

**For discussion
on 13 January 2003**

**Legislative Council Panel on
Information Technology and Broadcasting**

**2002 Surveys on IT Usage and Penetration
in the Household and Business Sectors**

Purpose

This paper briefs Members on the results of the two surveys on IT usage and penetration in the household and business sectors in Hong Kong respectively conducted during April to July 2002. This is the third round that the two annual surveys were conducted. This paper presents the major survey results.

Background and Survey Results

2. The Government has committed to conduct annual surveys to assess the usage and penetration of IT in the community and business sector. The statistics collected will serve as useful reference in the formulation of strategy and initiatives in promoting IT development and adoption in Hong Kong.

3. In early 2002, the Census and Statistics Department conducted two surveys on IT usage and penetration in the household and business sectors in Hong Kong respectively. Fieldwork of the surveys was conducted during April to July 2002. Results of the two surveys were released in December 2002. Background information about the conduct of the two surveys is provided in **Annex A**. The detailed statistical results of the surveys are set out in **Annexes B** and **C**.

Household Survey

4. As revealed in the 2002 Household Survey, installation of *personal computers* (PC) and *Internet connection* continued to become increasingly common among households. Some 1 322 000 households, or 62.1% of all households in Hong Kong, had installed PC at home in 2002. Among those households with PC installed at home, some 1 118 100 (84.6%) had their PC

connected to the Internet, representing 52.5% of all households in Hong Kong. This represents an increase compared to the situation in 2000 and 2001 when 49.7% and 60.6% respectively of all households in Hong Kong had PC installed at home, and 36.4% and 48.7% respectively of all households had PC at home connected to the Internet.

5. As for household broadband penetration, this has significantly increased from 19.2% of all households in Hong Kong in 2001 to 35.8% in 2002.

6. With the increased penetration of PC and Internet amongst households, more persons aged 10 and over had *used PC and Internet service*. Some 3 270 300 persons aged 10 and over, or 54.0% of all persons in that age group, had used PC in the 12 months before the survey in 2002. The corresponding figures were 3 020 000 persons and 50.3% in 2001. The 2002 survey also revealed that the rates of having used PC were higher among younger persons, persons with higher education and students. PC was used mainly for Internet service, word processing, offline digital entertainment, graphics/image processing, data processing/analysis/database management, etc.

7. In 2002, 2 918 800 persons aged 10 and over, or 48.2% of all persons in that age group, had used *Internet service* in the 12 months before the survey via various media including PC, television, WAP phones and personal digital assistants (PDA). The corresponding figures were 2 601 300 persons and 43.3% in 2001. Internet was mainly used for communication with others, browsing/surfing web pages, searching for/downloading information online, reading magazine/newspaper online, online digital entertainment, etc.

8. Utilisation of *electronic business services* is high in Hong Kong. About 92.6% of all persons aged 15 and over had used electronic business services of one form or another for personal matters in the 12 months before the survey, as against 88.5% recorded in 2001. The electronic business services covered in the Household Survey included the use of Octopus card, Automatic Teller Machine (ATM), e-cash, Easy Pay System (EPS), Payment by Phone Service (PPS), online searching for financial information/information on goods and services/job vacancies, etc.

9. Regarding the usage of *online purchasing services*, 274 500 persons aged 15 and over, or 4.9% of all persons in that age group, had used one or more types of online purchasing services for personal matters in the 12 months before the survey. The corresponding figures were 313 300 persons and 5.6% in 2001.

10. In respect of *online Government services*, 1 015 100 persons aged 15 and over, or 18.1% of all persons in that age group, had used one or more types of online Government services for personal matters in the 12 months before the survey. Among them, some 25.9% had used the Electronic Service Delivery (ESD) scheme web site and 89.4% had used other Government web sites. Online services mostly used were enquiry services, job seeking and recruitment, financial management, booking of Government venues, etc. For persons aged 15 and over who were aware of ESD, the percentage had increased from 28.7% in 2000 and 32.4% in 2001 to 39.7% in 2002.

11. We will further strengthen our efforts to promote the adoption of IT in the community through our programme to bridge digital divide and to build a digitally inclusive society, e.g. continue to organise the IT Hong Kong Campaign.

12. The scope of the Household Survey was also expanded this time to collect data on the usage of digital certificate and IT security. The survey results showed that 3.3% of the persons aged 15 and over having knowledge of using PC had digital certificates at the time of enumeration. The survey results also showed that, of the households with PC installed at home, 66.3% had installed anti-virus software, 26.5% had set password for access to the PC, while 18.2% responded that their PC at home had been infected by virus in the 12 months before enumeration. Of all persons aged 10 and over, 84.5% and 78.1% had heard of computer virus and hacking respectively. Of the persons aged 10 and over who had used PC in the 12 months before enumeration, 22.1% had set password for access to their computer files related to personal matters and 6.1% had encrypted their computer files related to personal matters.

13. We expect that the number of users of digital certificates will increase from 2003 onwards when we roll out the smart identity card scheme, with the option to install a digital certificate for one-year free trial. As for information security, we will strengthen our publicity and public education work so that the public will pay more attention to the matter.

Establishment Survey

14. According to the Establishment Survey, the percentages of establishments *using personal computers* (PCs) and *having Internet connection* were 54.5% and 44.2% respectively in 2002. The corresponding percentages were 49.7% and 37.2% respectively in 2001. A considerable increase was thus registered in 2002, notwithstanding the slowdown in the local economy. In 2002, the percentage of establishments with Internet connection which had used broadband technology was 50.9%.

15. Analysed by size of the establishments, 94.6% of large establishments, 76.6% of medium establishments and 50.7% of small establishments were using PCs. The corresponding figures for 2001 were 93.4%, 79.2% and 45.7% respectively. As regards Internet usage, 82.6% of large establishments, 66.1% of medium establishments and 40.5% of small establishments had Internet connection. The corresponding figures were 86.0%, 64.2% and 33.3% in 2001. So the percentage of small establishments which had installed PCs and Internet connection had increased.

16. Among the *major sectors*, PCs were most popularly used in the financing, insurance, real estate and business services sector (77.7%) and the wholesale, retail and import/export trades, restaurants and hotels sector (58.1%). The percentage of establishments with Internet connection was also highest in these two sectors, at 66.1% and 45.9% respectively.

17. About 11.8% of the establishments had a *Web page or Web site*, as compared to 10.7% in 2001. The percentage was higher for large establishments (61.0%) as compared with medium establishments (31.6%) and small establishments (8.1%). All of the establishments having Web pages/Web sites provided information about the establishments as well as their products and services offered in their Web pages/Web sites. Only 10.1% of the establishments having Web pages/Web sites used them to serve as the channel for online ordering of products and services.

18. In the 12 months before enumeration, 7.1% of the establishments had *ordered or purchased goods, services or information through electronic means*, representing a slight increase of around 1 percentage point over 6.2% in 2001. Electronic means included interactive response system through telephone lines, designated private network, and the Internet.

19. About 45.2% of the establishments had *received goods, services or information through electronic means*. The corresponding figure was 40.0% in 2001. In the Establishment Survey, goods received through electronic means referred to those products that could be transmitted through electronic media, such as software packages and songs. Browsing information on the Internet was also regarded as receiving information through electronic means.

20. The percentage of establishments having *sold goods, services or information through electronic means* was 1.5%. The corresponding figure was 1.1% in 2001. In the survey, an establishment was regarded to have sold its goods, services or information through electronic means if it offered them and accepted orders or purchases that were placed completely through electronic means.

21. About 12.1% of the establishments had *delivered their goods, services or information through electronic means*. The figure was about the same in 2001.

22. The total amount of *business receipts received from selling goods, services or information through electronic means* in 2001 was \$22.1 billion, or 0.43% of the total business receipts of establishments in all selected sectors, as against 0.17% (\$7.6 billion) in 2000. Of the total amount received from selling goods, services or information through electronic means, the percentage share in respect of *selling through the Internet* increased from 39.7% in 2000 to 74.4% in 2001.

23. The scope of the Establishment Survey was also expanded to collect data on *digital certificate* and *IT security*. The survey revealed that 1.9% of the establishments had obtained digital certificates. In the 12 months before enumeration, 35.0% of establishments had suffered from computer attacks. Analysed by type of computer attacks, 97.9% of those establishments had suffered from virus attacks. After the attacks, 91.2% of the establishments attacked took various types of actions, e.g. applied patches, used more security technologies, and reported to senior management, the Hong Kong Computer Emergency Response Team Coordination Centre and Police, etc. Among establishments with PCs, 80.5% of them had adopted security technologies to protect their computer systems and information. Anti-virus software ranked top on the list of security technologies adopted, cited by 95.0% of establishments which had adopted security technologies.

24. We will carry out more promotion work to enhance the adoption of IT in the business sector and to strengthen the knowledge of the sector on information security.

Comparison With Other Economies

25. Comparisons of IT adoption in Hong Kong with other economies are set out in **Annex D** for Members' reference. As other economies may not carry out IT surveys as frequently as Hong Kong, we have used the most up-to-date statistics (mostly pre-2002 figures) of these economies available for comparison. The statistics obtained from different sources generally show that Hong Kong compares well in IT adoption with other advanced economies, and reflect our development to grow as a leading digital city in the world.

**Information Technology and Broadcasting Branch
Commerce, Industry and Technology Bureau
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**Background Information
on the Household and Establishment IT Surveys**

The Household Survey was based on a scientific sample of some 10 000 households that represents the population of Hong Kong. Some 26 600 persons aged 10 and over in those households were interviewed.

2. The Establishment Survey was based on a sample of 4 635 establishments covering all industry sectors except the agriculture and fishing sector and the mining and quarrying sector. Specifically, the following industry sectors were covered: manufacturing; electricity and gas; construction; wholesale, retail and import/export trades, restaurants and hotels; transport, storage and communications; financing, insurance, real estate and business services; and community, social and personal services.

3. The establishments were classified according to employment size as at end-March 2002 as large, medium and small establishments. Large establishments referred to establishments with 100 or more persons engaged for the manufacturing sector, and 50 or more persons engaged for other industry sectors. Small establishments referred to those with less than 10 persons engaged regardless of sector. The others were regarded as medium establishments.

4. As the results of the surveys are subject to both sampling and non-sampling errors, care should be taken in comparing the 2001 and the 2002 figures, as a minor difference might not be statistically significant.

5. More detailed results of the Household Survey and the Establishment Survey are set out in the “Thematic Household Survey Report No. 10: Information Technology Usage and Penetration” and the “Report on 2002 Annual Survey on Information Technology Usage and Penetration in the Business Sector” respectively. The reports are in bilingual form and have already been put on sale. Copies have been sent to Members of the Legislative Council Panel on Information Technology and Broadcasting.

Annex B

Summary of Survey Results

Household Survey on Information Technology Usage and Penetration

<u>Data Item</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Information technology penetration amongst households			
◆ Percentage of households with personal computer (PC) at home among all households in Hong Kong	49.7%	60.6%	62.1%
◆ Percentage of households with PC at home connected to Internet among all households with PC at home in Hong Kong	73.3%	80.4%	84.6%
◆ Percentage of households with PC at home connected to Internet among all households in Hong Kong	36.4%	48.7%	52.5%
Information technology usage amongst household members			
◆ Percentage of persons aged 10 and over who had used PC in the twelve months before the survey among all persons aged 10 and over	43.1%	50.3%	54.0%
◆ Percentage of persons aged 10 and over who had used Internet service in the twelve months before the survey among all persons aged 10 and over	30.3%	43.3%	48.2%
Usage of electronic business services			
◆ Percentage of persons aged 15 and over who had used one or more types of electronic business services for personal matters in the twelve months before the survey among all persons aged 15 and over	84.9%	88.5%	92.6%
Usage of online purchasing services			
◆ Percentage of persons aged 15 and over who had used one or more types of online purchasing services for personal matters in the twelve months before the survey among all persons aged 15 and over	Not available	5.6%	4.9%
Online Government services			
◆ Percentage of persons aged 15 and over who were aware of the Electronic Service Delivery scheme	28.7%	32.4%	39.7%

Summary of Survey Results
Annual Survey on Information Technology
Usage and Penetration in the Business Sector

<u>Data Item</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
<i>(As a % of all establishments)</i>			
Personal Computer (PC) Usage			
Establishments using personal computer	51.5%	49.7%	54.5%
Internet Usage			
Establishments having Internet connection	37.3%	37.2%	44.2%
Web Site Usage			
Establishments having Web page/Web site	7.3%	10.7%	11.8%
Electronic Business			
Establishments having <i>ordered/purchased</i> goods, services or information through electronic means	4.9%	6.2%	7.1%
Establishments having <i>received</i> goods, services or information through electronic means	35.3%	40.0%	45.2%
Establishments having <i>sold</i> goods, services or information through electronic means	0.3%	1.1%	1.5%
Establishments having <i>delivered</i> goods, services or information through electronic means	8.1%	12.4%	12.1%
	<u>1999</u>	<u>2000</u>	<u>2001</u>
Business receipts from selling goods, services or information through electronic means	\$4.6 billion	\$7.6 billion	\$22.1 billion
Above business receipts as a % of total business receipts received	0.11%	0.17%	0.43%

Comparison of IT Adoption with Other Economies

A. Household PC and Internet Penetration

Economy	Period during which survey was conducted	Percentage of households with PC	Percentage of households with PC connected to the Internet
1. Hong Kong	Q2 2002	62%	53%
2. Singapore	2001	64%	57%
3. Republic of Korea	Mar 2002	60%	51%
4. Japan	2001	58%	35%
5. USA	Sept 2001	57%	51%
6. Australia	Nov 2000	56%	37%

Source : from web sites of different governments

B. Establishment PC and Internet Penetration

	Economy	Survey reference period	Percentage of establishments with PC	Percentage of establishments with Internet connection	Percentage of establishments with web page/web site
1.	Hong Kong	Q2 2002	55%	44%	12%
				(for all establishments)	
			79%	68%	36%
				(for establishments engaging 10 or more persons)	
2.	Australia	2001	84%	69%	22%
				(for all establishments)	
3.	United Kingdom	2001	64%	50%	39%
				(for all establishments)	

Source : from web sites of different governments