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Latest Developments in IT&T Statistics

in
Hong Kong, China

Introduction

This report gives a brief account of the latest developments in information technology and telecommunications (IT&T) statistics in Hong Kong, China[1] covering classification of the IT&T Sector, Information Technology (IT) usage and penetration in business and household sectors, electronic commerce, IT manpower and digital divide.

Classification of IT&T Sector

2   The Hong Kong Standard Industrial Classification (HSIC) has been enhanced to provide a more refined industry classification for the Information Technology & Telecommunications (IT&T) Sector, which covers establishments engaged in the manufacturing, distribution, installation and maintenance of IT&T products and the provision of IT&T services. Since then, statistics on the performance of the IT&T Sector have been compiled, including number of establishments, persons engaged, vacancies, business receipts and valued added. These help to reflect the contribution of the IT&T Sector to the economy.

3.   The coverage of the IT&T Sector is drawn up with reference to that of the Information and Communication Technology (ICT) Sector promulgated by the Organization for Economic Co-operation and Development (OECD). However, a number of industries covered in the ICT Sector are not covered in the IT&T Sector as it is considered that they are not highly related to IT&T or such economic activities are insignificant in Hong Kong. On the other hand, there are some other industries covered in the IT&T Sector but not in the ICT Sector.   A list of the above industries is in **Annex 1**.

4.   Recently, there is deliberation at the international arena on delineating a Content Sector, defined as a group of industries that are primarily engaged in the publication and/or the electronic distribution of a content product.   On the other

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[1] The Government of the People's Republic of China resumed its exercise of sovereignty over Hong Kong on 1 July 1997. On this date, the Hong Kong Special Administrative Region (HKSAR) was formed under the "One Country, Two Systems" principle. As stipulated in the Basic Law of the HKSAR, Hong Kong would exercise a high degree of antonomy. It would maintain its way of living after the Handover and would preserve a full range of elements underpinning Hong Kong's achievements in terms of prosperity and stability. In respect of statistical work, the HKSAR maintains its separate statistical systems and continues to compile and disseminate statistical data about the HKSAR. The Census and Statistics Department is responsible to the Government of the HKSAR only and there is no administrative relationship between it and the corresponding departments in the mainland of China.

hand, the United Nations Statistics Division is taking into consideration the importance of ICT activities in the planned revision of the ISIC in 2007. The possibility of introducing an Information Sector/Information Economy Sector (comprising the ICT Sector and the Content Sector) is also being deliberated. Thus, the coverage of the IT&T Sector is reviewed regularly to take into account the latest development in international standard and local requirements in this area.

IT Usage and Penetration in Business Sector

5.　　The Census & Statistics Department (C&SD) conducts an Annual Survey on IT Usage and Penetration in the Business Sector. The data items covered in the survey follow closely that recommended in OECD's model questionnaire on ICT usage in business promulgated in April 2000. The 2002 round of the survey was conducted in mid-2002. About 4 600 establishments were enumerated.

6.　　The following data are covered in the questionnaire:
- PC usage
- Internet Usage
- Web site usage
- Electronic business/Electronic commerce (covering purchasing, receiving, selling and delivering goods, services and information through electronic means)
- Budget for IT
- IT security

7.　　The last topic was newly added in the 2002 survey to address the increasing concern on IT security. Specific questions asked include:
- Whether suffered from computer attack
- Types of computer attack suffered
- Actions taken after suffered from computer attack
- Security technologies adopted
- Methods of authenticating clients and providing secure access for clients in electronic transactions
- Methods of authenticating employees in internal communication systems

8.   Some key findings from the 2002 round survey in the business sector are:

- 54.4% of establishments used PCs
- 44.2% of establishments had Internet connection
- 11.8% of establishments had a Web page/ Web site

IT Usage and Penetration in Household Sector

9.   Similar to the business sector, an Annual Household Survey on Penetration and Usage of IT continued to be conducted by C&SD in mid-2002. About 10 000 households were enumerated within which all members aged 10 and above were interviewed. The survey collected data on the household members IT usage at home, at work, at school and at other locations.

10.   The following data are covered in the questionnaire:

- PC and Internet facilities in the household
- Usage of PC at different locations
- Usage of Internet at different locations
- Knowledge and usage of Chinese input methods
- Usage of electronic business services
- Usage of online government services
- Awareness of information security

11.   Compared with the previous round of the survey, a number of questions have been added in the 2002 survey. Three questions about security of PC in household have been added, viz. whether anti-virus software/password for access had been installed in the PC at home, whether the PC at home had been infected by computer virus and the number of such incidents. On personal usage of PC/Internet, cyber-café was added as an option for places of using PC/Internet, in addition to options like at home, place of work, place of study, etc. Questions on duration of using PC/connection to the Internet for entertainment purposes, including playing PC games, watching VCD/DVD, listening music/radio programmes and watching online video programmes, were also added. Finally, there is a new set of questions for collecting information on personal knowledge of computer/Internet security, types of security breach experienced and actions taken to prevent security breach.

12. Some key findings pertaining to the 2002 household survey are:
- 62.1% of households had PC at home
- 84.6% of households had PC at home connected to Internet among all households with PC at home
- 54.0% of persons aged 10 and over had used PC in the 12 months before the survey.

Electronic Commerce

13. The OECD has promulgated a narrow and broad definitions of e-commerce based on a transactional approach. The broad definition covers all electronic transactions conducted over computer-mediated networks while the narrow definition covers only electronic transactions conducted over the Internet.

14. Hong Kong basically adopts the broad definition of e-commerce. Data on e-commerce are mainly collected via the above-mentioned survey on IT usage and penetration in the business sector. However, instead of defining e-commerce in the survey, data on the following activities are collected:
- Order or purchase of goods, services or information through electronic means
- Receipt of goods, services or information through electronic means
- Sales of goods, services or information through electronic means
- Delivery of goods, services or information through electronic means

15. Besides the above survey, data on e-commerce sales continue to be collected in the Monthly Survey of Retail Sales. Moreover, data on purchases through the Internet have also been collected in the 1999/2000 Household Expenditure Survey.

16. Besides defining e-commerce, OECD has also defined a set of core e-commerce indicators for each of the business and household sectors. All these indicators are available in Hong Kong.

IT&T Infrastructural Support

17.	The development of IT&T towards the information era is underpinned by technical and commercial infrastructural support as well as IT manpower. Statistics on this aspect could help reflect the "readiness" of IT&T development. Statistics on the supply of telecommunications services are compiled regularly by the Office of Telecommunications Authority (OFTA) based on administrative returns from the telecommunications operators. Some indicators in this aspect are:

- As at August 2002, there were some 5.9 million mobile phone users out of a total population of 6.7 million. The penetration rate of mobile phone services was 87% (in terms of number of mobile phone subscribers per 100 population).
- As at August 2002, there were 254 Internet Service Providers operating in Hong Kong, with an estimated number of 1.6 million registered customer accounts with dial-up access and 0.9 million registered customer accounts with broadband access.
- Some 600 establishments and 38 600 staff (or 1.1% of the working population) were engaged in the telecommunications industry in 2001.

IT Manpower

18.	A Manpower Survey on the IT Sector continues to be conducted by C&SD on behalf of the Vocational Training Council on a bi-annual basis to collect data on the manpower demand and training situation of IT staff in various economic sectors and other relevant government bodies. The 2002 survey was conducted in early-2002.

19.	The survey covered 8 types of IT jobs, viz. IT management, application and system development, e-business/Internet services, technical support, hardware support, operation support services, IT research and product development, and IT education and training. Specifically, the following data items were collected:

- The manpower strength of IT employees in respect of a number of major IT posts under each of the 8 types of IT jobs in the survey period and the forecast strength for the coming 12 months.
- Sources of recruitment of IT employees recruited (i.e. fresh

graduates of a Hong Kong (HK) institution, fresh graduate of a non-HK institution, experienced person from HK, and experienced person outside HK).

- Recruitment difficulties encountered.
- The character and competency of the new recruited (fresh graduates of HK Institutions (Degree/Diploma) only).
- Preferred academic qualification[2], IT experience[3] and average annual remuneration package [4] of IT employees in respect of a number of major IT posts under each of the 8 types of IT jobs.
- Reasons of employees leaving a company (i.e. whether taking up an IT position in other company or a non-IT position, emigration and others including retirement, starting own non-IT business or further studies).
- Training policy.
- Trend of the weight of outsourcing and/or shifting of IT functions (within or outside HK).
- Trend for the deployment of e-Commerce/e-Business

20. Besides, C&SD also conducted an *ad hoc* Establishment Survey on Manpower Training and Job Skills Requirements in the third quarter of 2002 to collect data on the perceptions and expectations of employers on their manpower training and job skills requirements over the medium term. While the survey basically covered establishments in all economic sectors (except some industry sectors such as Agriculture and Fishing, Mining and Quarrying), the sample was specifically designed to support the compilation of relevant statistics pertaining to the IT&T Sector. A total of about 5 500 establishments were sampled. Results of the survey would be available shortly.

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[2] Degree/Postgraduate Diploma/Corporate Membership of Professional Body; Higher Diploma/Higher Certificate/ Post-secondary College Diploma; Diploma/Certificate; Secondary 7; Secondary 5; Below secondary 5

[3] 10 years or more; 6 years to less than 10 years; 3 years to less than 6 years; 1 year to less than 3 years; Less than 1 year; Nil

[4] HK$1,080,001 or more; HK$840,001–HK$1,080,000; HK$600,001–HK$840,000; HK$360,001–HK$600,000; HK$240,001–HK$360,000; HK$120,001–HK$240,000; HK$96,001–HK$120,000;HK$96,000 or below

21.   Among others, the following data items were covered in the questionnaire:

- percentage of employees recruited from outside Hong Kong by country,
- reasons for recruiting employees from outside Hong Kong,
- whether would recruit employees from the mainland of China in the next 5 years,
- occupation categories [5] and preferred educational attainment [6] of employees to be recruited from the mainland of China,
- occupation categories and preferred educational attainment of persons to be deployed to work in the mainland of China,
- percentage of person engaged by occupation category and education attainment.

Digital Divide

22.   C&SD has recently started to develop a framework of statistical indicators for measuring digital divide in Hong Kong. Reference has been made to the framework promulgated by OECD, which stipulates that a number of indicators can be used to measure the extent of digital divide. Among the most important are infrastructure readiness, ICT penetration rates and intensity indicators.

23.   Indicators of infrastructure readiness include number of telecommunications access lines, Internet hosts and secure servers. ICT penetration rates can be measured in terms of access and usage. These can be further analysed across various socio-economic characteristics of the population. Gini coefficient is also proposed as a statistical tool for measuring such inequality in distribution of access to computer and internet by income. As regards the intensity, indicators on frequency/location/purpose of use are relevant.   Most of the above indicators are already available in Hong Kong.

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(http://www.info.gov.hk/censtatd/)

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[5] Managers and administrators; Professionals; Associate professionals; Clerks; Service workers and shop sales workers; Craft and related workers; Plant and machine operators and assemblers; Elementary occupations; Others
[6] Postgraduate; First-degree; Sub-degree; Technician; Craft; Matriculation; Upper secondary; Lower secondary and below

Industries covered in ICT Sector but not in IT&T Sector

- Manufacture of office machinery and equipment (excluding computing and accounting machinery)
- Manufacture of insulated wire and cable
- Manufacture of electronic parts and components (excluding those for computer and telecommunications equipment)
- Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods
- Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment
- Manufacturing of industrial process control equipment
- Renting of office machinery and equipment

Industries covered in IT&T Sector but not in ICT Sector

- Installation and maintenance of intercommunication system and telecommunications system
- Retail of telephone system, telecommunications equipment, computer, computer peripherals and software packages