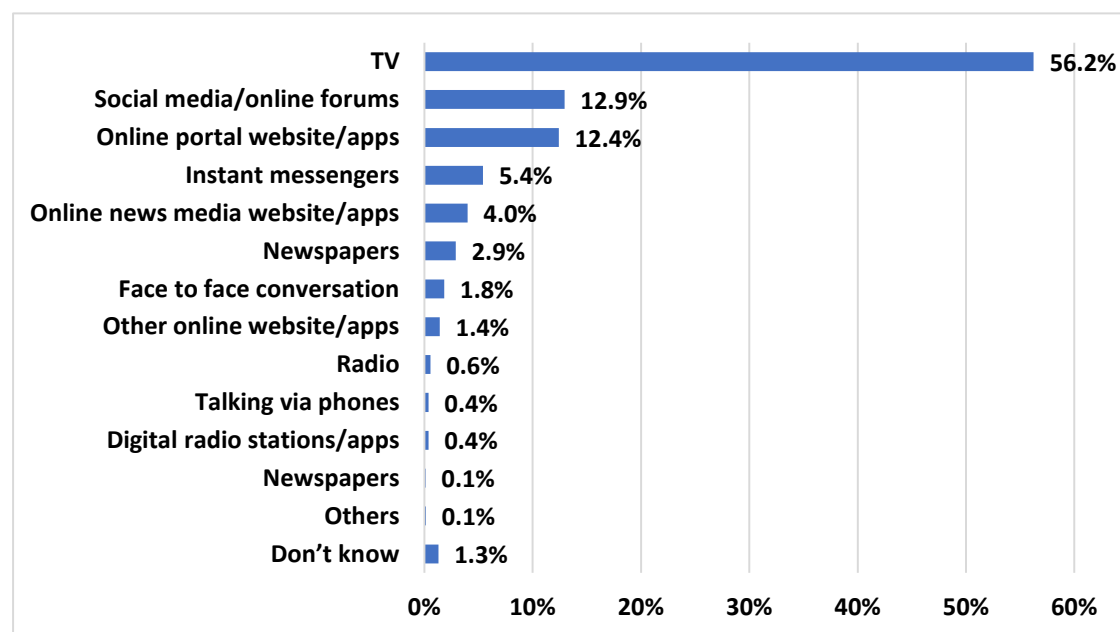
When analyzed by marital status, most people regardless of marital status believe mobile payments are important, with the highest rate 78.5% of unmarried people and the lowest rate 63.4% of widowed/separated people.

I. News

Ways of People Getting News Q66

1. Overall Analysis

In Taiwan, 56.2% of people aged 16 and over get news mainly by watching TV, followed by social media/online forums (12.9%) and web portals/apps (12.4%) (see Figure 33).



Base : N=1,050, single-choice (people who read news)

Figure 33 Ways of People Getting News

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that most people in all regions get news mainly by watching TV, with the highest rate 68.5% in Taipei City, New Taipei City and Keelung and the lowest rate 42.9% in Kaohsiung, Pingtung and Penghu. Among

secondary ways of getting news, except for people in Yunlin, Chiayi and Tainan (26.5%) getting news from social media/online forums, people in other regions get news mainly from web portals/apps.

(2) Analysis of basic differences

When analyzed by gender, both men (55.8%) and women (56.7%) get news mainly by watching TV.

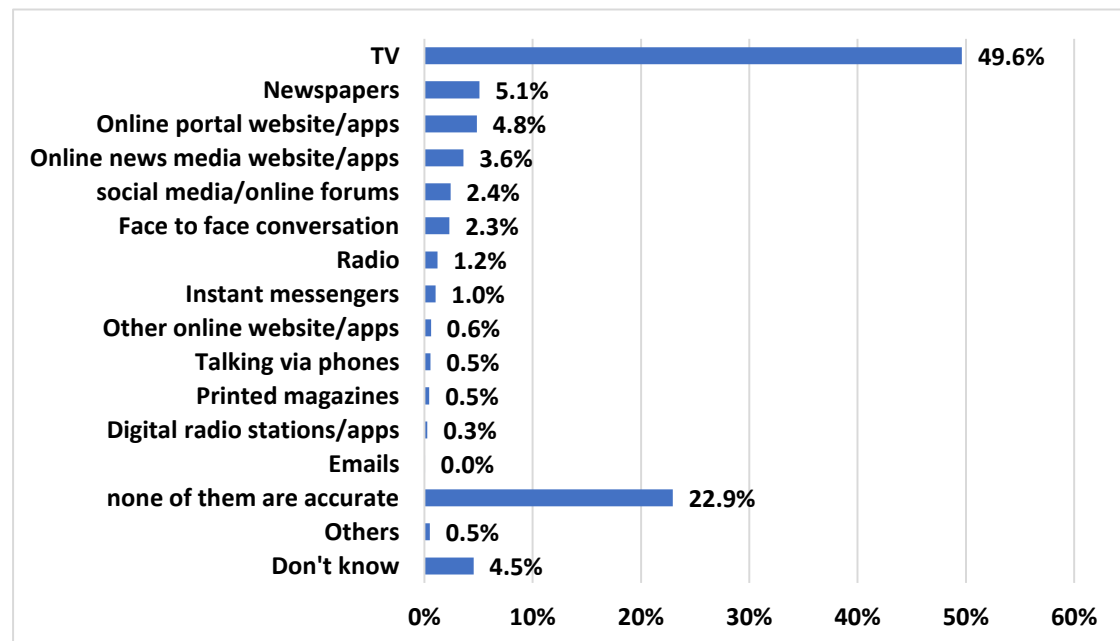
When analyzed by age, most people of all age groups get news by watching TV and the proportion of those watching TV to get news increases by age, with the highest rate 84.5% of those aged 66 and over and the lowest rate 33.9% of those aged 16–25.

When analyzed by marital status, most people regardless of marital status get news mainly by watching TV, with the highest rate 69.6% of those widowed/separated and the lowest rate 37% of those unmarried. In addition, the proportion of those unmarried (22.8%) who get news from social media/online forums is distinctively higher than those married (7%) or widowed/separated (7.4%)

The Accuracy of News Sources Q67

1. Overall Analysis

In Taiwan, 49.6% of people aged 16 and over believe they could get the most accurate news by watching news programs on TV. Among other news sources, each source has less than 10% of people who believe they could get the most accurate news from related sources. Besides, up to 22.9% of people believe there are no sources for them to get the accurate news (see Figure 34).



Base : N=1,103, single-choice

Figure 34 The Accuracy of News Sources

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that most people in all regions believe they can get the most accurate news by watching news programs on TV, with the highest rate 55.2% in Yilan, Hualien and Taitung and the lowest rate 46.7% in Taipei City, New Taipei City and Keelung.

(2) Analysis of basic differences

When analyzed by gender, near half of men (47.5%) and just over half of women (51.7%) believe they can get the most accurate news by watching news programs on TV, but more than 20% of men and women believe there are no sources for them to get accurate news.

When analyzed by age, most people of all age groups believe they can get the most accurate news by watching news programs on TV and the proportion of people believing news programs on TV to be the most accurate news source approximately increases by age, with the lowest rate 37.9% of those aged 16–25 and the highest rate of those aged 56–65.

When analyzed by marital status, most people regardless of marital status believe they can get the most accurate news by watching news programs on TV, with the highest rate 63.6% of those widowed/separated people and the lowest rate 39.7% of those unmarried.

Importance of Impartial Sources of News Q70-Q82

1. Overall Analysis

In Taiwan, 90.9% of people believe news programs on TV to be an important (including very important and fairly important) source of impartial news, while 6.9% of people believe news programs on TV to be unimportant (including least important and less important) source of impartial news. 88.3% believe printed newspapers to be an important source of impartial news, while 10% believe printed newspapers to be an unimportant source of impartial news. 88.4% of people believe the radio to be an important source of impartial news, while 10% believe the radio to be an unimportant source of impartial news. 84.3% believe printed magazines to be an important source of impartial news, while 13% believe printed magazines to be an unimportant news source of impartiality (see Table 11).

Table 11 Importance of Impartial Sources of News

News Sources	Importance of Impartiality of News Sources					
	Important			Unimportant		
	Very important	Fairly Important	Total	Less important	Least important	Total
TV	64.3%	26.6%	90.9%	6.0%	0.9%	6.9%
Printed newspaper	61.4%	26.9%	88.3%	8.6%	1.3%	10.0%
Radio	60.2%	28.2%	88.4%	7.3%	1.7%	8.9%
Printed magazines	57.4%	26.9%	84.3%	11.2%	1.8%	13.0%
Radio websites/Apps	56.1%	28.2%	84.2%	9.3%	2.0%	11.3%
Web portals/Apps	55.6%	27.5%	83.0%	9.2%	1.8%	11.1%
Websites/Apps operated by online news media	54.9%	28.0%	83.0%	9.9%	1.1%	11.1%
Social media/online forums	54.3%	26.0%	80.3%	10.5%	3.0%	13.5%
Other websites/Apps	50.7%	26.7%	77.4%	11.3%	3.3%	14.6%
Instant messengers	51.2%	29.8%	81.0%	12.0%	2.5%	14.5%
Face-to-face conversations	47.7%	33.4%	81.1%	14.0%	2.0%	16.0%
Telephone conversations	43.8%	31.7%	75.6%	16.4%	3.1%	19.4%
Emails	43.0%	27.2%	70.2%	16.5%	2.6%	19.0%

N=1,103, single-choice

Source: this research.

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether people believe TV, printed newspaper, radio, printed magazines, radio websites/apps, web portals/apps, websites/apps operated by online news media, social media/online forums, other websites/apps, instant messengers, face-to-face conversations, telephone conversations and emails to be an important source of impartial news significantly varies by region.

The result of cross analysis finds that most people in all regions believe the TV to be an important source of impartial news, with the highest rate 96.8% in Kaohsiung, Pingtung and Penghu and the lowest rate 86.4% in Taipei City, New Taipei City and Keelung. Most people in all regions believe printed newspapers to be an important source of impartial news, with the highest rate 97.4% in Kaohsiung, Pingtung and Penghu and the lowest rate 78.8% in Taipei City, New Taipei City and Keelung. Most people in all regions believe the radio to be an important source of impartial news, with the highest rate 94.5% in Yilan, Hualien and Taitung and the lowest rate 81.7% in Taipei City, New Taipei City and Keelung. Most people in all regions believe printed magazines to be an important impartial news source, with the highest rate 92.7% in Kaohsiung, Pingtung and Penghu and the lowest rate 75.2% in Taipei City, New Taipei City and Keelung. Most people in all regions believe face-to-face conversations to be an important impartial news source, with the highest rate 86.9% in Yunlin, Chiayi and Tainan and the lowest rate 75.9% in Taipei City, New Taipei City and Keelung. Most people in all regions believe instant messengers to be an important news source of

impartiality, with the highest rate 89.1% in Yunlin, Chiayi and Tainan and the lowest rate 76.5% in Taipei City, New Taipei City and Keelung.

Concerning other news sources, less than 75% of people in Taipei City, New Taipei City and Keelung believe radio websites/apps, social media/online forums, other websites/apps, telephone conversations and emails to be important sources of impartial news, with the lowest rate 62% for emails. Further, the proportions of people in Taipei City, New Taipei City and Keelung believing that impartial news sources are unimportant are larger than those of people of other regions.

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether people believe printed newspaper, printed magazines, radio websites/apps, web portals/apps, websites/apps operated by online news media, social media/online forums, instant messengers and emails to be important impartial news sources significantly varies by age; whether people believe other websites/apps and telephone conversations to be important impartial news sources significantly varies by gender; whether people believe websites/apps operated by online news media and social media/online forums to be important impartial news sources significantly varies by marital status.

When analyzed by gender, the rates of women who believe TV (91.2%), face-to-face conversations (82.1%) and telephone conversations (77.6%) to be important sources of impartial news are higher than those of men; the rates of men who believe the radio (90.1%), printed newspapers (88.8%), printed magazines (85.4%), radio websites/apps (85.3%), web portals/apps (83.9%), websites/apps operated by online news media (83.2%), social media/online forums (82.3%), other websites/apps (78.3%), instant messengers (81.9%) and Emails (70.9%) to be the important news sources of impartiality are higher than those of women.

When analyzed by age, the rates of people aged 16–25 believing TV (93.6%), radio (91.2%), printed newspapers (92%), radio websites/apps (89.7%), web portals/apps (90.3%), other websites/apps (86.4%) and emails (79.9%) to be important sources of impartial news are higher than those of other age groups. In addition, the rates of those aged 56–65 (21.3%) as well as those aged 66 and over (23.9%) believing emails to be an unimportant source of impartial news are distinctively higher than those of other age groups.

When analyzed by marital status, the rates of those unmarried believing radio (88.9%), printed newspapers (89.2%), printed magazines (85.1%), radio websites/apps (88.4%), web portals/apps (88.7%), websites/apps operated by online news media (90.1%), social media/online forums (87.7%), other websites/apps (84.1%), instant messengers (85.3%) and emails (77.2%) to be important sources of impartial news are

higher than those married and widowed/separated.

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether people believe TV, radio, printed newspaper, printed magazines, radio websites/apps, web portals/apps, websites/apps operated by online news media, social media/online forums, other websites/apps, telephone conversations, instant messengers and Emails to be the important sources of impartial news significantly varies by level of education.

When analyzed by education level, the proportions of people believing that TV, printed magazines, radio websites/apps, web portals/apps, websites/apps operated by online news media and social media/online forums to be important impartial news sources approximately increases by education level. Up to 98.2% of people with a master's degree or higher believe news programs on TV to be an important source of impartial news. 42.5% of those with elementary school education or lower believe emails to be an important source of impartial news.

Impartiality of News Sources Q83-Q95

1. Overall analysis

In Taiwan, 63.9% of people aged 16 and over believe news programs on TV to be an impartial (excluding very impartial and fairly impartial) news source, while 34% of people believe news programs on TV not to be an impartial news source (including extremely not impartial and not too impartial). 63.9% of people believe printed newspaper to be an impartial news source, while 30.8% of people believe printed newspapers not to be an impartial news source. 61.9% of people believe radio to be an impartial news source, while 27.2% of people believe radio not to be an impartial news source. 58.8% of people believe radio websites/apps to be an impartial news source, while 29.6% of people believe radio websites/apps not to be an impartial news source (see Table 12).

Table 12 Impartiality of News Sources

News Sources	Impartiality of News Sources					
	Impartial			Not impartial		
	Very impartial	Fairly impartial	Total	Not too impartial	Extremely not impartial	Total
Printed newspaper	15.0%	48.9%	63.9%	26.5%	4.3%	30.8%
Radios	14.7%	47.2%	61.9%	22.8%	4.4%	27.2%
TV	19.0%	44.9%	63.9%	29.5%	4.5%	34.0%
Radio websites/apps	11.8%	47.0%	58.8%	26.1%	3.4%	29.6%
Web portals/apps	11.6%	44.5%	56.1%	29.9%	4.0%	34.0%
Printed magazines	13.5%	45.1%	58.7%	30.9%	5.0%	35.8%
Face-to-face conversations	11.2%	46.2%	57.4%	32.6%	5.2%	37.8%
Other websites/apps online	9.9%	37.7%	47.6%	32.1%	5.9%	38.0%
Websites/apps operated by online news media	11.1%	43.2%	54.3%	31.1%	4.8%	35.9%
Instant messengers	11.3%	42.9%	54.2%	31.2%	5.3%	36.5%
Social media/online forums	11.1%	39.9%	51.0%	32.8%	6.8%	39.6%
Telephone conversations	9.3%	43.7%	53.0%	33.7%	5.2%	38.9%
Emails	9.7%	37.7%	47.5%	27.4%	3.9%	31.3%

N=1,103, single-choice

Source: this research.

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether people believe TV, radio, printed newspaper, printed magazines, radio websites/apps, web portals/apps, websites/apps operated by online news media, social media/online forums, other websites/apps, instant messengers, face-to-face conversations, telephone conversations and emails to be impartial news sources significantly varies by region.

The result of cross analysis finds that 40-80% of people in each region believe radio to be an impartial news source. More people in Yilan, Hualien and Taitung believe TV (57.2%), printed newspaper (50.1%), printed magazines (49%), radio websites/apps (58.2%), web portals/apps (60%), other websites/apps (66.1%), websites/apps operated by online news media (63.5%), social media/online forums (65.2%), face-to-face conversations (53.2%), telephone conversations (60%), instant messengers (56.7%) and emails (57.5%) not to be impartial news sources.

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether people believe social media/online forums, other websites/apps, face-to-face conversations and instant messengers to be impartial news sources significantly varies by gender; whether people believe web portals/apps, websites/apps operated by online news media, other websites/apps, telephone conversations and emails to be impartial news sources significantly varies by age; whether people believe printed magazines, radio

websites/apps and websites/apps operated by online news media to be impartial news sources significantly varies by marriage.

When analyzed by gender, both men and women believe TV, radio, printed newspaper, printed magazines, radio websites/apps, web portals/apps, websites/apps operated by online news media, social media/online forums, other websites/apps, face-to-face conversations, telephone conversations, instant messengers and emails to be impartial news sources.

When analyzed by age, 40-70% of people of all age groups believe TV, radio, printed newspaper, printed magazines, radio websites/apps, face-to-face conversations, telephone conversations and instant messengers to be impartial news sources. More people aged 56–65 believe web portals/apps, websites/apps operated by online news media, social media/online forums, other websites/apps and emails not to be impartial news sources.

When analyzed by marital status, most people regardless of marital status believe TV, radio, printed newspaper, radio websites/Apps, face-to-face conversations and telephone conversations to be impartial news sources. Those widowed/separated have the largest percentages who believe that printed magazines (49.7%), web portals/apps (38%), websites/apps operated by online news media (38.1%), social media/online forums (39.7%), other websites/apps (41.5%), instant messengers (47.5%) and emails (34.7%) not to be impartial news sources.

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether people believe printed magazines, radio websites/apps and web portals/apps to be impartial news sources significantly varies by profession; whether people believe face-to-face conversations and telephone conversations to be impartial news sources significantly varies by education level; whether people believe instant messengers to be an impartial news source significantly varies by individual average monthly income.

When analyzed by education level, most of those with elementary school education or lower believe face-to-face conversations and telephone conversations to be impartial news sources, while those with a master's degree or higher have the smallest percentage who believe face-to-face conversations and telephone conversations to be impartial news sources.

When analyzed by profession, most jobseekers believe printed magazines (55.1%) and web portals/apps (54.4%) not to be impartial news sources. Most people in the real estate (52.5%) believe radio not to be an impartial news source.

When analyzed by individual average monthly income, most of those earning NT\$60,000 or more (64.4%) believe instant messengers to be an impartial news source, while those earning NT\$1-9,999 (40.7%) have the smallest percentage who believe

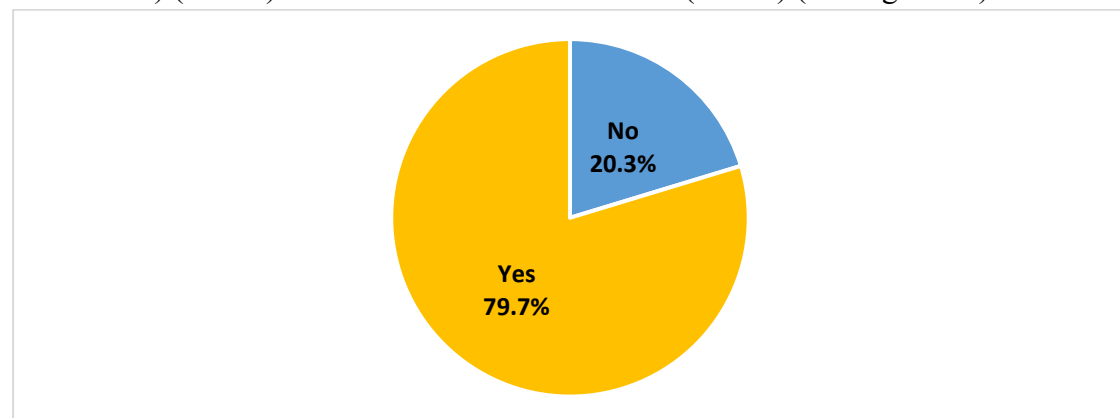
instant messengers to be an impartial news source.

J. Perception toward Content of Videos on the Internet and Online Games

State of Viewing Videos on the Internet Q96 Q97 Q98

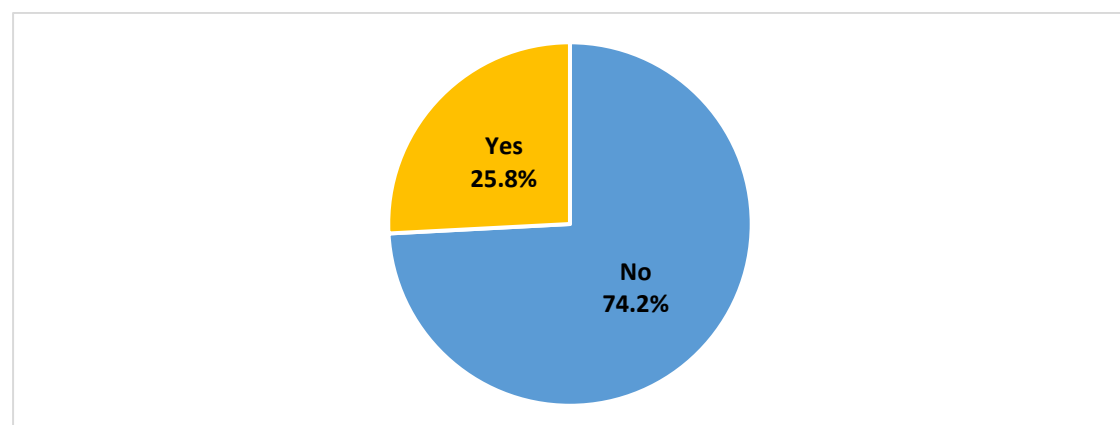
1. Overall Analysis

In Taiwan, 79.7% of people aged 16 and over have viewed videos on the Internet, while 20.3% have not (see Figure 35). 74.2% have not viewed improper content in recently viewed videos on the Internet, while 25.8% have (see Figure 36). Among those having viewed improper content, 60.3% of people who have watched video clips on YouTube or Facebook (less than 10 minutes) constitute the largest proportion of viewers viewing improper content, followed by videos on YouTube or Facebook (longer than 10 minutes) (35.9%) and on TV station live streams (33.3%) (see Figure 37).



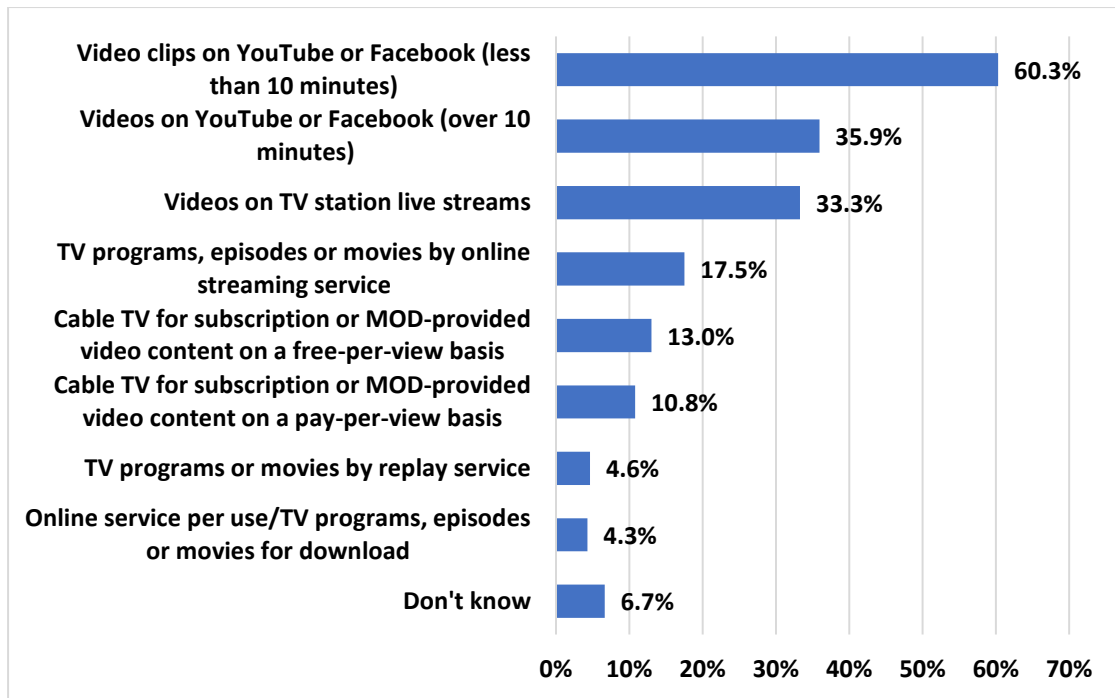
Base: N = 1,103, single-choice

Figure 35 Whether an Interviewee Has Watched Videos on the Internet or Not



Base: N = 879, single-choice (people who have viewed video content on the Internet)

Figure 36 Whether Improper Content Contained in Videos on the Internet Has Been Viewed by Interviewees Recently



Base: N = 227, multiple-choice (people who have viewed improper content contained in the videos on the Internet lately)

Figure 37 Ways an Interviewee Have Viewed Improper Content Contained in Videos on the Internet

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicates that whether people have viewed videos on the Internet and whether improper content in videos on the Internet had been viewed lately by viewers significantly varies by region.

The cross analysis suggests that most people in all regions have watched videos on the Internet, with the highest rate 90.5% in Yunlin, Chiayi and Tainan and the lowest rate 64.9% in Taipei City, New Taipei City and Keelung. Most people in all regions have not viewed improper content lately in videos on the Internet; among those having viewed improper content, people in Yilan, Hualien and Taitung (39.9%) constitute the largest portion while those in Taichung, Changhua and Nantou (20.8%) the smallest portion. Concerning ways of having viewed improper content among videos on the Internet, people in Taipei City, New Taipei City and Keelung (44.5%) as well as Yilan, Hualien and Taitung (54.5%) have viewed improper content, mainly from video clips on YouTube or Facebook (less than 10 minutes), with the highest rate 78.4% in Kaohsiung, Pingtung and Penghu as well as the lowest rate of 55.2% in Yunlin, Chiayi and Tainan.

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether people have viewed videos on the Internet significantly varies by gender, age and marital status.

When analyzed by gender, concerning ways that inappropriate content is viewed, both most of men (61%) and women (59.7%) had mainly viewed inappropriate content in videos clips on Facebook and YouTube (less than 10 minutes).

When analyzed by age, except for most people aged 66 and over (58.2%) who have not viewed video content on the Internet, most people of other age groups have viewed video content on the Internet and the proportion of people who have viewed online video content decreases by age group, with the highest rate 96.8% of those aged 16–25 and the lowest rate 68.5% of those aged 56–65. In addition, most viewers of every age group have not viewed improper content among videos being recently viewed on the Internet. Among those who have viewed improper content on the Internet, those aged 36–45 (30.3%) constitute the largest proportion and those who aged 66 and over (18%) the smallest; concerning ways of having viewed improper content among videos on the Internet, video clips on YouTube or Facebook (less than 10 minutes) constitute the largest proportion for viewers to have viewed improper video content on the Internet, with the highest rate 68.1% of those aged 56–65 and the lowest rate 53.4% of those aged 46–55.

When analyzed by marital status, most viewers regardless of marital status have viewed online video content, with the highest rate 95.7% of unmarried people and the lowest rate 61.3% of those widowed/separated. Most viewers regardless of marital status have not viewed improper video content lately on the Internet; among those having viewed improper online video content, widowed/separated people make up the largest portion and those unmarried the smallest. concerning ways of having viewed improper content among videos on the Internet, video clips on YouTube or Facebook (less than 10 minutes) constitute the largest proportion for viewers to have viewed improper video content on the Internet, with the highest rate 66.9% of widowed/separated people and the lowest rate 54.2% of those married.

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether people have viewed videos on the Internet significantly varies by housing tenure, education level, profession and average individual monthly income; whether a viewer have viewed improper video content on the Internet lately significantly varies by education level and profession.

When analyzed by housing tenure, most home owners (77.9%) and house renters (85.6%) have viewed videos on the Internet; however, more home owners (22.1%) than house renters (14.4%) have not viewed videos on the Internet.

When analyzed by education level, except for more people of the group of elementary school education or lower (67.4%) and the high school and secondary school group (51.4%) who have not viewed video content on the Internet, most people of other education level have viewed online video content and the proportion of people

who have viewed online video content increases by education level, with the highest rate of people with a master's degree or higher (98.4%) and the lowest rate of the senior high and vocational school group (83%). In addition, people of every education level have not viewed improper content from online videos being viewed lately; however, among those who have viewed improper content, the senior high and vocational school group (30.9%) makes up the largest proportion and the high school and secondary school group (8%) the smallest.

When analyzed by profession, except for more of the retired (55.9%) who have not viewed online video content, more people of other professions have viewed online video content, with more than 90% of people in the manufacturing industry (93.6%), people in the support service industries (91.4%), people in the education industry (97.1%), people in the public administration and national defense industries (96.5%), people in the health care and social work services industries (

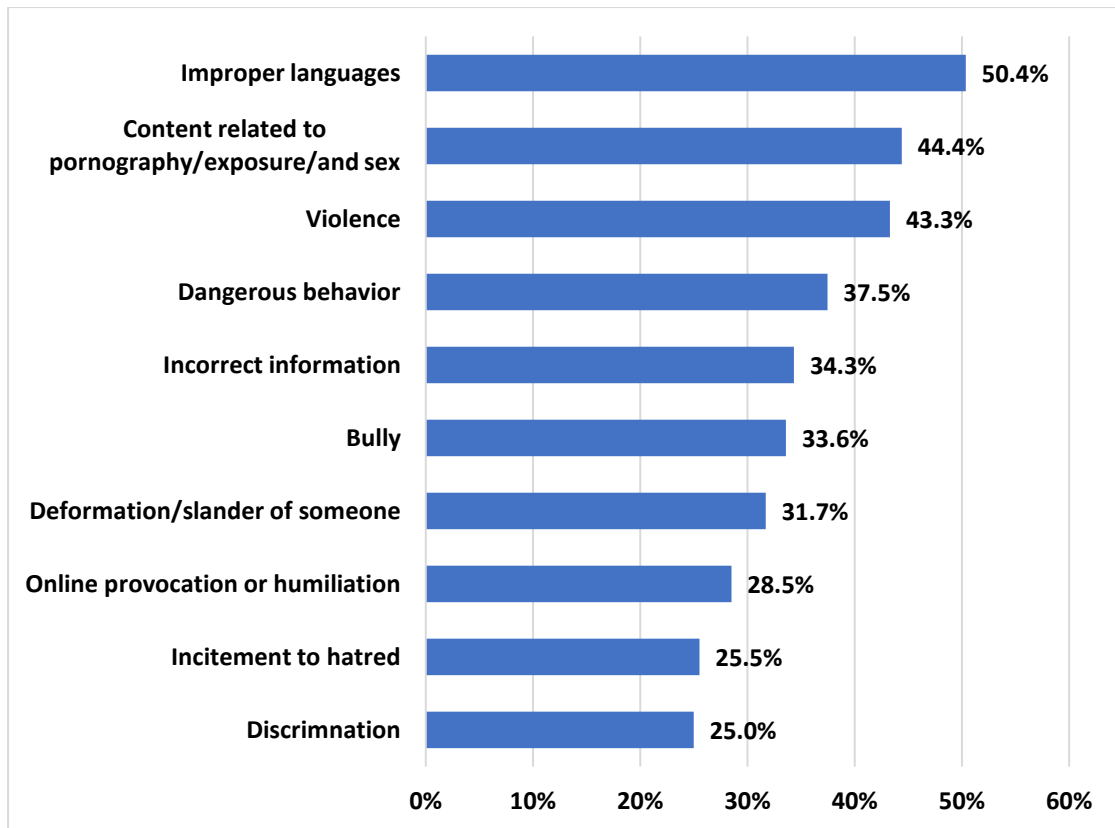
93.9%) people in the art, entertainment and recreation services industries (96.6%), students (96.9%) and jobseekers (92.4%). Concerning whether a viewer have viewed improper content from online video content, except for more people in the agriculture, forestry, fishery and husbandry industries (63.5%) who have viewed improper content from videos on the Internet, most people of other professions have not.

When analyzed by average individual monthly income, most people of each income group have viewed online video content, with the highest rate 88% of the NT\$60,000 and more group and the lowest rate 62.2% of NT\$10,000-NT\$19,999 group.

Improper Content in Internet Videos Q99

1. Overall Analysis

In Taiwan, among those who have viewed improper content in videos on the Internet, 50.4% of people aged 16 and over have mainly viewed improper content with improper language, followed by content related to pornography/nudity/sex (44.4%) and violence (43.3%) (see Figure 38)



Base: N = 227, multiple-choice (people who have viewed improper content contained in the videos on the Internet lately)

Figure 38 Types of Improper Content Being Viewed by Interviewees Who Have Viewed Videos on the Internet (Top 10)

2. Comparative Analysis

(1) Analysis of regional differences

The result of cross analysis finds that, among those who have viewed improper content contained in videos on the Internet, 65.7% of people in Yunlin, Chiayi and Tainan, 51.3% of people in Kaohsiung, Pingtung and Penghu as well as people in Yilan, Hualien and Taitung (75.8%) have mainly viewed improper content with improper language; people in Taoyuan, Hsinchu and Miaoli (40.1%), as well as people in Taichung, Changhua and Nantou (60.1%), have viewed mainly content related to pornography/nudity/sex; people in Taipei City, New Taipei City and Keelung (45.6%) have mainly viewed improper content with violence.

(2) Analysis of basic differences

When analyzed by gender, both men (45.7%) and women (54.1%) have mainly viewed improper video content with improper language. On the other hand, the rate of men (37.8%) having viewed improper video content with bullying is distinctively higher than that of women (30.2%).

When analyzed by age, those having viewed improper video content differs by age group. People aged 36–45 (47.4%) have viewed mainly improper video content related

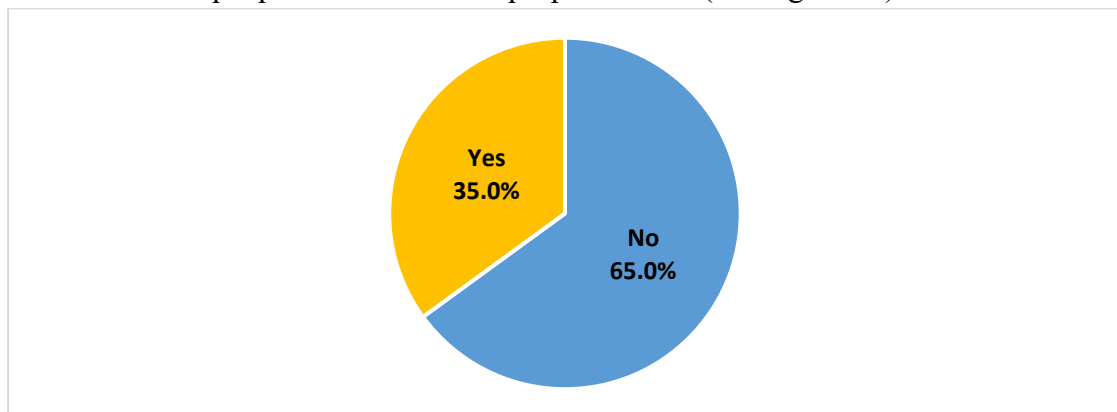
to violence; people aged 26–35 (41.9%) as well as 66 and over (64.1%) have viewed improper video content related to pornography/nude/sex; people aged 16–25 (52.1%), 46–55 (63.1%) and 56–65 (65.5%) have viewed improper video content with improper language.

When analyzed by marital status, unmarried (47.2%) and married people (55.7%) have viewed mainly improper video content with improper language, while those widowed/separated (46%) have viewed improper video content related to deformation/slander.

Experience and Perception toward Online Games Q101 Q102

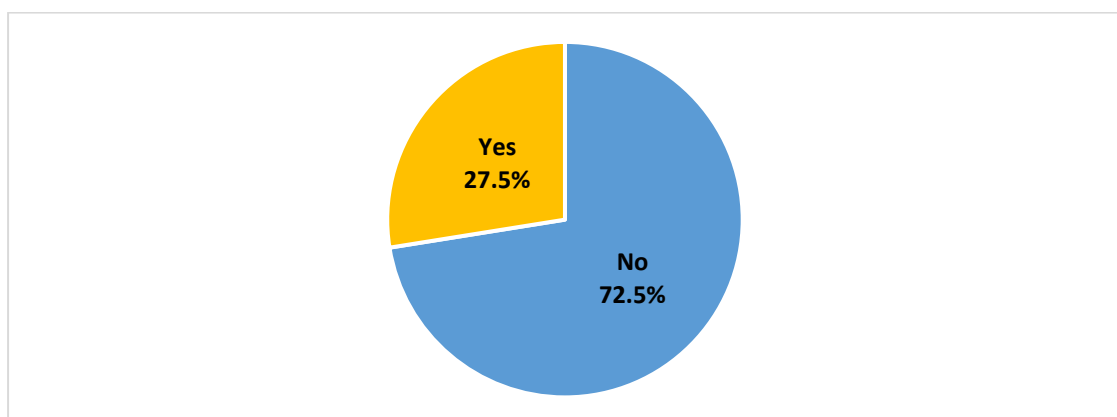
1. Overall Analysis

In Taiwan, 35% of people aged 16 and over frequently play online games (for example, using the desktops/Mac/notebooks, game consoles connected to a TV set, tablet, smart phone, etc.), while 65% of people do not frequently play online games (see Figure 39). When playing games, 72.5% of people have not viewed improper content, while 27.5% of people have viewed improper content (see Figure 40).



Base: N = 1,103, single-choice

Figure 39 Whether an Interviewee Frequently Play Online Games or Not



Base: N = 386, single-choice (people who frequently play online games)

Figure 40 Whether an Interviewee Have Viewed Improper Content When Playing Online Games

2. Comparative Analysis

(1) Analysis of regional differences

The result of Chi-square tests indicate that whether people play online games or not varies significantly by region.

The result of cross analysis shows that most of people in all regions do not frequently play online games; among those who frequently play online games, people in Yilan, Hualien and Taitung (46.2%) constitute the largest proportion while those in Taipei City, New Taipei City and Keelung (25.4%) the smallest. When playing online games, people in all regions have not viewed improper content; among those who have viewed improper content, people in Taipei City, New Taipei City and Keelung (40.6%) make up the largest proportion and people in Taichung, Changhua and Nantou (19%) the smallest.

(2) Analysis of basic differences

The result of Chi-square tests indicates that whether people play online games significantly varies by gender, age and marital status.

When analyzed by gender, most men (59.7%) and women (70.1%) do not frequently play online games; when playing online games, most men (75.1%) and women (69%) have not viewed improper content.

When analyzed by age, except for those aged 16–25 (67.9%) and 26–35 (57%) who frequently play online games, most people of other age groups do not frequently play online games, with the highest rate 93.6% of those aged 66 and over and the lowest rate 57.7% of those aged 36–45, and the proportion of people playing online games decreases by age. When playing online games, most people of all age groups have not viewed improper content, but the rate of those aged 66 and over who have viewed improper content is distinctively higher than the rates of people of other age groups. –

When analyzed by marital status, except for most of those unmarried (58.6%) who frequently play online games, most married (78.1%) and widowed/separated people (81.1%) do not frequently play online games. When playing online games, most people regardless of marital status have not viewed improper video content; among those who have viewed improper content, those (32%) make up the largest proportion while those widowed/separated the smallest (17.8%).

(3) Analysis of differences in social and economic status

The result of Chi-square tests indicates that whether people frequently play online games varies significantly by housing tenure, education level, profession and individual average monthly income.

When analyzed by housing tenure, more house renters (68.5%) and home owners (53.4%) do not frequently play online games, but more house renters (46.6%) than home owners (31.5%) frequently play online games

When analyzed by education level, most people of all education level do not frequently play online games. Among those who frequently play online games, people with a bachelor's degree (47%) make up the largest proportion while those with elementary school education or lower the smallest (4.7%).

When analyzed by profession, except for people in publishing, audio-video production, mass communication, information and communications (72.6%), those working in professional, scientific and technology services (55.8%), students (70.9%) and jobseekers (51.9%) frequently play online games, most people in other industries do not frequently play online games.

When analyzed by individual average monthly income, except for most people of no income (54.3%) frequently playing online games, most people of other income groups do not play online games, with the highest rate 74.7% of those earning NT\$10,000-NT\$19,999 group and the lowest rate 60.8% of those earning NT\$50,000-59,999.