International Telecommunication Union

August 2005

Hong Kong, China
ICT data collection case study

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The Hong Kong ICT Data Collection Case study is one of the activities of the Digital Bridges Initiative, a project established by the International Telecommunication Union and the Korean Agency for Digital Opportunity and Promotion (KADO) of the Republic of Korea to help achieve the international agreed goals of the World Summit on the Information Society (WSIS) to bridge the digital divide. More information on ITU's statistical work and the Digital Bridges Initiative are available under: www.itu.int/ict and www.itu.int/digitalbridges.

NOTE: THE HONG KONG SPECIAL ADMINISTRATIVE REGION OF THE PEOPLE'S REPUBLIC OF CHINA IS REFERRED TO AS HONG KONG IN THE REPORT.

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CONTENTS

1. INTRODUCTION

Hong Kong is at the forefront of adopting new information and communication technologies (ICTs) and is widely regarded as a test-bed for the industry. There is extensive technology diffusion, with the mobile cellular subscriber penetration rate reaching 114.5 per cent, household personal computer (PC) penetration of 71 per cent and 65 per cent of all households connected to the Internet in 2004. These are some of the figures that highlight Hong Kong's success in the area of ICT diffusion. Behind this success, the collection and use of statistics have played a major role.

The *Digital 21 Information Technology Strategy (Digital 21 Strategy)*, first published in 1998 and updated in 2001 and 2004, aims to build Hong Kong's information infrastructure and create an enabling environment for e-business to prosper.[1] The strategy has been regularly reviewed and revised to keep pace with the changing technological landscape. Under the Digital 21 Strategy, Hong Kong's government has introduced a wide range of measures to bridge the digital divide in order to ensure that the entire community is able to use ICT to improve their quality of life. These measures have been formulated based on statistical information covering the availability and use of ICT by the different sectors of the economy. The Digital 21 Strategy identifies actions in eight main areas, covering: government leadership; sustainable e-government programme; infrastructure and business environment; institutional review; technological development; vibrant IT industry; human resources in a knowledge economy; and bridging the digital divide.

As Hong Kong moves towards a global information society, it is aware of the central importance of extending access to information and communication technologies (ICTs) to its population. With the growing recognition of ICTs as effective tools for social development and economic growth, there are ever-greater incentives for an economy such as Hong Kong to foster higher access levels and to overcome the digital divide, the gap that exists between those with and those without access to ICTs. Closely tied to the government's desire to increase the availability of ICTs, it also recognizes the need for reliable, comprehensive and comparable statistical information.

The Hong Kong Case Study, which is part of the input into the Digital Bridges Symposium[2], is one of the activities resulting from a Memorandum of Understanding (MoU) between the International Telecommunication Union (ITU) and the Korea Agency for Digital Opportunity and Promotion (KADO). The overall objective of this partnership is to help achieve the internationally agreed goals of the World Summit on the Information Society (WSIS, at www.itu.int/wsis) to bridge the digital divide. In particular the project, which is called the Digital Bridges Initiative, will provide new tools necessary to measure the digital divide. This includes capacity building through policy and technical expertise to help countries measure and analyse their availability of ICTs.

The case study highlights best practice in data collection, analyses, and dissemination of ICT data and statistical information.[3] Specifically, the study examines the role of different government agencies in the definition, collection, use and dissemination of ICT statistics, and looks at the ways in which they cooperate with the national statistics agency. It identifies how far Hong Kong's policy-makers are using national ICT statistics to formulate and adapt policies that directly or indirectly impact ICT availability and usage. It further examines how Hong Kong uses (international) benchmarking tools

such as indices to gauge ICT development and to formulate policies for the improvement of the sector. A major objective of the study is to help guide other economies in their data collection and dissemination efforts for ICT statistics.

Understanding how ICT statistics are collected, disseminated and analyzed is important in order to show the efficiency of the nation's statistical service as well as to serve as an example to other economies that may wish to replicate some of these experiences.

[1] See www.info.gov.hk/digital21/eng/strategy/strategy_main.html.

[2] See www.itu.int/digitalbridges/.

[3] The ITU's Market, Economics, and Finance Unit (MEF) has also published an ICT data collection case study on Australia. The study is available at www.itu.int/ITU-D/ict/cs/australia/index.html.

2. HONG KONG IN A NUTSHELL[1]

Hong Kong is situated on the south-eastern tip of mainland China, in the centre of East Asia. Essentially one big city, Hong Kong had a population of 6.88 million at mid-2004. It is divided into three main land areas: Hong Kong Island (20%), Kowloon (30%) and New Territories (50%) (Figure 2.1). With a land area of only 1'103 square kilometres, it is the third most densely populated economy in the world - some 6'380 people per square kilometre at mid-2004, after Macao, China and Monaco. Hong Kong is a world-class financial, trading and business centre and is considered one of the world's largest trading economies. After a century and a half of British administration, Hong Kong became a Special Administrative Region of the People's Republic of China on 1 July 1997.

Figure 2.1: Map of Hong Kong

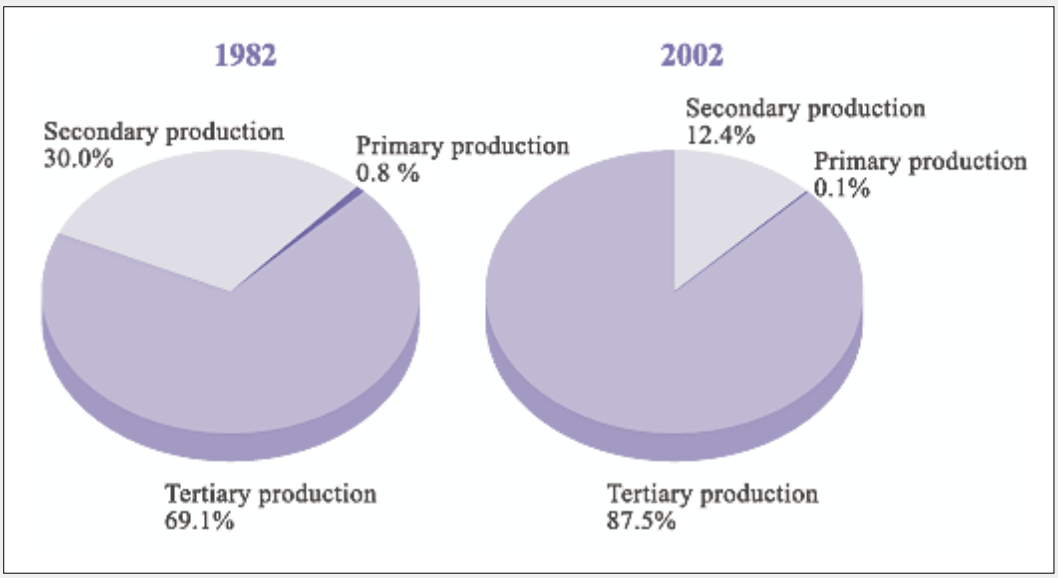
Source: CIA, The World Factbook 2005 available at www.cia.gov/cia/publications/factbook/geos/hk.html.

2.1 History, politics and economy[2]

Following the Opium Wars, the British took control of Hong Kong in 1841. Before that time, farmers and fishermen mainly inhabited the area. Pursuant to the Sino-British Joint Declaration, mainland China resumed the exercise of sovereignty over Hong Kong on 1 July 1997. Under this agreement and its "one country, two systems" formula, China's socialist economic system will not be imposed on Hong Kong and it will enjoy a high degree of autonomy in all matters except in foreign and defence affairs for the next 50 years.

In 2004/2005 Hong Kong was ranked the world's freest economy[3], the world's 21st most competitive economy[4], and the largest trading entity. The International Monetary Fund (IMF) classifies Hong Kong as an advanced economy[5] because of its high per capita GDP, which stood at US$ 23'030 in 2003, the second highest in Asia, after Japan. During the Asian financial crisis Hong Kong suffered two recessions, one in 1998 and the other during 2001/2002. However, these economic downturns did not affect GDP growth. Annual growth of GDP during the decade 1993-2003 averaged 3.2 per cent. According to Census and Statistics Department, GDP grew by 6.0 per cent in real terms in the first quarter of 2005 compared to the previous year, following 8.1 per cent growth in 2004.[6] The Hong Kong dollar (HK$) remains the legal currency in Hong Kong and all other currencies are treated as foreign, including the Chinese Renminbi. Since October 1983, a Hong Kong dollar has had a fixed exchange rate with the US dollar of HK$ 7.80.

Figure 2.2: Growing tertiary services sector in Hong Kong



Source: Hong Kong Yearbook, 2003 available at www.info.gov.hk/yearbook/2003/english/chapter03/03_01.html.

Except from its port, natural resources in Hong Kong are limited, and food and raw materials must be imported. Gross imports and exports each exceed GDP in dollar terms. Hong Kong's export business to and from China is also a major driver of growth. Although the Severe Acute Respiratory Syndrome (SARS) outbreak battered Hong Kong's economy in early 2003, a boom in tourism from mainland China, a return of consumer confidence, and a solid rise in exports resulted in the resumption of strong economic growth in late 2003 and in 2004.

The agriculture, fisheries, and mining sector are insignificant in Hong Kong, in terms of both value and total employment. This reflects the more and more urbanised nature of the economy, in which the tertiary services sector[7], by 2002, contributed 88 per cent to GDP (Figure 2.2).

2.2 Human Development[8]

The United Nations Development Programme (UNDP) ranked Hong Kong at twenty-third out of 177 economies in its 2004 *Human Development Report*. The ranking is based on a composite of four indicators: life expectancy, literacy, school enrolment and GDP per capita. The position of Hong Kong is six points lower than its GDP per capita rank, suggesting that its GDP per capita rank is comparatively high, compared to the other human development indicators. It is relatively weak in terms of school enrolment, where it ranks 89th and literacy, here it ranks 50th. Overall, Hong Kong ranks third in the region - ahead of Singapore and the Republic of Korea (Table 2.2.1). Hong Kong has a similar level of GDP per capita (PPP US $) to those of four European countries: namely France, Italy, Finland and Sweden.

Table 2.2.1: Ranking Hong Kong's human development

Hong Kong Human Development Indicators			*Ranking within regional and income grouping*			
			Asia Pacific		*Countries with similar income*	
Rank	*Indicator*	*Value*	*Rank*	*Country*	*Rank*	*Country*
23	Overall		28	Korea, Rep.	**23**	**Hong Kong (26'910)**
3	Life expectancy	79.1	25	Singapore	21	Italy (26'430)
50	Literacy	99%	**23**	**Hong Kong**	16	France (26'920)
89	School enrolment	113	18	New Zealand	13	Finland (26'190)
17	GDP per capita (US$, PPP)	28'260	9	Japan	9	Japan (26'940)

Source: UNDP 2004 HDI.

[1] Most of the information in this section is adapted from the Hong Kong Government Information Centre at www.info.gov.hk.

[2] Unless otherwise indicated, information is adopted from the Hong Kong Government, at www.info.gov.hk/yearbook/2003/.

[3] Source: Heritage Foundation 2004 Index of Economic Freedom, www.heritage.org/research/features/index/. The 2005 Index of Economic Freedom measures 161 countries against a list of 50 independent variables divided into 10 broad factors of economic freedom. Low scores are more desirable. The higher the score on a factor, the greater the level of government interference in the economy and the less economic freedom a country enjoys.

[4] Source: World Economic Forum's Global Competitiveness Report, 2004-2005. Growth Competitiveness Index rankings. The Growth Competitiveness Index is composed of three component indexes: the technology index, the public institutions index, and the macroeconomic environment index. These indexes are calculated on the basis of both "hard data" and "survey data". See www.weforum.org/pdf/Gcr/Growth_Competitiveness_Index_2003_Comparisons.

[5] The IMF's World Economic Outlook classifies countries into two major country groups: advanced economies and other emerging market and developing countries, see www.imf.org/external/pubs/ft/weo/2005/01/pdf/statappx.pdf.

[6] Press release. Economic situation in first quarter of 2005 and updated GDP and price forecasts for 2005, available at www.info.gov.hk/gia/general/200505/27/05270160.htm.

[7] This sector includes the wholesale, retail and import/export trades, restaurants and hotels; transport, storage and communications; financing, insurance, real estate and business services; community, social and personal services; and ownership of premises.

[8] See 2004 United Nations Development Program's Human Development Index (HDI), at http://hdr.undp.org/reports/global/2004/pdf/presskit/HDR04_PKE_HDI.pdf.

3. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) SECTOR

In Hong Kong the sector that this study refers to as the ICT sector is called the *Information Technology and Telecommunications Sector (IT&T)*. The *Hong Kong Standard Industrial Classification (HSIC)* is used to classify the industries that fall within the IT&T sector.[1] This includes businesses engaged in the manufacturing, distribution, installation and maintenance of IT&T products and the provision of IT&T services (for the List of industries covered by the IT&T sector, see Annex 1). The coverage of the sector is based on the Information and Communication Technology (ICT) sector of the Organization for Economic Co-operation and Development (OECD).[2] While the OECD and the HSIC classifications are very similar, the HSIC includes a number of industries that are not part of the OECD list, and vice-a-versa.[3]

Statistics on the performance of the IT&T sector are compiled from annual economic survey data by the Census and Statistics Department (C&SD). Data compiled include the number of establishments, persons engaged, vacancies, business receipts and value added in the IT&T sector. These statistics are used to determine the contribution of the IT&T sector to the overall economy.

Another area under discussion in the international arena is the *Content Sector.* This is defined as a group of industries primarily engaged in the publication and/or the electronic distribution of content products. The United Nations Statistics Division (UNSD) is taking into consideration the importance of ICT activities in the planned revision of the International Standard Industry Classification (ISIC) in 2007[4] and the possibility of introducing an Information Sector/ Information Economy sector - comprising the ICT sector and the Content sector. For the purpose of this study, only the ICT sector (IT&T) will be covered.

Revisions to the international classifications such as ISIC will have a great impact on the comparability of ICT statistics that will be compiled and disseminated by countries in the future. This will guide countries in what needs to be measured and analyzed. Until the collection of statistics is harmonized and internationally comparable, economies will continue to rely on country classifications.

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[1] The Hong Kong Standard Industrial Classification (HSIC), compiled by the Census and Statistics Department, serves as a standard framework for the statistical classification of economic units into different industry classes. The HSIC is generally used by the department in various surveys and statistical systems and in the publication of statistics available at www.info.gov.hk/censtatd/eng/news/rev_stat/hsic/hsic_1_1.htm.

[2] See www.oecd.org/dataoecd/34/37/2771153.pdf.

[3] A list of those industries is presented in Annex 2.

[4] ISIC is a standard classification of economic activities arranged so that entities can be classified according to the activity they carry out. The categories of ISIC at the most detailed level are delineated according to what is, in most countries, the customary combination of activities described in statistical units, see http://unstats.un.org/unsd/cr/registry/docs/isic4-050515.doc.

4. SUPPLY AND DEMAND ICT STATISTICS: HONG KONG'S USERS AND PRODUCERS

Official ICT statistics in Hong Kong are collected and disseminated by two main players: the **Census and Statistics Department (C&SD)** and **Office of the Telecommunications Authority (OFTA)**. The type of information that each bureau collects and disseminates depends on the source of the information. Data from official surveys such as household and business surveys, are collected by C&SD, while administrative records like subscribers and customer-based data reported by telecommunication operators are collected and disseminated by OFTA. This division of data collection and dissemination, and the cooperation of the two main players, has allowed Hong Kong to reach a high level of data accuracy and efficiency (Figure 4.1).

The statistics produced and disseminated by these two agencies are used inside Hong Kong to highlight trends

Figure 4.1: Who is in-charge?

Office of the Government Chief Information Officer (OGCIO)

- Policy and strategy advisor on IT matters
- Coordinator and executive arm on IT matters
- Initiates revisiting of the survey questionnaire, work with C&SD
- Coordinates with subject matter specialists to identify changes of survey
- Comments on reports/press releases prepared by C&SD
- User of ICT statistics

Census and Statistics Department (C&SD)

- Official statistics agency
- Initiates revisiting of the survey questionnaire, work with OGCIO
- Conducts or commissions the surveys
- Data collection, processing and analysis of data collected
- Produces the final reports and issues press release on summary survey findings

Office of Telecommunications Authority (OFTA)

- Telecommunication Regulator
- Collects data from operators
- Regularly publishes telecom data on its website
- Provides data to ITU

Source: ITU.

in the availability and usage of ICTs. They are also utilized to measure developments in technology, the size of the sector and its contribution to the economy, as well as to benchmark Hong Kong's position in the ICT world. The following section will outline the main functions of Hong Kong's users and producers of ICT data:

4.1 The Commerce, Industry and Technology Bureau (CITB)

The **Commerce, Industry and Technology Bureau (CITB**) is the country's main ICT policy maker and responsible for policy and strategic matters on Information Technology (IT) in Hong Kong. The bureau comprises the Commerce and Industry Branch (CIB), the Communications and Technology Branch (CTB) and the Office of the Government Chief Information Officer (OGCIO). Of the three branches, OGCIO is directly responsible for policy, strategy and execution of information technology programmes and policies. CITB also oversees the operation of seven executive arms in Hong Kong, including the Office of the Telecommunications Authority (OFTA).[1] It does not collect any statistics on ICT availability or usage of ICT but is an important user of statistics that other agencies responsible for the data collection produce.

4.2 Office of the Government Chief Information Officer (OGCIO)

The Office of the Government Chief Information Officer (OGCIO), which falls within CITB, serves as the coordinator and executive arm on IT matters.[2] It was set up in 2004 by merging the functions of the former *Information Technology Services Departmen*t and the IT-related divisions of the *Communications and Technology Branch (CTB)* of the CITB.[3] OGCIO is not only responsible for overseeing programmes and measures under the 2004 Digital 21 Strategy[4] but also works with the Census and Statistics Department (C&SD) in the formulation and review of IT survey questionnaires as well as analysis and dissemination of survey results. It is a major user of ICT statistics collected by C&SD. The analyses made by OGCIO are used as reference to formulate ICT –related policies and strategies and to measure their progress in the implementation, as reflected by the survey data.

OGCIO is also a main source of funding for IT surveys. It regularly commissions the C&SD to conduct annual surveys on the IT usage and penetration in households and business sectors of the economy.

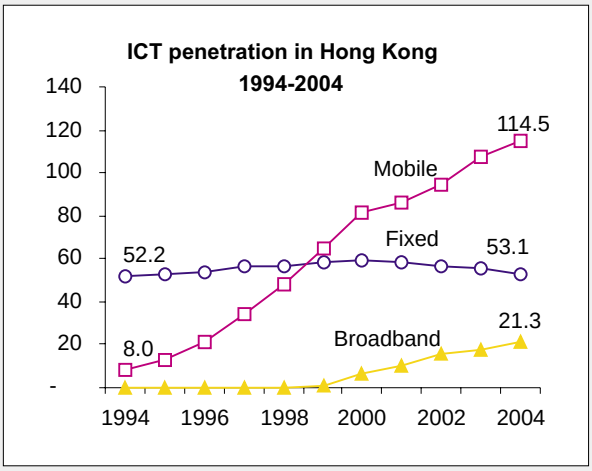
4.3 Office of the Telecommunications Authority (OFTA)

Established in 1993, the Office of the Telecommunications Authority (OFTA) is Hong Kong's regulatory authority. It falls within the CITB and serves as the executive arm of the Telecommunications Authority, a statutory authority created by the Telecommunications Ordinance,[5] responsible for regulating the telecommunication industry in Hong Kong. Particularly, it ensures economic and technical regulation of telecommunication services as well as the enforcement of principles of fair competition and management of radio frequency spectrum. OFTA is considered one of the world's leading telecommunication regulators in terms of the timeliness and relevance of the statistics it disseminates. It regularly publishes a variety of statistics on its web site and in August 2005, for example, had published May 2005 broadband data, showing that 22 per cent of population had a broadband connection.[6] OFTA's collection of data is facilitated by operators' obligation to report data to OFTA relating to their businesses on a monthly, quarterly, semi-annual and annual basis. In Hong Kong, operators are required to collect and provide data to OFTA. This binding obligation to produce and provide information is written into the licence agreements, thus making the data gathering and dissemination efforts of the regulator easier. In many other countries, confidentiality of information is one of the main obstacles in data collection and dissemination and hampers information sharing efforts. While many operators insist on keeping financial data confidential, others fail to share even basic subscriber data.

Listed companies in Hong Kong are further required to publish company reports on a periodic basis. The annual reports or interim reports published by telecom operators listed in Hong Kong or operators belonging to a listed group contain operational and financial data that allows the aggregation of information. This transparency further enhances the ability to analyze operators' market shares, their contribution to Hong Kong's ICT sector, and to observe overall market developments.

The subscriber and traffic related data that operators are required to report to OFTA on a periodic basis enable the regulator to publish monthly and annual statistics on the number of fixed telephone lines, mobile cellular subscribers and Internet subscribers (Figure 4.3.1). OFTA's website serves as a portal for disseminating the statistics that it produces including data on the number

Figure 4.3.1: Penetration of ICT in Hong Kong
Fixed telephone lines, mobile cellular subscribers and broadband subscribers per 100 inhabitants, 1994-2004



Source: ITU adapted from OFTA.

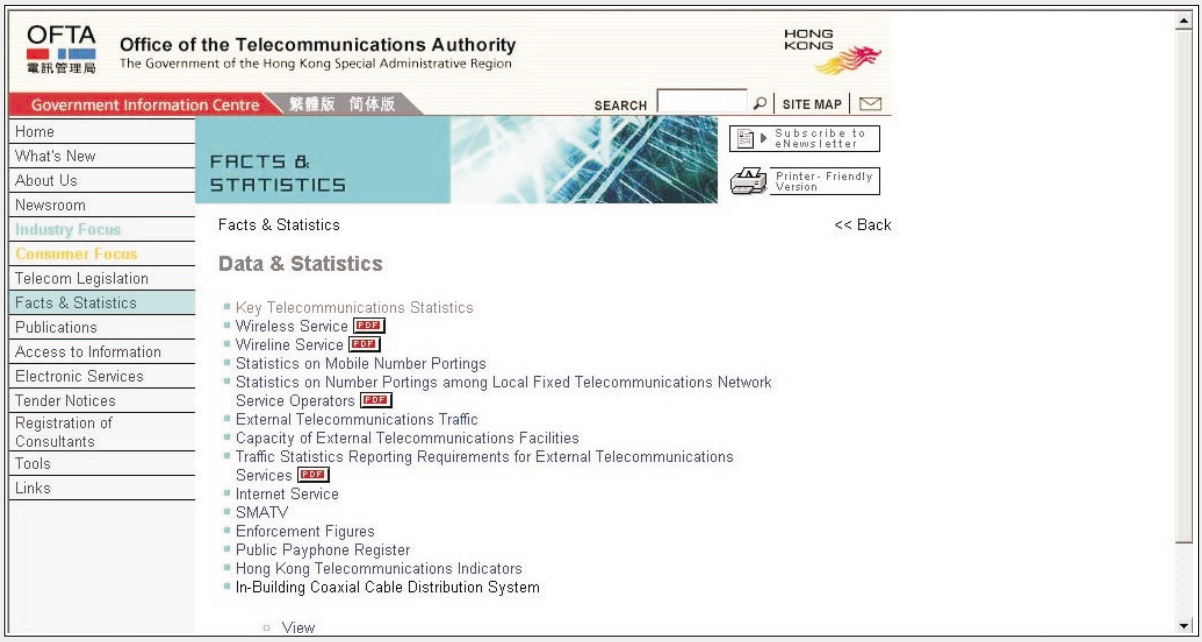
of subscribers, traffic, both for voice and Internet, as well as international Internet bandwidth (Figure 4.3.2).

OFTA validates and verifies the data it collects, to ensure the integrity of the data and to meet international and local definitions. In certain cases, the telecommunication operators make reference to the aggregated statistics produced by OFTA. Other sources of information such as surveys carried out by the Census and Statistics Department (C&SD) are also studied by OFTA, together with the data collected from operators.

The selection of the indicators collected by OFTA is usually influenced by requests from data users. The International Telecommunication Union (ITU), as part of its annual data collection, sends out questionnaires to countries to collect the previous year's telecom/ ICT statistics (for ITU Telecommunication Indicators Questionnaire 2004, see Annex 3). The indicators collected by ITU serve as the reference for OFTA's data collection. OFTA also takes into account requests from other international and regional organizations, media, analysts and academics in formulating its data collection policy. It collects specific data upon the request for customized research data from other government agencies. The data collected and processed by OFTA can be presented in various formats, according to the occasions on which the data are to be released.

OFTA faces a number of problems related to the collection and dissemination of telecommunication statistics. The definition of indicators is one of the

Figure 4.3.2: OFTA's Facts and Statistics webpage



Source: OFTA, www.ofta.gov.hk/en/datastat/main.html.

main difficulties encountered. One example is the measurement of Short Messaging Services (SMS). The current definition does not give clear guidance as to whether promotional SMS from vendors should be included. Treatment of spam and non–spam SMS is not clear, either.

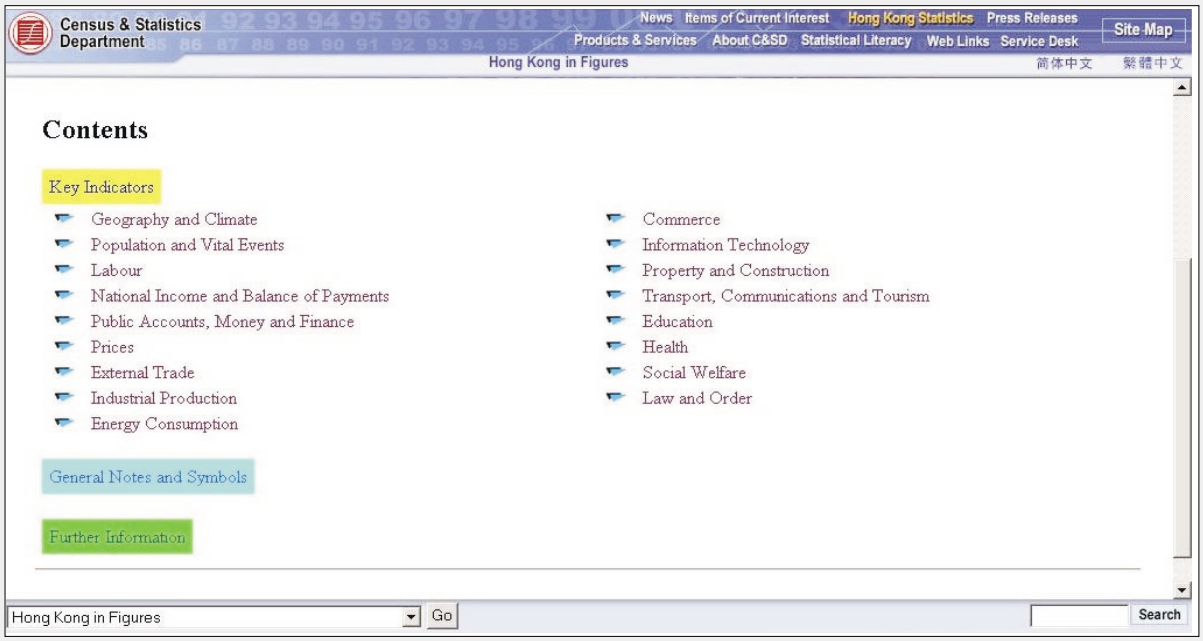
Data disseminated by OFTA are used both inside and outside Hong Kong. Most of the administrative data on the number of subscribers quoted in government official speeches are based on OFTA information. Telecom operators also use the data collected by OFTA to benchmark their market position and international users include the ITU and the Asia-Pacific Telecommunity.[7] The Census and Statistics department (C&SD) uses OFTA data and present them in its cross-sectoral statistics publications. Other users of OFTA data include private research companies, students and telecom researchers and consultants.

Data collected by OFTA are not excluded from possible misuse and wrong analysis and users occasionally misinterpret the data that OFTA disseminates. One example is the problem in collecting tariff that reflects the market situation. Operators are required to publish their tariffs and charge no more than these published tariffs. While operators usually publish their official rates on the Internet, the *effective* rate is usually a lot lower than the published one and customers will not pay the standard tariff. Incentives such as promotional bundled items provided by operators are also not counted. This effectively produces misleading price indications and makes it hard to compare operators to one another. Another example is the charging of mobile calls. In Hong Kong, calls to mobile phones are charged both ways (caller and receiver pays). However, mobile phone users are rarely concerned about the extra cost as cellular tariff packages usually include around 1'000 free minutes – almost 17 hours of free calling –a month– much of which remains unused. Consumers have many choices when it comes to tariffs, mainly due to the extremely competitive market.

4.4 The Census and Statistics Department (C&SD)

The Census and Statistics Department (C&SD) is the official statistics agency in Hong Kong and is responsible for the collection and dissemination of official statistics. Set up in late 1967, the agency is responsible for conducting statistical surveys, operating the statistical systems for the production of social and economic statistics, as well as performing statistical analysis and disseminating the data and analytical results that it produces. It also provides

Figure 4.4.1: C&SD "Hong Kong in Figures" webpage



Source: C&SD, www.info.gov.hk/censtatd/eng/hkstat/index2.html.

guidance and statistical support on statistical matters to various government departments and bureaux.

The *Census and Statistics Ordinance* - which serves as the legal basis for conducting the population census as well as the collection, compilation and publication of other statistical information - guides the work of the department. The Ordinance also provides strict safeguards on the confidentiality of data pertaining to individuals or undertakings.[8] C&SD also ensures that the compilation and dissemination of statistics are in accordance with international standards. Notably, it adheres to the *Fundamental Principles of Official Statistics*[9], as well as IMF's *Special Data Dissemination Standard (SDDS).*[10] C&SD's compliance to these international standards helps to maintain its position in the international statistical community and ensures the international comparability of its statistics. Both of these standards are applied to its data collection coverage, periodicity, timeliness and integrity of data collected and quality of data disseminated.

Timeliness of data is an important factor in every country's data dissemination practices, as timely information is relevant information, particularly in a sector that changes rapidly. Transparency of statistical methods and practices are key factors in ensuring comparability and guarantee a certain level quality. To this end, C&SD ensures that the data it collects include annotations about data coverage, definitions, methodology and sources. At the same time, it alerts users of its statistics to any changes in methodology and revisions made to official statistics.

The department's website serves as a portal for disseminating statistics and other information that it produces (Figure 4.4.1). It further includes press releases on new statistics, information on frequently asked statistics, as well as a list of printed or electronic versions of the statistical publications. This raises the awareness of the available statistics and newly released information by the department.

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1 See www.citb.gov.hk/about/index.htm.

2 OGCIO is formerly known as the Information Technology Services Department (ITSD) of CITB.

3 See www.ogcio.gov.hk.

4 Digital 21 IT Strategy was first set out in 1998 to build Hong Kong's information infrastructure and create an enabling environment for e-business to prosper. It was revised in 2001 to keep pace with the changing technological landscape. See www.info.gov.hk/digital21/eng/strategy2004/strategy_main.html

5 Cap 106, Laws of Hong Kong.

6 See www.ofta.gov.hk/en/datastat/main.html.

7 See www.aptsec.org/apt/aptintro.html.

8 The Ordinance was modified in June 1997, see www.info.gov.hk/censtatd/eng/aboutus/ordinance/ordinance_index.html.

9 The *Fundamental Principles of Official Statistics* was developed in the Conference of European Statisticians and was adopted by the UN Statistical Commission at its 1994 session. The Principles set out the contribution that official statistics make to a society and provide general guidelines for the functioning of national statistical systems. It helps to rebuild public trust in official statistics and governments acknowledgement of the critical contribution that official statistics could make. See http://unstats.un.org/unsd/methods/statorg/FP-English.htm.

10 The *Special Data Dissemination Standard (SDDS)* was established by the International Monetary Fund (IMF) to guide members that have, or that might seek, access to international capital markets in the provision of their economic and financial data to the public. Both the General Data Dissemination System (GDDS) and the SDDS are expected to enhance the availability of timely and comprehensive statistics and therefore contribute to the pursuit of sound macroeconomic policies; the SDDS is also expected to contribute to the improved functioning of financial markets. See http://dsbb.imf.org/vgn/images/pdfs/sddsguide.pdf.

5. MEASURING THE INFORMATION SOCIETY

There are two regularly conducted IT surveys in Hong Kong. While the surveys were initiated by both the policy advisor and its executive arm (CITB and OGCIO), the Census and Statistics Department (C&SD) was commissioned to manage and conduct the surveys (Box 5.1). The fifth rounds of surveys were conducted between May and August 2004 and results released in December 2004.

The two surveys are:

(1) *Annual Survey on Information Technology (IT) Usage and Penetration in the Business Sector (Business survey).*

(2) *Thematic Household Survey on IT Usage and Penetration (Household survey).*

The surveys have been conducted annually since 2000 to assess the use and uptake of information technology within the different sectors. The surveys also capture the most recent trends in the IT sector, and individual /business use of IT in Hong Kong. The results of the surveys serve as a basis for identifying focal areas where IT needs to be promoted, and at the same time serve as a useful reference for developing IT strategies and policies.

5.1 Usage and penetration of IT in households

Surveys on the usage and penetration of IT in households are carried out by the Census and Statistics Department (C&SD) under its series of Thematic Household Surveys (THS). These surveys have been conducted in order to meet the requests from the government policy bureaux and departments for statistical data on various social issues. C&SD started the THS on IT usage and penetration in 2000 in order to identify trends in citizens' uptake and use of IT and provide updated information about the society's readiness, IT penetration, and its impact on the community. While C&SD acts as the co-ordinator and

Box 5.1. Administrative process of the surveys

The following summarizes the administrative process on conducting the household surveys:

1. Both the C&SD and OGCIO initiate the revisiting of the survey questionnaires, including deletion of obsolete questions and addition of questions on new IT topics if any.
2. OGCIO co-ordinates with corresponding subject officers to identify changes and addition of questions. For instance, questions on wireless and mobile penetration were added in the 5th round of the thematic household surveys in 2004.
3. C&SD commissions or conducts and monitors the surveys, including data collection, data processing and analysis.
4. C&SD forwards the draft reports/press releases for OGCIO's comments and based from the comments received finalizes the reports/press releases.
5. C&SD produces the final reports and issues press releases on the summary survey findings.

Source: ITU.

manager of the THS, the surveys are carried out by private research firms. C&SD closely monitors the process and methodology to ensure that the quality of data collected is statistically acceptable.

The first round of the ***THS on IT Usage and Penetration*** was carried out in 2000 and the most recent (fifth) completed round was conducted during June to August 2004 (the sixth round started in May 2005 and is in progress). The 2004 survey collects information on the availability of personal computers (PC) and the Internet within households; usage of PC and the Internet in different locations; knowledge and usage of Chinese input methods; and usage of electronic business services and online government services. It also measures the awareness of IT security. Similar questions and topics were also addressed in the previous surveys (For Thematic Household Survey on IT Usage and Penetration questionnaire, see Annex 4).

The survey covered the land-based non-institutional population of Hong Kong,[1] representing some 99 per cent of the Hong Kong Resident Population, which includes *usual residents*[2] and *mobile residents.*[3] The quarters[4] that are used for residential purposes serve as the basis sample selection for the survey and based on the classification maintained by the C&SD. In general, each unit of quarters is identified by its unique address, including details such as street name, building name, floor number and flat number.

In the 2004 survey, some 10'000 households from a selected sample were enumerated, constituting a response rate of 75 per cent. To be able to get household level information, the household head or a knowledgeable person within each enumerated household was interviewed. The selected respondents were questioned on the availability and number of PCs in households, including PCs connected to the Internet.

Individual level information was obtained from all persons aged 10 and above in the enumerated households.[5] These persons were asked about their knowledge of using a personal computer (PC) and Chinese input methods as well as their usage of PC and Internet service during the twelve months before enumeration. Persons aged 15 and over were further asked about their usage of electronic business services for personal matters during the twelve months before enumeration. Finally, some questions about information technology security were asked.

In 2004, new questions related to extent of usage of wireless and mobile technology were added, reflecting changes in the technology and the market. Demographic and socio-economic characteristics of respondents, such as gender, age, educational attainment and household income are also included in the survey questionnaire. The availability of socio-economic data, combined with the data on IT usage and penetration, allow an in-depth understanding and analysis of the national digital divide.

The penetration of personal computers (PC) in homes in Hong Kong was already close to 50 per cent in 2000 and has risen to 71 per cent by 2004. The number of households with a PC connected to the Internet has also shown impressive growth, with more than 91 per cent connected by 2004. Close to 60 per cent of persons aged 10 and above used a PC in 2004, with Internet usage among citizens of Hong Kong rising at the same time (Table 5.1.1). The increase in broadband uptake is one of the reasons for the increase in Internet usage.

The last survey points to several divides amongst Hong Kong's citizens: Younger respondents (persons aged 10-14) had the highest rate of PC and Internet use in the 2004 survey (98 per cent for PC use and 95 per cent for Internet use) while those of 65 and above had the lowest (4 per cent and 3 per cent, respectively). Men had a higher ratio of PC and Internet usage (62 per cent and 59 per cent, respectively), than women (57 per cent and 54 per cent, respectively) and the level of education was another important factor in determining the use of IT. Persons with a tertiary education had much higher rate of PC and Internet use (94 per cent and 93 per cent, respectively) compared to people with a primary education (18 per cent and 17 per cent, respectively) (Figure 5.1.1).

Table 5.1.1 Summary of the Thematic Household Survey results (THS)

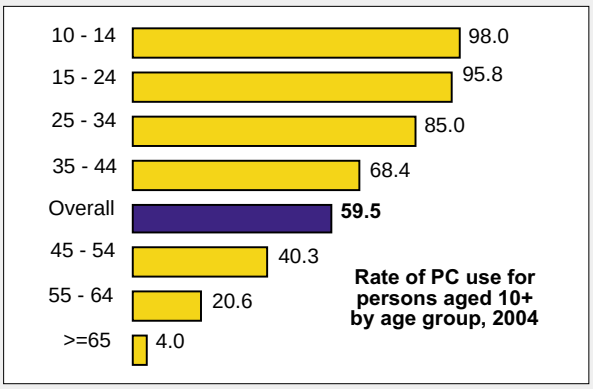
Penetration of PC and Internet in households and usage of PC and Internet service by individuals, 2000-2004

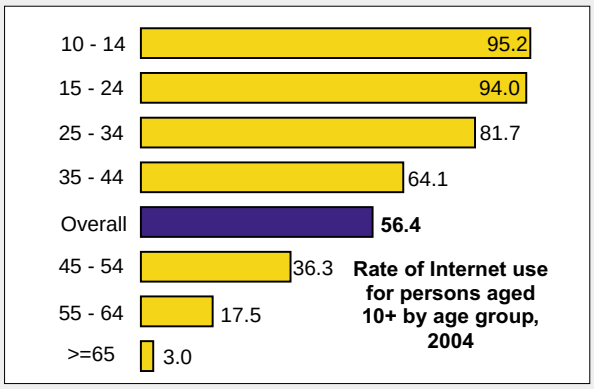
Data Item	*2000*	*2001*	*2002*	*2003*	*2004*
Information technology penetration amongst households					
Households with personal computer (PC) at home amongst all households	49.7	60.6	62.1	67.5	71.1
Households with PC * at home connected to Internet amongst all households with PC at home	73.3	80.4	84.6	88.8	91.3
Households with PC * at home connected to Internet amongst all households	36.4	48.7	52.5	60.0	64.9
Information technology usage amongst household members					
Persons aged 10 and over who had used PC in the twelve months before the survey amongst all persons aged 10 and over	43.1	50.3	54.0	56.2	59.5
Persons aged 10 and over who had used Internet service in the twelve months before the survey amongst all persons aged 10 and over	30.3	43.3	48.2	52.2	56.4
Usage of electronic business services					
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 amongst all persons aged 15 and over	84.9	88.5	92.6	93.6	96.5
Usage of online purchasing services					
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 amongst all persons aged 15 and over	-	5.6	4.9	7.0	7.1
Usage of online Government services					
Persons aged 15 and over who had used online Government services for personal matters in the twelve months before the survey amongst all persons aged 15 and over	-	-	18.1	24.3	28.5

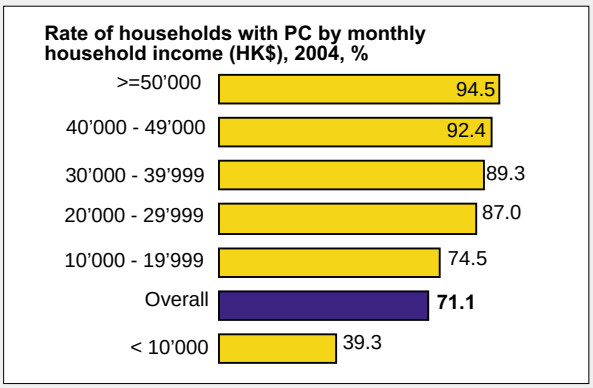
Note: * Excluding the palm top/Personal Digital Assistant (PDA) connected to Internet.
Source: C&SD.

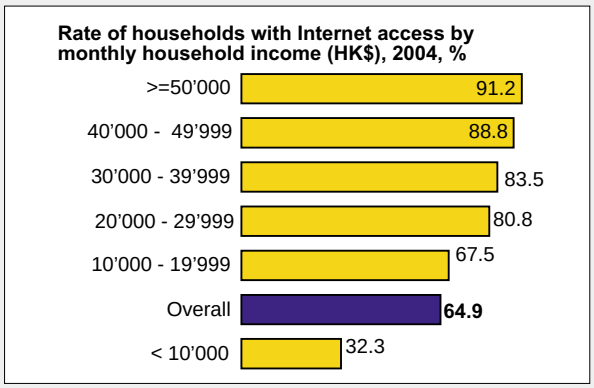
Figure 5.1.1: Household and individual use of ICT

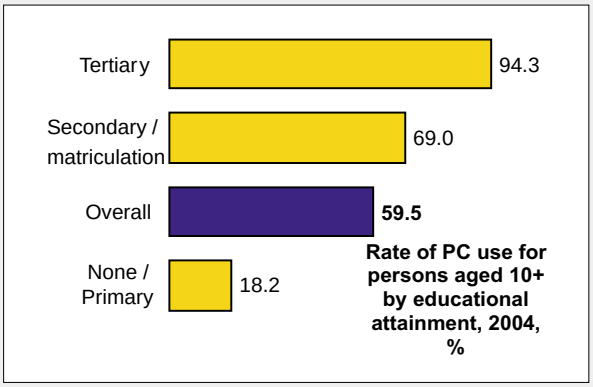
PC and Internet penetration in households for different user groups, and location and purpose of PC and Internet use by individuals, Hong Kong, 2004

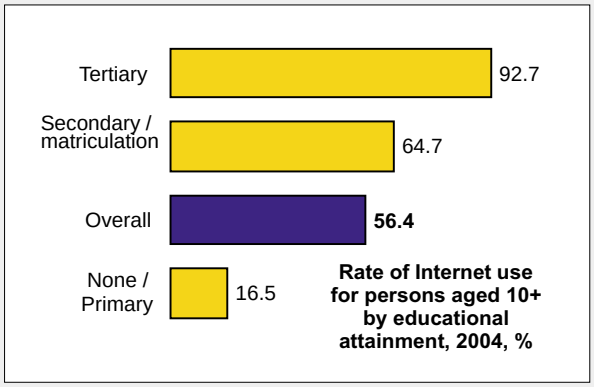


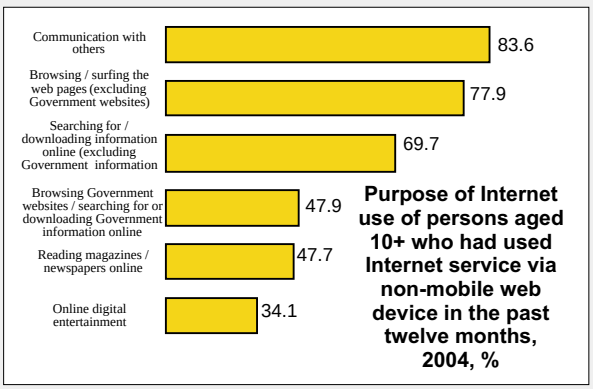


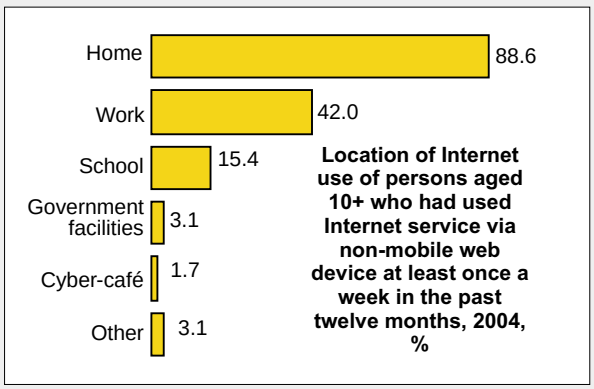












Source: ITU adapted from C&SD.

Box 5.1.1: The City University of Hong Kong: a producer and user of ICT statistics

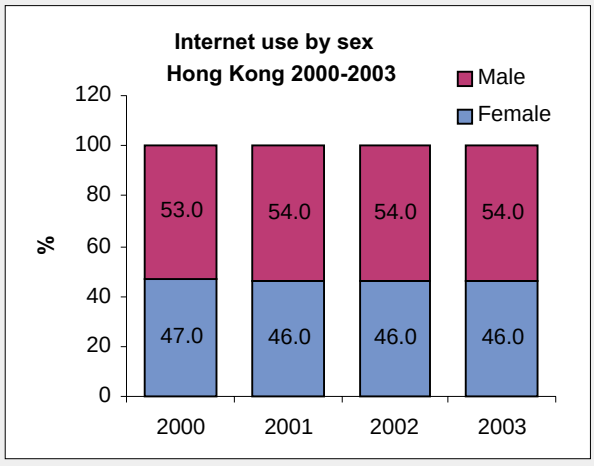
One might expect that the information gathered by the Census and Statistics Department (C&SD) is sufficient to measure usage and availability of ICTs in Hong Kong. However, the City University (CityU), one of the eight universities in Hong Kong, also collects Internet availability and usage statistics. The survey is carried out under the "Diffusion, Use and Impact of Internet in Hong Kong and Mainland China" project by Prof. Jonathan Zhu of the Communication Research Centre, which started when the CityU became a member of the World Internet Project (WIP, at: http://www.worldinternetproject.net/).

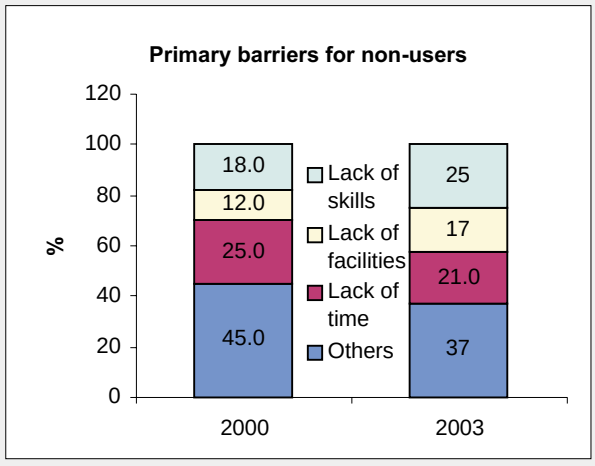
CityU carried out the first Internet Usage survey in 2000, almost at the same time the C&SD conducted the first household survey. It has since been carried out annually, until December 2004. The University Grants Committee of Hong Kong and CityU Research Grants Office funded the surveys. Unlike the methodology used by C&SD, CityU used two sets of survey questionnaires: one for ICT users (that included around 100 questions); and one for non-users (that included around 40 questions). These are based on different survey questionnaires including the WIP, and the China Internet Network Information Center (CNNIC). Like any other survey, respondents are assured of the confidentiality of information collected. The survey covered Chinese-speaking adults aged 18-74. The key findings from the surveys, such as the penetration and usage of ICT, have been largely consistent with those from C & SD surveys.

The results of the survey are published in international academic journals, such as Journal of Computer-Mediated Communication, local trade publications, such as the Hong Kong Economic Journal and the Media Digest, and through presentations at conferences. CityU is also one of the founding members of the Asia Pacific Internet Research Alliance (APIRA). APIRA is a regional academic organization that aims to enhance comparison of Internet information, deepen the research on statistical techniques to be used to analyze data on Internet, facilitate cooperation among Asia-Pacific countries on the Internet information survey and research, and boost the regional development of the Internet research with a view to harmonizing survey questions and methodology. Current members of APIRA include: China Internet Network Information Center (CNNIC), National Internet Development Agency of Korea (NIDA, former KRNIC), Japan's Access Media International (AMI), City University of Hong Kong; University of Macau; and Taiwan Network Information Center (TWNIC), see http://www.apira.org. As a member, CityU participates in the harmonization of survey questionnaires and conducts and releases the results of the survey at the same time as other APIRA members. Although CityU surveys are harmonized with other APIRA members' surveys, they are mainly used for academic and research purposes. The main reason is that the C&SD, as the official statistical agency of Hong Kong, has a priority with regard to surverys and methodologies and is the official provider of data used for international comparison.

Figure Box 5.1.1: Who use Internet more and why Internet is not used?

Internet use by sex in Hong Kong 2000-20003 and primary barriers for non-user of Internet





City University uses the statistics that it collects for its research mainly to analyze the availability and usage of Internet in Hong Kong and to measure the Digital Divide. The **Digital Divide Index (DDI)** was built using four indicators that examine age, education, gender and employment of Interne t users for the survey conducted in 2000-04. The results of the DDI showed that Hong Kong's divide is greater in terms of Internet use by age than in mainland China (which has a lower Internet penetration rate than Hong Kong), and the United States (where the penetration rate is higher). For example, in 2000, 75% of the youth (18-25 years old) in Hong Kong used the Internet as compared with 11% of the senior citizens (50-74 years old), a ratio of 7:1. In the same year, Internet users accounted for 57% of the youth and 30% of the senior citizens in the U.S. (a ratio of 2:1), or 63% of the youth and 10% of the senior citizens in urban China (a ratio of 6:1).

Source: City University and APIRA.

5.2 Business use of IT

Since 2000, the Census and Statistics Department (C&SD) conducts the **Annual Survey on Information Technology (IT) Usage and Penetration in the Business Sector**. The data items included in the survey closely follow the recommendations of the OECD in its model questionnaire on IT usage in business, promulgated in April 2000. The latest survey was conducted from May to August 2004 and covered some 4'700 business establishments. The results were released less than six months later, at the end of 2004. The survey included questions on PC usage, Internet usage, Web site usage, electronic business/electronic commerce activity and IT spending within the business sector (for Annual Survey on Information Technology Usage and Penetration in Business Sector questionnaire, see Annex 5). The C&SD conducted the 2004 survey under the auspices of the Office of the Government Chief Information Officer (OGCIO). The results were used as an important input of the development of Hong Kong's IT strategy.

Reflecting the increasing market focus on wireless applications, the following four new questions on the usage of wireless and mobile services/technology were added: (i) wireless and mobile devices in use; (ii) wireless and mobile transmission technology employed; (iii) wireless and mobile services employed from service providers; and (iv) wireless and mobile applications involved. A fifth question - reasons for not using wireless and mobile services - was added to identify barriers to this new area of IT applications.

Another area the business survey covers is e-commerce. Hong Kong adopts the broad definition of **e-commerce** promulgated by the Organization for Economic Cooperation and Development (OECD).[6] The survey collected information related to the order or purchase of goods, services or information via electronic means; receipt of goods, services or information via electronic means; sales of goods, services or information via electronic means; and the delivery of goods, services or information via electronic means.

The 2004 business survey used the Central Register of Establishments (CRE) as the sampling frame.[7] The survey covers the following industries: 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 sectors.

To arrive at the survey frame, the industry groups were stratified and divided by employment size. A total of 4'756 establishments were selected for enumeration in the 2004 survey, representing a total of 326'000 establishments. Around 50 per cent (or 166'000 establishments) are classified as either wholesale, retail and import/export trades, restaurants and hotel sector. About 87 per cent of the establishments were classified as small size. The establishments are categorized into small, medium and large (Table 5.2.1).

Data collection was made through a questionnaire mailed to the selected establishments. Electronic copies were also provided upon respondents' request. Personal, face-to-face, or telephone interviews were used to verify the information or to assist respondents in completing the questionnaires. By the end of the survey period, around 3'500 establishments were successfully enumerated, representing a 97 per cent response rate.

According to the 2004 survey results, some 58.4 per cent of the establishments used personal computers

Table 5.2.1: Distribution of establishments

Distribution of establishments by economic activity and number of persons engaged, 2004

Size of establishments/Economic activity	*Number of persons engaged*		
	Small	*Medium*	*Large*
Manufacturing (Industry sector 3)	<10	10-99	>=100
Non-manufacturing (Industry sectors 4-9)	<10	10-49	>=50

Source: C&SD.

Table 5.2.2. Business Use of ICT

Results of the annual Survey on Information Technology Usage and Penetration in the Business Sector, 2000-2004

Data Item	*2000*	*2001*	*2002*	*2003*	*2004*
	(As a % of all establishments)				
Personal Computer (PC) Usage					
Establishments using personal computer	51.5	49.7	54.5	54.8	58.4
Internet Usage					
Establishments having Internet connection	37.3	37.2	44.2	47.5	50.4
Web Site Usage					
Establishments having Web page/Web site	7.3	10.7	11.8	13.5	14.8
Electronic Business					
Establishments having *ordered or purchased* goods, services or information through electronic means	4.9	6.2	7.1	9.6	11.7
Establishments having *received* goods, services or information through electronic means	35.3	40.0	45.2	51.0	53.0
Establishments having *sold* goods, services or information through electronic means	0.3	1.1	1.5	1.1	1.3
Establishments having *delivered* goods, services or information through electronic means	8.1	12.4	12.1	13.6	15.3

Source: C&SD.

(PCs), with large establishments showing a higher usage rate (97%) than small- or medium-sized establishments (Table 5.2.2). PC use was highest in the financial, real estate and business sectors (82%). At the same time, more than 86 per cent of the establishments using PCs had an Internet connection, equivalent to 50 per cent of all establishments. Internet is mostly used for communication (email) (Figure 5.2.1). Some 15 per cent of establishments had their own website, a slight increase the year before (2003). Again, the presence of websites is higher or more widespread in larger establishments.

C&SD carried out the survey itself and verified and validated the information collected. This ensured the completeness of entries, consistency among data items and the credibility of the reported data. Discrepancies or inconsistencies in the reported information were clarified by contacting respondents by phone or by field verification visits.

An establishment is considered to have ordered or purchased goods or services through electronic means if the confirmation of order or purchase is done entirely through electronic means. In 2004, close to 12 per cent of establishments had purchased or ordered goods through electronic means. Delivery of goods via electronic means is even higher, at more than 15 per cent. However, the percentage of establishments that had sold goods and services via electronic means remains low, at 1.3 per cent (Table 5.2.2).

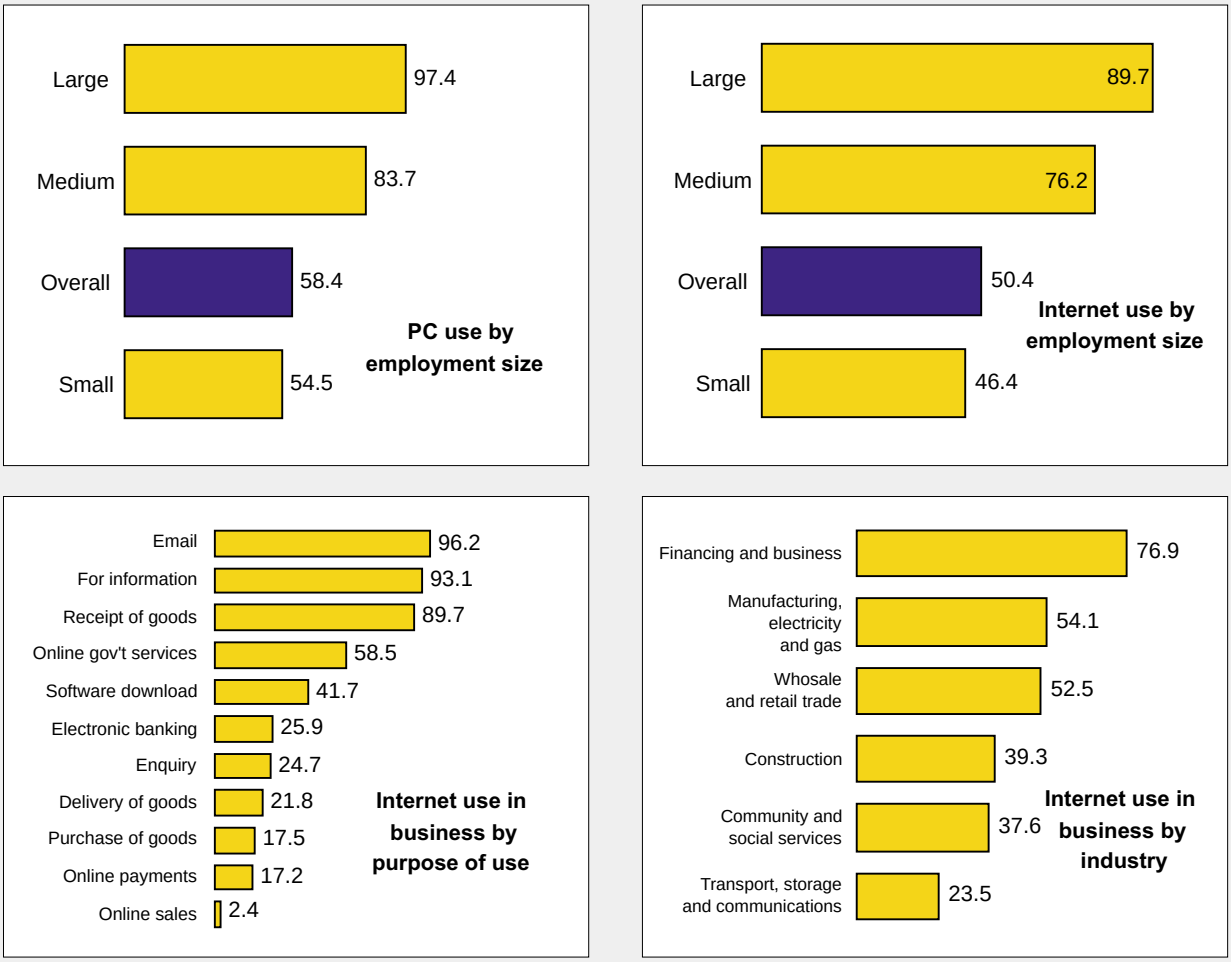
PC and Internet usage vary considerably according to the size of businesses. In 2004, large establishments showed more usage of both ICTs than medium and small establishments (Figure 5.2.1). The same is true for the presence of websites and experience in the use of electronic commerce.

Another area covered by the business survey is IT security. With the exponential growth in the use of IT and e-business transactions across the world, IT security issues, including viruses and computer-related crimes, are becoming increasingly important.

According to the 2004 survey, 45 per cent of establishments had suffered from some form of

Figure 5.2.1: Internet and PC usage in Hong Kong's business sector

PC use in business sector by employment size (top left); Internet use in business sector by employment size (top right); Internet use in business sector by purpose of use (bottom left); and Internet use in business sector by type of industry (bottom right)



Source: ITU adapted from C&SD.

infringement. Ninety-nine per cent of these businesses were victim of a virus attack, followed by denial of service (9.4%) and hacking (6.4%). After experiencing such problems, 95 per cent of the establishments took various types of remedial measures and 36 per cent adopted/installed more stringent security technologies.

The results of these IT security questions have been exploited both by the government and the business sector to formulate policies and to identify necessary actions. Results suggest that the business sector has adapted quite well to new IT security breaches and has taking decisive remedial measures when such incidents occur. The government in particular is aware of the importance of information security to businesses and the community at large. Hong Kong has organized different IT security awareness programmes for both the business sector and the general public to raise awareness and to suggest solutions.

The government has also set up a dedicated information security website portal (INFOSEC, at www.infosec.gov.hk/engtext/main.htm) to disseminate and promote the latest information on information security.[8] OGCIO keeps reviewing the current legislation too see whether it keeps up with the latest IT and e-commerce developments, so as to provide maximum protection to its citizens and businesses.

5.3 IT expenditure

Data on **IT expenditure** in the business sector have been collected by the Census and Statistics Department (C&SD) in a series of annual economic surveys since the year 1998. Data items collected include expenditure

on purchases of computer hardware (e.g. PCs, mainframes, notebook computers, storage devices and components) and peripherals (e.g. printers, scanners) for own use; expenditure on purchases of computer programs, software and databases for own use, (including both standard ones available in the market and those specifically designed/ developed by other firms); payments for other IT-related services (e.g. system design and development, computer training, Internet page design, Internet connection, website hosting, computer equipment leasing, repair and maintenance of computer products); and cost of in-house development of computer programs and databases for own use. Based on the survey results, a statistical series on IT expenditure in Hong Kong for 1998 to 2003 has been compiled and analyzed.

5.4 Manpower Survey of the IT Sector

The Census and Statistics Department (C&SD) also conducts the **Manpower Survey of the IT Sector** on behalf of the Vocational Training Council (VTC).[9] The Committee on Information Technology Training and Development of the Vocational Training Council (VTC) is the agency responsible for the assessment of manpower and training needs in the information technology sector in Hong Kong. Its duties includes the recommendation of measures needed for the development of employers' training facilities and educational and training institutions.

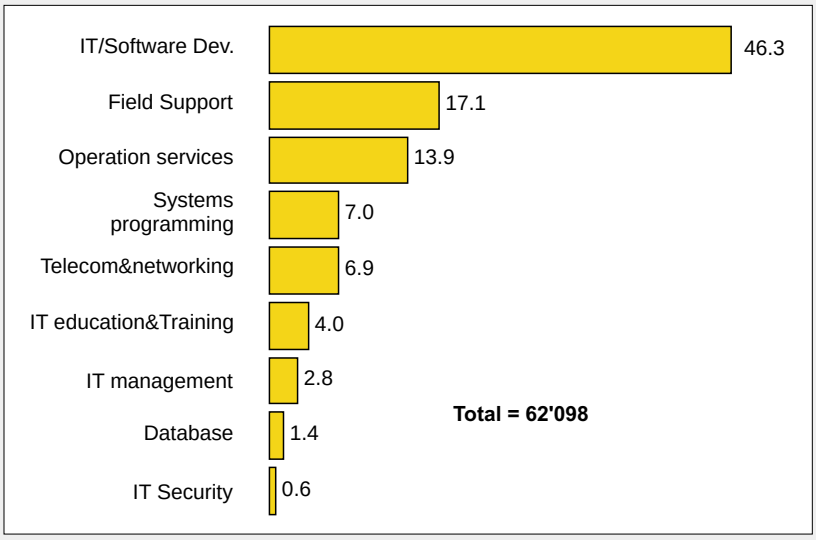
Previously (before 1991) called *electronic data processing sector*, these surveys have been conducted every two years since 1983. They collect data on the manpower demand and training situation of IT staff in various economic sectors and government bodies. The 2004 survey was conducted in March 2004 and the results were released in October 2004.[10] The survey covered nine broad categories of Information Technology (IT) jobs, including IT management, IT software development, telecommunications and networking, IT security, database, systems programming, field support, operation services and IT education and training.

The 2004 survey covered the entire economy, including all relevant government units to ensure that all IT employees were included or sampled. The survey frame was drawn from the Central Register of Establishments (CRE) maintained by C&SD and covered about 86'000 companies. The stratified random sampling method was used to select the sample (1'528 companies, or 1.8%). However, the sample excluded all companies with less than five employees.

The respondent companies were asked to complete a detailed questionnaire on IT manpower and training needs.[11] Data collection was carried out by C&SD, by personal interviews, to ensure proper completion of survey questionnaire.[12]

The IT employees were classified according to their job specifications based on the duties they performed. C&SD verified and coded the information collected and aggregated it to reflect the overall IT manpower situation

Figure 5.4.1: Manpower structure by Job category
Distribution of IT employees by job category, March 2004, %



Source: ITU adapted from VTC.

of the whole sector. Out of the total sample (1'534), around 83 per cent completed the survey (Figure 5.4.1).

5.5 ICTs in school and in the health sector

Although Internet connectivity in Hong Kong's academic and health sector is high, there is no official survey carried out to measure the magnitude or extent of ICT availability in the sector, or to measure usage by teachers, students or medical practitioners. The Department of Health (DoH) has been conducting a series of Health Manpower Surveys (HMS) amongst healthcare personnel practising in Hong Kong since 1980.[13] However, the survey does not include any questions on the availability of ICTs in the health sector, nor usage of ICTs by health practitioners.

To compensate for the lack of an ICT survey, the Hospital Authority (HA), one of the most active agencies involved in information technology in the health care sector, maintains some data on ICT availability.[14] HA is responsible for managing Hong Kong's 43 hospitals and institutions, 45 specialist outpatient clinics and 74 general outpatient clinics. As of June 2005, all HA hospitals and institutions were connected to the Internet via a secured Demilitarized Zone (DMZ) network infrastructure from around 25'000 computers. Most importantly, Internet access is available to all HA staff, who are asked to provide their details in order to register the number of Internet users within the HA.

5.6 Government Use of ICTs

Adoption of IT within the government sector is increasing (Table 5.6.1). However, there is no official survey that collects information on the availability and use of ICTs within the government. Administrative data based on inventories of computers and knowledge of staff activities enables Hong Kong to supply data on the sector. The Office of the Government Chief Information Officer (OGCIO) is responsible for coordinating government computerization and regularly publishes information on their website.[15]

As of March 2005, 76 per cent of government staff had access to computers; while close to 52 per cent and 41 per cent had access to the Internet and email, respectively.

Data describing the magnitude of government IT investment, as well as the percentage of staff with access to a PC, email and the Internet are made available by OGCIO in *Hong Kong as an Information Society* publication of the C&SD. Information on the number of IT staff, such as the number of analysts/ programmers, computer operators and data processors, are also available.

The government also encourages the population to interact with it online. To facilitate this, the government portal at www.info.gov.hk provides a summary of available information about public administration in both Chinese and English. The government launched the Electronic Service Delivery (ESD) (at www.esd.gov.hk) portal in December 2000. The portal provides more than 200 online government services and a variety of e-commerce services.

Based on the results of the 2004 round of THS on IT usage and penetration, 28.5 per cent of all persons

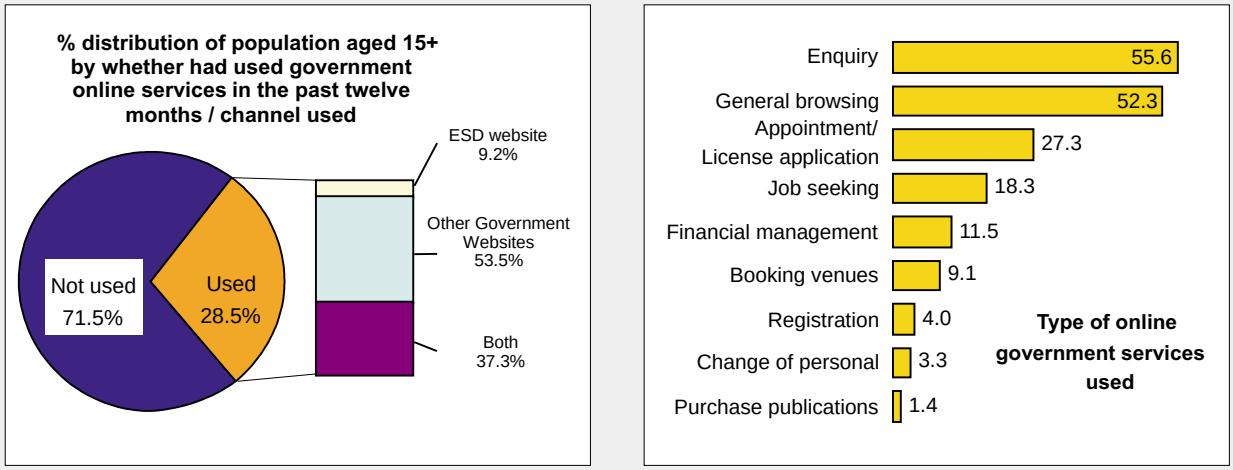
Table 5.6.1: Government spending on IT and computerization in government

	December 2002	*December 2003*	*December 2004*	*March 2005*
Government IT Expenditure (excluding IT expenditure of the Housing Authority, Hospital Authority and subvented schools)[16]	$2'980 million (for 2001-02)	$3'213 million (for 2002-03)	$3'081 million (for 2003-04)	$2'834 million (for 2004-05)
Percentage of staff with PC	64.0	71.0	72.2	76.2
Percentage of staff with Internet access	40.3	46.0	46.9	51.9
Percentage of staff with internal e-mail access	27.3	31.0	35.0	40.9

Source: OGCIO available at www.ogcio.gov.hk/eng/about/ecomp.htm.

Figure 5.6.1: Government online

Percentage distribution of population (aged 15+) that had or had not used e-government services by type of service (left) and the type of e-government services used by e-government users (right), 2004



Note: Electronic Service Delivery (ESD) is a portal that provides more than 200 online governement services and a variety of e-commerce services.
Source: C&SD.

aged 15 and over in Hong Kong had used one or more types of online Government services for personal matters in the past twelve months. Of these, 46.5 per cent had used government services via the ESD website. More than half (55.6 per cent) had accessed the government web sites for enquiry services, and 27.3 per cent for appointment booking or application for licences/ certificates (Figure 5.6.1).

[1] Inmates of institutions and persons living on board vessels were excluded from the survey.

[2] Hong Kong Permanent Residents who have stayed in Hong Kong for at least three months during the six months before or for at least three months during the six months after the reference time-point, regardless of whether they are in Hong Kong or not at the reference time-point; and Hong Kong Non-permanent Residents who are in Hong Kong at the reference time-point.

[3] Hong Kong Permanent Residents who have stayed in Hong Kong for at least one month but less than three months during the six months before or for at least one month but less than three months during the six months after the reference time-point, regardless of whether they are in Hong Kong or not at the reference time-point.

[4] A quarter is a standard statistical term to denote form of dwelling of accommodation.

[5] In most OECD member some countries, the lower age limit is 15. In the 2004 round of THS on IT usage and penetration, some 27‘844 persons were enumerated.

[6] The OECD has both the narrow and broad definitions of e-commerce based on a transactional approach. The broad definition covers all electronic transactions conducted via computer-mediated networks, while the narrow definition covers only those conducted via the Internet. For both the definitions, the payment and ultimate delivery of the goods and services may be conducted on or off-line. See www.oecd.org/dataoecd/12/55/2092477.pdf.

[7] This is a comprehensive register maintained by the C&SD and updated by reference to records of the Business Registration Office of the Inland Revenue Department.

[8] Various government bureaux in Hong Kong as well as departments and private organizations have been actively participating in the promotion and public education on information security and prevention of computer related crimes. The web site aims to serve as a one-stop portal for general public to effectively access information and resources on information security as well as measures and best practices for prevention of computer related crimes, www.infosec.gov.hk/engtext/main.htm.

[9] The Vocational Training Council (VTC) was established in 1982 under the VTC Ordinance to provide and promote a cost-effective and comprehensive system of vocational education and training to meet the needs of the economy, see www.vtc.edu.hk.

[10] See www.ittdc.org/cittd/2004/executive_summary.pdf.

[11] For a copy of the survey questionnaire, see www.ittdc.org/cittd/2004/app_3.pdf.

[12] For a detailed description of the sampling plan, see www.ittdc.org/cittd/2004/app_27.pdf.

[13] See www.info.gov.hk/dh/health_new/background/index.htm.

[14] The Hospital Authority (HA) is a statutory body established on 1 December 1990 under the Hospital Authority Ordinance to manage all public hospitals in Hong Kong. It is an independent organization that is accountable to the Government through the Secretary for Health and Welfare, who is responsible for the formulation of health policies and monitoring the performance of the Authority, see www.ha.org.hk/.

[15] Information for 1992-2001 is also available in the *Hong Kong as Information Society 2004* publication of C&SD and OGCIO website, see www.ogcio.gov.hk/eng/about/ecomp.htm.

6. DISSEMINATION

The Census and Statistics Department (C&SD) provides a list of all government departments producing official statistics covering their own areas. This list is provided as a central repository of web links for easy retrieval of sectoral statistics produced by other agencies.[1]

Aside from its website, C&SD disseminates the data it collects through printed publications, available both in paper copy and by electronic download (pdf).[2] At the same time C&SD has published annually the *"Hong Kong as an Information Society"* report since 2002. The publication presents a compilation of statistical information coming from a variety of sources relevant to the development of the information society. Information from the two ICT surveys conducted by C&SD (the household and business survey on IT usage and penetration) are included in the report. Besides covering the usage and penetration of IT both in the business sector and in households, it shows developments in telecommunications services, analyses the demand for manpower in the IT&T sector, and highlights developments in relevant educational programmes.

The compilation of results from different surveys into one single publication is useful for data users and analysts and provides a one-stop reference for data covering not only the ICT sector itself, but also the availability and use of ICTs across other sectors.

[1] Official statistics comprise statistics compiled by the Census and Statistics Department (C&SD) and those compiled by various policy bureaux and other government departments, see www.info.gov.hk/censtatd/eng/hkstat/osos_index.html.

[2] The results of the household and business surveys are published in paper and electronic format, see www.statisticalbookstore.gov.hk.

7. INTERNATIONAL BENCHMARKING

Surveys carried out in different countries have different coverage and have used different methodologies. This is the case of Hong Kong's surveys—which may not be strictly comparable with other economies. However, compared to, for example, Australia, Canada and the United Kingdom, where similar ICT surveys have been carried out, Hong Kong's survey findings show that IT penetration and usage, both in the business and household sectors, are comparable to that in the other advanced economies.

The main obstacles to international comparisons today are the lack of harmonized indicators and survey methodologies. To overcome this problem, which has been identified by different regional and international organizations, a number of cooperation project have been established. A major effort in this direction is being made by a number of regional and international organizations that have formed the "*Partnership on Measuring ICT for Development*". The partnership's main objective is to harmonize indicators and survey methodologies in countries and increase the availability of information on ICT access and usage.[1] An important step was the outcome of the partnership's WSIS Thematic meeting on *Measuring the Information Society* (held in Geneva in February 2005), which agreed on a set of core ICT indicators (Annex 6). Hong Kong, as one of the economies that already carries out surveys on the household and business sectors to measure ICT uptake, can easily map its survey questionnaires to include the agreed set of core ICT indicators. For example, most of the indicators in the agreed core set are already collected in Hong Kong, partly because Hong Kong modelled its survey questionnaire on that of OECD.

Some benchmarking figures from international organizations are used to compare Hong Kong's ICT performance with other economies. Examples include Hong Kong's performance in the ITU's Mobile/Internet Index, Internet case study rankings and Digital Access Index (DAI) (Box 7.1).[2] The results of the DAI was made available to the public through the Internet and was communicated to Hong Kong's Legislators when OGCIO presented the results of its 2003 IT surveys on both households and businesses (Table 7.1).

Hong Kong is conducting a survey to establish a Digital Inclusion Index, which is composed of a set of reliable indicators robustly reflecting the degree of digital inclusiveness in Hong Kong. Also, agencies such as OFTA and C&SD believe that the result of its surveys, both household and business surveys, show areas where IT adoption is strong or weak. The results enable them to adapt and formulate policies that address specific shortcomings.

Statistical indicators could be used to measure the extent of the digital divide. Among the most important are infrastructure readiness, ICT penetration rates and intensity indicators. Indicators of infrastructure readiness such as the number of telecommunications access lines; number of subscribers and secure servers are used to measure ICT penetration rates. These can be further analysed across various socio-economic characteristics of the population. Analysis using the *Gini* coefficient is also a useful statistical tool for measuring inequality in the distribution of access to computers and the Internet by income. As regards the intensity of use, indicators on frequency, location, and purpose of use are relevant. Most of the above indicators are already available in Hong Kong.

For example, the 2004 household ICT survey revealed that the PC and Internet penetration rates in Hong Kong increased with income and educational level. For example, households with monthly income less than HK$ 10'000 (US$1'285), only 39 per cent had a PC; but the figure is 95 per cent for those with a monthly income above HK$ 50'000 (US$6'430) (Figure 5.1.1).

Box 7.1: ITU indices[3]

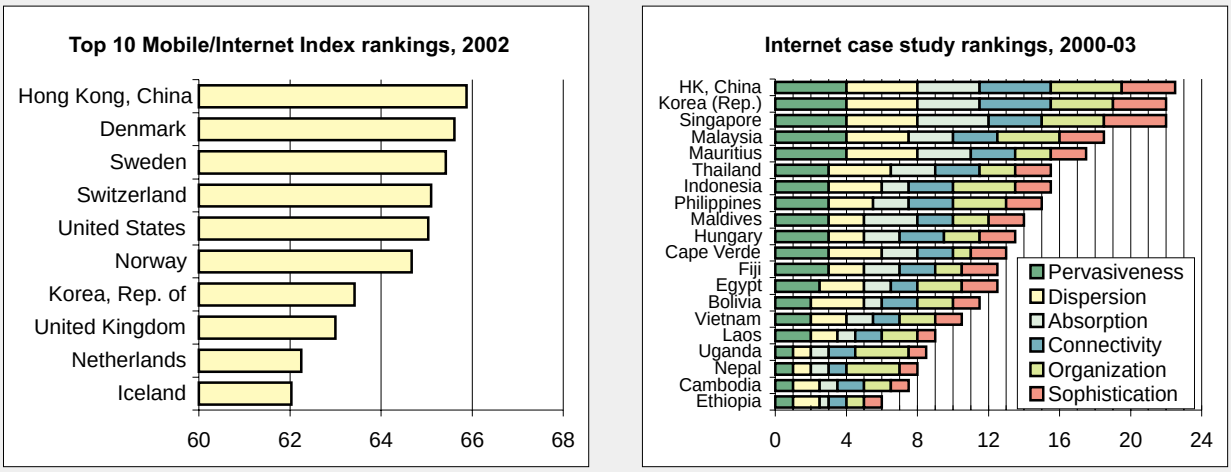
As the United Nations' agency responsible for telecommunications, and as part of its mandate to help extend the benefits of ICTs to the world's populations, ITU has long been involved in developing statistics and in analysing ICT developments. While many other indices have drawn upon ITU resources, ITU itself has recently developed its own indices.

In its fourth Internet Report, *Internet for a Mobile Generation*, ITU published a Mobile/Internet index in 2002 measuring the relative levels of mobile and Internet development (Box Figure 7.1, left).[4] This index also attempted to predict how well each economy might take advantage of ICTs in the future. The index covered 177 economies with 26 quantitative variables broken into three clusters: infrastructure, usage and market structure. Benefits of the Mobile/Internet Index methodology include the use of strictly quantitative data, a significant number of variables and wide coverage. Among improvements identified for this index are the use of a weighting structure for categories and inclusion of a method for testing the robustness of rankings.

As part of the Internet Case Studies project, ITU used the Mosaic Group framework for measuring the state of Internet diffusion in different economies.[5] Overall scores for the six categories: - pervasiveness, sector absorption, connectivity infrastructure, organizational infrastructure, geographic dispersion, and sophistication of use - have been compiled for 20 economies (Box Figure 7.1, right).

Box Figure 7.1: ITU indices

Top ten economies in Mobile/Index, 2002 (left) and Mosaic values of ITU Internet Case Study economies, 2000-03 (right)



Source: ITU Internet for a Mobile Generation and ITU Internet Country Case Studies.

Table 7.1: Top 10 Economies, Digital Access Index (DAI) 2003

	Country	*INFRA-STRUCTURE*	*AFFOR-DABILITY*	*KNOW-LEDGE*	*QUALITY*	*USAGE*	***DAI***
	HIGH						
1	Sweden	0.94	0.99	0.99	0.64	0.67	**0.847**
2	Denmark	0.89	0.99	0.99	0.66	0.60	**0.828**
3	Iceland	0.89	0.99	0.96	0.50	0.76	**0.820**
4	Korea (Rep.)	0.74	0.99	0.96	0.74	0.65	**0.817**
5	Norway	0.84	0.99	0.99	0.55	0.59	**0.793**
6	Netherlands	0.78	0.99	0.99	0.61	0.60	**0.792**
7	**Hong Kong, China***	**0.93**	**1.00**	**0.83**	**0.68**	**0.51**	**0.790**
8	Finland	0.81	0.99	0.99	0.55	0.60	**0.786**
9	Taiwan, China	0.98	0.99	0.95	0.56	0.45	**0.786**
10	Canada	0.69	0.99	0.97	0.64	0.60	**0.779**

Note: * For detailed description on how the DAI was computed for Hong Kong, see Box 7.2.

Box 7.2: Compiling the Digital Access Index[6]

The following example shows how the Digital Access Index (DAI) is compiled for Hong Kong, China. The Office of the Telecommunications Authority (OFTA) provided all ICT infrastructure data. Population and Internet usage statistics are from the official statistical agency, the Census and Statistics Department (C&SD). The Internet access prices are from i-Cable. Hong Kong is a role model for data availability with all of these indicators freely available on the OFTA, C&SD and i-Cable websites.[7] As for other economies, GNI per capita, exchange rates, literacy and school enrolment are from international sources.

DAI data for Hong Kong, China

2002

Indicator	*Value*
Population	6'786'100
Gross National Income (GNI) per capita in United States dollars (US$)	US$ 24'750 (2'063 month)
Annual average exchange rate (Hong Kong Dollar (HK$) to one (US$)	7.80
Fixed telephone subscribers	3'841'787
Fixed telephone subscribers per 100 inhab.	56.6
Mobile cellular subscribers	6'218'984
Mobile subscribers per 100 inhabitants	91.6
20 hours Internet access per month	HK$ 30 (US$ 3.85)
Adult literacy (age 15 and over)	93.5
Combined school enrolment (gross primary, secondary and tertiary)	63
International Internet bandwidth	12'668 Mbps
Bits per capita	1'866.8
Broadband subscribers	989'115
Broadband subscribers per 100 inhabitants	14.6
Internet users	2'918'800
Internet users per 100 inhabitants	43.0

Source: OFTA, C&SD, i-Cable, World Bank, IMF, UNDP.

Infrastructure

The goalpost for fixed telephone subscribers per 100 inhabitants is 60: 56. 6 / 60 = 0.94.

The goalpost for mobile cellular subscribers per 100 inhabitants is 100: 91.6 / 100 = 0.92.

Each indicator is weighed equally:
0.94 x (1/2) + 0.92 x (1/2) = 0.47 + 0.46 = 0.93.

Affordability

Affordability indicator:
1 - (20 hours of Internet access / Monthly GNI * 100) = 1 - (US$ 3.85 / US$ 2'063 = 0.2998).

The goalpost for affordability is 0.1 : 1 - (0.2998 / 100) = 0.998.

Knowledge

The goalpost for literacy and enrolment is 100[8]:
93.5 / 100 = 0.935 and 63 / 100 = 0.63.

Literacy is given two-thirds weight and enrolment one third: 0.935 x (2/3) + 0.63 x (1/3) = 0.83.

Quality

The goalpost for bits per capita is 10'000. Because of the extreme range among economies and the fact that international bandwidth is more critical at early stages of development, logarithms are used to transform the values: (LOG (1'866.8) – LOG (0.01)) / (LOG (10'000) – LOG (0.01)) = 0.88.

The goalpost for broadband subscribers per 100 inhabitants is 30: 14.6 / 30 = 0.49.
Each indicator is weighed equally: 0.88 x (1/2) + 0.49 x (1/2) = 0.44 + 0.24 = 0.68.

Usage

The goalpost for Internet users per 100 inhabitants is 85: 43.0 / 85 = 0.51.

DAI

The Digital Access Index is the average of the five categories above:
(0.93 x 0.2) + (0.998 x 0.2) + (0.83 x 0.2) + (0.68 x 0.2) + (0.51 x 0.2) = **0.79.**

[1] Following the first phase of the World Summit on the Information Society (WSIS), held in Geneva in December 2003, a number of key international stakeholders involved in the statistical measurement of ICTs joined forces to create a global Partnership on Measuring ICT for Development. The Partnership was formally launched during the eleventh United Nations Conference on Trade and Development (UNCTAD XI), held in Sao Paulo, Brazil, in June 2004. Current partners include the International Telecommunications Union (ITU), the Organization for Economic Co-operation and Development (OECD), UNCTAD, UNESCO Institute for Statistics (UIS), four UN Regional Commissions (ECA, ECLAC, ESCAP, and ESCWA), the UN ICT Task Force, EUROSTAT and the World Bank. Some national statistics offices (NSOs) from statistically advanced countries also contribute to the partnership activities and provide expertise and advice to NSOs from developing countries, and transfer knowledge in areas such as methodologies and survey programmes. Additional information including the list of partnership activities is available at www.itu.int/ITU-D/ict/partnership/index.html.

[2] The Digital Access Index is the first global index to rank Information and Communication Technology (ICT) developed by ITU in 2003. It combines eight variables, covering five areas to provide an overall country score. The areas are availability of infrastructure, affordability of access, educational level, quality of services and Internet usage. The results of the index point to potential stumbling blocks in ICT adoption and can help countries identify their relative strengths and weaknesses. Additional information is available at www.itu.int/ict/dai/index.html.

[3] Extracted from Chapter 5 of the ITU's *World Telecommunication Development Report: Access Indicators for the Information Society*, ITU, 2003.

[4] ITU. (2002). *Internet Report: Internet for a Mobile Generation*. Available from : http://www.itu.int/osg/spu/publications/sales/mobileinternet/index.html; accessed November 11, 2003.

[5] ITU. Internet Country Case Studies. Available from: http://www.itu.int/ITU-D/ict/cs; accessed November 11, 2003.

[6] Extracted from Chapter 5 of the ITU's *World Telecommunication Development Report: Access Indicators for the Information Society*, ITU, 2003.

[7] Apart from featuring monthly time series OFTA is one of the few regulators that also compiles international Internet bandwidth. See the "Data and Statistics" web page under the "Telecom Facts" menu on the OFTA website. www.ofta.gov.hk; accessed November 15, 2003. Bi-annual (mid and end of year) population data and annual survey data on Internet users are available from the C&SD website at www.info.gov.hk/censtatd/eng/hkstat/hkinf/it/it_2_index.html; accessed November 15, 2003. Internet access prices are from i-Cable's website: http://www.i-cable.com/ourservices/dialup/e-home.html; accessed November 15, 2003.

[8] The United Nations Development Programme establishes the goalposts and weights for the indictors in the Knowledge category. See http://www.undp.org/hdr2003/pdf/hdr03_backmatter_2.pdf; accessed November 15, 2003.

8. LOOKING FORWARD

The Census and Statistics Department (C&SD) faces major issues and challenges in developing ICT statistics. While a framework on this area is in place, it needs to be reviewed regularly to reflect the latest ICT developments. C&SD will continue to enhance its framework for measuring the information society, with a view to meeting the needs of Hong Kong and contributing to the international statistical community.

An important challenge is the comparability of data over time, which is particularly difficult, given the rapid technological and market development. Due to the rapid developments in IT, the definition of a personal computer, for example, has been changed to include not just a desktop computer, but also a laptop/ notebook computer and a Personal Data Assistant (PDA, including pocket PC, handheld devices and PDA phones), devices that have become popular over the last few years. While this is a necessary adoption to changes, it makes the penetration rates over the years not strictly comparable.

The above also applies to the measurement of Internet and website penetration. The speed and mode of Internet connection is changing rapidly. Thus, instead of just looking at the overall penetration rate, detailed analysis of Internet penetration by different modes of connection is necessary.

The measurement of e-commerce is becoming more difficult due to the breakdown of business receipts by electronic sales and customer group. While there has been an increasing demand for more comprehensive and timely ICT statistics, resource constraints of the business sector have also caused increasing reservation about providing raw data, including in a timely manner.

The revision to internationally agreed industry classification (ISIC Rev. 4), particularly the introduction of the Information and Communication section will have an impact on the IT&T sector classification in Hong Kong. Also, should Hong Kong choose to adhere to the international agreed set of core ICT indicators, there will be a need to slightly modify the questions included in its surveys.

9. CONCLUSIONS

Hong Kong's success in the collection, dissemination and use of Information and Communication Technology (ICT) statistics makes it a good case study. A number of useful experiences that can help other countries improve their ICT data collection and dissemination practices need to be highlighted:

1) The legal basis for data collection and dissemination plays a major role in the production of timely and reliable statistics.

   a) The Census and Statistics Department (C&SD), Hong Kong's official statistics agency, is an independent authority with a strong mandate and legal foundation. Its data collection is based on the Census and Statistics Ordinance. Beside the population census, the Ordinance directs the C&SD to carry out statistical surveys so as to cover specific areas that affect social and economic development in Hong Kong (such as ICT). The provisions of the Ordinance facilitate the statistical data collection process and ensure the quality of information.

   b) Similar to the C&SD, the Office of Telecommunications Authority (OFTA), Hong Kong's telecommunication regulator, is backed by a strong legal basis. Telecommunication operators are, by law, required to collect and provide data to OFTA. They are also obliged, by licence conditions under their licences, to provide data relating to their businesses on a periodic basis, thus helping the regulator in gathering and dissemination data. In many other countries, confidentiality of information is one of the main obstacles in data collection and dissemination and hampers information sharing efforts.

2) Coordination and cooperation among different ICT players is important to ensure non-duplication of efforts and maximum utilization of available resources.

   a) The administrative process to conduct Hong Kong's surveys is an example of good coordination and cooperation among different agencies in Hong Kong. The Office of Government Chief Information Officer (OGCIO) works with the Census and Statistics Department (C&SD) in the formulation and review of ICT survey questionnaires as well as analysis and dissemination of survey results. Together, the agencies review survey questionnaires to delete obsolete questions and add questions on new ICT topics, ensuring that questions respond to Hong Kong's policy needs.

   b) All ICT (and other) surveys are conducted or commissioned by C&SD. This centralized process ensures that data collection, data processing and analysis are carried out in accordance with international statistical standards, and conform with the Fundamental Principles of Official Statistics.

   c) C&SD produces the final statistical publications and issues press releases on the summary survey findings. OGCIO uses these results and statistics to formulate policies and identify problem areas.

3) There have been efforts to produce model surveys for data collection on business, individual and household use of ICTs to enhance comparability of data collected and to reduce costs. The *Partnership on Measuring ICT for Development* has developed a core list of ICT indicators, and will provide a model questionnaire and survey methodology, which countries should use.

   a) The coverage of the ICT sector in Hong Kong is based on the Organization for Economic Co-

operation and Development's (OECD) classification of the Information and Communication Technology (ICT) sector. At the same time, the questionnaire used for ICT data collection (household and business) is based on OECD model surveys and questionnaires.

b) The ICT surveys (household and business) in Hong Kong are stand-alone surveys. This approach ensures that relevant and detailed questions on ICT usage by individuals, households and businesses are collected. Specific demographic characteristics such as age, educational attainment, geographical location, and household income can be cross-tabulated. While stand alone ICT surveys (as opposed to ICT questions attached to other surveys) are useful because they do not need to rely on existing classifications used in other surveys, they are most costly and time consuming.

4) Timeliness, comparability, and accuracy of data are important to optimize the usefulness of information for policy input.

a) C&SD complies with IMF's Special Data Dissemination Standard (SDDS), which has contributed to Hong Kong's high standard in terms of its statistical work. It also allows policy makers, international consulting companies and organizations to compare and benchmark Hong Kong's achievements to other countries and highlight strengths and weaknesses.

b) C&SD releases statistical information as early as possible, and believes that the usefulness of statistics is related to the timeliness with which the statistics are made available to users. The ICT surveys (both households and business) results are released and published in less than six months following the survey period.

c) OFTA ensures timeliness and transparency of telecommunication statistics by publishing monthly administrative data on its website.

5) Data collection should be driven by policy needs. Policy-makers have to recognize the importance of reliable and up-to-date statistics to formulate policies and inform the public about developments in the ICT arena.

a) OGCIO, policy and strategy advisor, and executive arm on IT matters in Hong Kong, is the major user of ICT statistics collected by C&SD. The analyses made by OGCIO are used to formulate ICT –related policies and strategies and to measure their progress or delay in the implementation, as reflected by the survey data.

b) OGCIO is also a main source of funding for ICT surveys. It regularly commissions the C&SD to conduct annual surveys on the availability of ICTs and usage of ICT in households and business sectors of the economy. This ensures that periodic ICT surveys are conducted in Hong Kong.

ANNEX 1

List of industries covered by the IT & T sector

(I) Manufacturing of IT&T products
Computing machinery and equipment, manufacturing (HSIC 382200)
Telephone and communications equipment, manufacturing (HSIC 383202)
Electronic parts and components for computer and telecommunications equipment, manufacturing (HSIC 384001)
(II) Communication system installation and maintenance
Intercommunication system, installation and maintenance (HSIC 551602)
Telecommunications system, installation and maintenance (HSIC 551701)
(III) Distribution of IT&T products
Telephone system, wholesale (HSIC 611821)
Telecommunications equipment (excl. telephone system), wholesale (HSIC 611822)
Computer, computer peripherals and software packages, wholesale (HSIC 611824)
Telephone system, retail (HSIC 621721)
Telecommunications equipment (excl. telephone system), retail (HSIC 621722)
Computer, computer peripherals and software packages, retail (HSIC 621724)
Telephone system, import & export (HSIC 631821)
Telecommunications equipment (excl. telephone system), import & export (HSIC 631822)
Computer, computer peripherals and software packages, import & export (HSIC 631824)
(IV) Telecommunications services
Wireline based fixed telecommunications network services (HSIC 732101)
Fixed telecommunications network services, n.e.c. (HSIC 732199)
Radio paging services (HSIC 732200)
Mobile communications services (HSIC 732901)
Internet access services (HSIC 732902)
Satellite communications services (HSIC 732903)
Telecommunications services, n.e.c. (HSIC 732999)
(V) Information technology services
Software development and maintenance services (HSIC 833301)
Data processing and tabulating services (HSIC 833302)
Information technology related services, n.e.c. (HSIC 833399)
Engineering and technical services related to computer and telecommunications equipment (HSIC 833501)

ANNEX 2

List of industries covered in ICT sector but not in IT&T sector

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

ANNEX 3

ITU Telecommunication Indicators Questionnaire 2004

TELEPHONE NETWORK	
i112	Main telephone lines in operation
i117	Total capacity of local public switching exchanges
i1142	Percent of main lines connected to digital exchanges
i116	Percent of main lines which are residential
i1162	% of main lines in urban areas
i1112	Public payphones
i1163	Number of localities with telephone service
i1191	International telephone circuits
MOBILE SERVICES	
i271	Cellular mobile telephone subscribers
i271p	- Cellular mobile subscribers - prepaid card
i2712	- Digital cellular mobile subscribers
i271m	- Number of mobile telephone Internet subscribers
i271h	- Number of high-speed mobile subscribers (e.g., GPRS)
i271land	Percent coverage of mobile cellular network (land area)
i271pop	Percent coverage of mobile cellular network (population)
i133wm	Total outgoing mobile minutes
i133sms	Number of mobile Short Message Service (SMS) sent
i151p	Cellular tariffs - Pre-paid connection charge
i153p	Cellular tariffs - Pre-paid per min. local call (peak)
i153po	Cellular tariffs - Pre-paid per min. local call (off-peak)
i153psms	Cellular tariffs - price of Pre-paid SMS
TEXT/DATA NETWORK	
i311	Telex subscriber lines
i412	Private leased circuits
i413	Total subscribers to public data networks
i4213	Internet subscribers (total)
i4213d	- Dial-up Internet subscribers
i4213ca	- Cable modem Internet subscribers
i4213dsl	- DSL Internet subscribers
i4213ob	- Other broadband Internet subscribers
i4212f	- % female Internet users
i4212f%f	- Female Internet users as % of female population
i423	Public Internet access facilities
i424	PWLAN locations
i4214	International Internet Bandwidth (Mbps)
i4214og	- International outgoing Internet Bandwidth (Mbps)
i4214ic	- International incoming Internet Bandwidth (Mbps)
i28	Total number of ISDN subscribers
i281	- Number of basic access ISDN subscribers
i282	- Number of primary access ISDN subscribers
i28c	ISDN B channel equivalents
QUALITY OF SERVICE	
i123	Waiting list for main lines
i143	Number of faults per 100 main lines per year
i141	% of telephone faults cleared by next working day

TRAFFIC	
i1311m	Local telephone traffic (minutes)
i1313wm	- Fixed to mobile traffic (minutes)
i132m	International outgoing telephone traffic (minutes)
i132mi	International incoming telephone traffic (minutes)
i1311im	Dial-up Internet traffic (minutes)
i22	International outgoing telegrams (messages)
TARIFFS	
i151	Connection fee for residential telephone service
i151b	Connection fee for business telephone service
i152	Monthly subscription for residential telephone service
i152b	Monthly subscription for business telephone service
i153	Cost of a 3-minute local call (peak rate)
i153o	Cost of a 3-minute local call (off-peak rate)
STAFF	
i51	Full-time telecommunication staff
i51f	- Female telecommunication staff
i51m	- of which: male
i51w	- Mobile communications staff
REVENUE (in millions local currency at current prices)	
i75	Total revenue from all telecom services
i71	- Revenue from telephone service
i711	- Income from telephone connection charges
i712	- Income from telephone subscription charges
i7131	- Income from local calls
i7132	- Income from national long distance calls
i7133	- Income from international calls
i731	- Income from data transmission
i732	- Revenue from leased circuits
i741	- Revenue from mobile communications
i74	- Other income (facsimile, videotex, Internet, etc.)
CAPITAL EXPENDITURE (in millions of local currency at current prices)	
i81	Annual investment in telecom (incl. land & buildings)
i83	- Annual investment for telephone service
i841m	- Mobile communication investment
BROADCASTING	
i955	Radio sets
i955h	Radio equipped households
i955L	Radio licence households
i956	Percent of population covered by radio broadcasting
i965	Television receivers
i965h	Television equipped households
i965L	Television licence households
i966	Percent of population covered by TV broadcasting
i965c	Cable TV subscribers
i965cp	Households passed by cable television
i965s	Home satellite antennas
	INFORMATION TECHNOLOGY
i422	Number of Personal Computers
i422h	- Number of Personal Computers in homes
i422hp	- % of homes with a Personal Computer
i422s	Sales of Personal Computers during the year (units)
	DEMOGRAPHY, ECONOMY
i61	Population
i6111	- Urban population (in per cent)
i612	- Population of largest city
i62	Households
i63	Gross domestic product (GDP)
i64	Gross Fixed Capital Formation (GFCF)
i652	Average annual exchange rate per US$
i66_95	Consumer price index (1995=100)

ANNEX 4

Thematic Household Survey on IT Usage and Penetration
Questionnaire 2004

|EDIT _____|CBRD 1.....(1)
|CODE _____|JOB NO.....(2-5)
|CHECK _____|Q'NAIRE NO.....(6-9)
| _____

H040232 Thematic Household Survey in the Second Quarter of 2004

Introduction:

Hello, my name is (say last name). I'm an interviewer of XXX. We are now conducting a survey on behalf of the **Census and Statistics Department**. The survey aims to collect information from households on the **usage and penetration of information technology**. The information is useful to the Government for policy formulation. The information provided by you will be kept strictly confidential and will be used for aggregate analysis only. Thank you for your co-operation.

A.1 Which type of housing does your quarters belong to? ***(Show card)***(Q5)(160-161)

Public rental housing (including rental flats of Housing Authority and Housing Society).....01
Housing Authority's Tenants Purchase Scheme/ Buy or Rent Option (excluding the premium-paid flats) 02
Housing Authority's Home Ownership Scheme / Private Sector Participation Scheme/ Middle Income Housing Scheme (excluding the premium-paid flats) 03
Housing Society's Flat for Sale Scheme (excluding the premium-paid flats) 04
Housing Society's Sandwich Class Housing Scheme (excluding the premium-paid flats) 05
Private housing (including flats under Housing Society's Urban Improvement Scheme, premium-paid subsidised sale flats) 06
Other permanent structures (including hotels, hostels, dormitories, residential area in non-residential buildings and staff quarters).....07
Temporary structures (including roof-top structures, mobile homes, huts & places not intended for residential purpose) 08
Institutional housing.....09 – End the interview

Others (please specify): _____ _____
_____

A.2 How many households are there in this quarters? A household is defined as a group of people who live and dine together in a quarters. They may not be relatives with each other. A person who takes care of his / her daily necessities alone will also be regarded as a household. (Q6) (162-163)

_____ Households

A.3 Is this accommodation owned or rented by your household or otherwise? (Q7) (164-165)

Owned 01
Rented
Sole-tenant 02
Co-tenant.....03
Main tenant.....04
Sub-tenant 05
Provided by employer 06
Rent free.....07
Others (please specify):
_____

Household I / II / III / IV / V (Q8) (166)

Separate questionnaires for individual households

Part B is answered by household head. If a different respondent is interviewed, repeat the introduction.

Read out: Now I'd like to know some information of your household.

B.1 Excluding the live-in foreign domestic helpers, how many members in this household are aged 10 or above? I mean those who live in this quarters at least one month in the past 6 months or at least one month in the coming 6 months. (Q9) (167-168)

_____members

	Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
If there are more than 1 member with age 10 or above (i.e. B.1 > 1), continue with B.2; otherwise, go to CA.1ai					
B.2 For the members aged 10 or above in your household, please tell me, what's their relationship to you?	(Q10a) (169-170)	(Q10b) (171-172)	(Q10c) (173-174)	(Q10d) (175-176)	(Q10e) (177-178)
01 Household head	01				
02 Husband		02	02	02	02
03 Wife		03	03	03	03
04 Son / daughter		04	04	04	04
05 Brother / sister		05	05	05	05
06 Brother-in-law / sister in-law		06	06	06	06
07 Parent		07	07	07	07
08 Parent-in-law		08	08	08	08
09 Grand child		09	09	09	09
10 Son-in-law / daughter-in-law		10	10	10	10
11 Grandparent		11	11	11	11
12 Uncle / aunt (father's brother or sister-in-law)		12	12	12	12
13 Uncle / aunt (father's sister or brother-in-law)		13	13	13	13
14 Uncle / aunt (mother's sister or brother-in-law)		14	14	14	14
15 Uncle / aunt (mother's brother or sister-in-law)		15	15	15	15
16 Cousin		16	16	16	16
17 Nephew / niece		17	17	17	17
18 Other relative		18	18	18	18
19 Friend		19	19	19	19
20 Employee		20	20	20	20
Others (please specify)		_____	_____	_____	_____
		_____	_____	_____	_____

CB. Computer and Internet Facilities in the Household

Read Out: I want to know what types of computers your household owned.

CB.1 Which family members is most familiar with the computer facilities at home? (Q45) (2933-2934)

Respondent himself(i.e Household head) 01
Other members
Member 2 02
Member 3 03
Member 4 04
Member 5 05
Member 6 06
Others (please specify): _____

Invite that member to conduct the interview, then repeat the introduction.

(I) Penetration of Computers

CB.2 Does your household have the following types of computers? ***(Read out items a-c)*** Please include those owned by your household and those provided by others for your use. ***For each type of computer with an answer "yes", probe*** "How many does your household have?" (Q46)

			Yes	No
			(2935-2936)	
(R1)	(a)	(Desktop)	_____	97
(R2)	(bi)	(Laptop/Notebook/Tablet PC).....		
(R3)	(bii)	If "yes", how many of them are with wireless Internet connection Capability?	_____ _____	97
(R4)	(ci)	Personal Digital Assistant (PDA).....	_____	97
(R5)	(cii)	If "yes", how many of them are with wireless Internet connection capability?	_____	97

If not having any desktop, laptop/ notebook/ tablet PC (i.e. CB.2a and bi = 97), continue with CB.3a and CB.3b; otherwise, go to CB.4a

CB.3a What are your main reasons for not having any desktop, laptop, notebook or tablet PC at home? Any other reasons? Any others? ***(Allow multiple answers)*** (Q47) (2945)

No specific usage..... 01
Do not know how to use computer 02
Lack of interest in using computers 03
Have access to computers at other places 04
Cost too high 05
Price devalued too fast..... 06
Too frequent release of new models 07
Avoid children spending too much time on computer 08
Already have plan to purchase computer..... 09
Other reasons (please specify): _____
_____

CB.3b Would your household buy one in the next 12 months? ***(Probe the degree)*** (Q48) (2955)

Definitely would..... 5+
Probably would..... 4¦
May or may not ..... 3¦ ***Go to Part D***
Probably not ..... 2¦
Definitely not..... 1+

CB. Computer and Internet Facilities in the Household

(II) Security of Computer

CB.4a Is ***(read out items a & b)*** installed in any of your desktop, laptop, notebook or tablet PC at home? (Q49) (2956-2957)

			Yes	No
(R1)	(a)	Antivirus software	1	2
(R2)	(b)	Password for access	1	2

CB.4b In the past 12 months, has your desktop, laptop, notebook or tablet PC at home been infected by computer virus?
(If "yes", probe:) In the past 12 months, how many times has it been infected? (Q50) (2958-2960)

Yes: _____time(s)
No 999

(III) Penetration of Internet Facilities

(Refer to CB.2c) If having PDA, continue with CB.5a; if not, continue with CB.5b

CB.5 (a) Excluding your PDA, is/are your computer(s) at home connected to Internet?
(b) Is/are your computer(s) at home connected to Internet? (Q51) (2961)

Yes 1
No ..... 2 – ***go to CB.8***

CB.6 Which mode of Internet connection do you use? Any other modes? Any others? ***(Allow multiple answers)***

(Refer to CB.6) If using more than 1 mode, continue with CB.7; otherwise, go to Part D

CB.7 What is your major mode of Internet connection?

	CB.6	CB.7
	Q52a (2962)	Q52b (2967)
Dial-up (via telephone lines)	1+	1+
Broad band	2¦ ***go to Part D***	2¦ ***go to Part D***
Mobile telecom network (e.g. mobile phone)	3+	3+
Others (please specify):	_____	_____
	_____	_____

CB. Computer and Internet Facilities in the Household

CB.8 What are your reasons for not having your computer(s) at home connected to Internet? Any other reasons? Any others? ***(Allow multiple answers)*** (Q53) (2972)

- Need to upgrade the computer before connecting to Internet 01
- No need to use Internet services 02
- Lack of interest in Internet services 03
- Lack of confidence / skills in using computer 04
- Have other facilities at home for connecting to Internet, e.g. television 05
- Have access to Internet at other places 06
- Not permitted by family members 07
- Avoid children spending too much time on Internet, e.g. ICQ 08
- There is unhealthy/ obscene information on Internet 09
- Monthly charges too expensive 10
- Security concern, e.g. leakage of information, theft of account 11
- Just installed a new computer and would consider whether connect it to Internet later 12
- Already have plan to connect to Internet 13
- Lack of time for using Internet services 14
- Other reasons (please specify): _____ _____

C.9 Would you connect your computers at home to Internet <u>in the next 12 months</u>? ***(Probe the degree)*** (Q54) (3015)

- Definitely would 5
- Probably would 4
- May or may not 3
- Probably not 2
- Definitely not 1

D. Usage of Computers and Internet

Invite individual household member to answer Part D-K

For this part, ask household members aged 10 or above.

(I) Knowledge on Computer and Chinese Input Methods

Read out: ***Now I'd like to know your pattern of using computer. By computer I refer to desktop, laptop/ notebook/ tablet PC and PDA.***

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
D.2	Which of the following statements best describes your computer knowledge? ***(Read out the answer)***	Q73a (3323)	Q73b (3324)	Q73c (3325)	Q73d (3326)	Q73e (3327)
	Know how to use computer to do any of the activities listed on this card, including using Internet services ***(Show card)***	1	1	1	1	1
	Don't know how to use computer	2- ***go to D.4***	2- ***go to D.4***	2- ***go to D.4***	2- ***go to D.4***	2- ***go to D.4***
D.3	Did you learn it by yourself or by attending formal training courses related to information technology? For example computer courses and distance learning courses. Computer lessons at school are also included.	Q74a (3331)	Q74b (3332)	Q74c (3333)	Q74d (3334)	Q74e (3335)
	Learn by himself/herself	01+	01+	01+	01+	01+
	By attending formal courses	02	02	02	02	02
	Both	03	03	03	03	03
	Others (please specify)	+***go to D.5***	+***go to D.5***	+***go to D.5***	+***go to D.5***	+***go to D.5***
		___	___	___	___	___
D.4	In the next 12 months, would you attend any courses related to information technology? ***(Probe the degree)***	Q75a (3339)	Q75b (3340)	Q75c (3341)	Q75d (3342)	Q75e (3343)
	Definitely would	5+	5+	5+	5+	5+
	Probably would	4	4	4	4	4
	May or may not	3+***go to D12.a***	3+***go to D12.a***	3+***go to D12.a***	3+***go to D12.a***	3+***go to D12.a***
	Probably not	2	2	2	2	2
	Definitely not	1+	1+	1+	1+	1+
D.5	Which type of Chinese input method(s) have you used before? ***(Read out items a – c) (Allow multiple answers but only applicable to items a – c)***	Q76a (3347)	Q76b (3348)	Q76c (3349)	Q76d (3350)	Q76e (3351)
	(a) Keyboard input methods	1	1	1	1	1
	(b) Hand-writing input method	2	2	2	2	2
	(c) Voice input method	3	3	3	3	3
	Don't know any Chinese input methods	9- ***go to D.7***	9- ***go to D.7***	9- ***go to D.7***	9- ***go to D.7***	9- ***go to D.7***
(Refer to D.5) If the respondent has used more than 1 method, continue with D.6; otherwise, go to D.7.						
D.6	Which Chinese input method do you use most often?	Q77a (3355)	Q77b (3356)	Q77c (3357)	Q77d (3358)	Q77e (3359)
	Keyboard input method	1	1	1	1	1
	Hand-writing input method	2	2	2	2	2
	Voice input method	3	3	3	3	3

D. Usage of Computers and Internet

(II) Usage of Computers

		Member (H/H head)_____	Member _____	Member _____	Member _____	Member _____
D.7	In the past 12 months, have you used computer to do any of the activities listed on this card? ***(Show card)*** Irrespective of the place where you used it	Q78a (3363)	Q78b (3364)	Q78c (3365)	Q78d (3366)	Q78e (3367)
	Yes	1	1	1	1	1
	No	2 - ***go to D.12a***	2 - ***go to D.12a***	2 - ***go to D.12a***	2 - ***go to D.12a***	2 - ***go to D.12a***
D.8	Usually how often do you use computer?	Q79a (3371)	Q79b (3372)	Q79c (3373)	Q79d (3374)	Q79e (3375)
	Once or more a day	1	1	1	1	1
	Once every 2 to 4 days	2	2	2	2	2
	Once every 5-7 days	3	3	3	3	3
	Less than once a week but at least once every 2 weeks	4	4	4	4	4
	Less than once every 2 weeks but at least once a month	5 ***go to D.11a***	5 ***go to D.11a***	5 ***go to D.11a***	5 ***go to D.11a***	5 ***go to D.11a***
	Less than once a month	6	6	6	6	6
D.9	Where have you used computer in the past 12 months? Any other places? Any others? ***(Show card)*** ***(Allow multiple answers)***	Q80a (3379)	Q80b (3380)	Q80c (3414)	Q80d (3415)	Q80e (3416)
D.10	Including the time for using Internet services, how many hours approximately did you spend using computer at ***(read out the answers in D.9a)*** weekly on average?	Q81a (3420-3424)	Q81b (3450-3454)	Q81c (3480-3517)	Q81d (3543-3547)	Q81e (3573-3577)
	(a) Home (R1)	1 (___hr__mins)	1 (___hr__mins)	1 (___hr__mins)	1 (___hr__mins)	1 (___hr__mins)
	(b) Place of work (R2)	2 (___hr__mins)	2 (___hr__mins)	2 (___hr__mins)	2 (___hr__mins)	2 (___hr__mins)
	(c) Place of study (R3)	3 (___hr__mins)	3 (___hr__mins)	3 (___hr__mins)	3 (___hr__mins)	3 (___hr__mins)
	(d) Places with public computer facilities (e.g. Home Affairs Department district offices, community halls / centres, public libraries, post offices, community organisations or voluntary agencies, etc.) (R4)	4 (___hr__mins)	4 (___hr__mins)	4 (___hr__mins)	4 (___hr__mins)	4 (___hr__mins)
	(e) Cyber-café * (R5)	5 (___hr__mins)	5 (___hr__mins)	5 (___hr__mins)	5 (___hr__mins)	5 (___hr__mins)
	(f) Other places (eg. Restaurant/ pub/ shop/ coffee shop/ neighbour/ computer training centre, etc.) (R6)	6 (___hr__mins)	6 (___hr__mins)	6 (___hr__mins)	6 (___hr__mins)	6 (___hr__mins)

* *Cyber-café refers to shops which specialize in providing computer and internet facilities, also online games to attract customers. Cyber-café usually charge on hourly basis and provide (free) snack/ beverage. Please note that coffee shops or fast food shops which mainly provide food, drinks and free computers facilities to the customers, eg. Pacific Coffee, are not regarded as cyber-café.*

D. Usage of Computers and Internet

		Member (H/H head) _____	Member _____	Memebr _____	Member _____	Member _____
		All Places	All Places	All Places	All Places	All Places
D.11a	Including all places, for what purposes do you usually use computer? ***(Show card)*** Any other purposes? Any others?	Q82a (3759)	Q82b (3764)	Q82c (3769)	Q82d (3774)	Q82e (3779)
	Using Internet services	01	01	01	01	01
	Playing computer games (excluding online games)	02	02	02	02	02
	Watching VCD / DVD	03	03	03	03	03
	Listening to music (excluding online music)	04	04	04	04	04
	Word processing	05	05	05	05	05
	Graphics / image processing	06	06	06	06	06
	Data processing / analysis / database management	07	07	07	07	07
	Graphic / 3-D design, e.g. CAD-CAM, AUTO-CAD	08	08	08	08	08
	Self-studying	09	09	09	09	09
	Designing homepages	10	10	10	10	10
	Programming	11	11	11	11	11
	Using custom-made computer systems, e.g. accounting and human resources management	12	12	12	12	12
	Using Intranet services, e.g. searching internal information and for internal communication	13	13	13	13	13
	Others (please specify)	_____ _____	_____ _____	_____ _____	_____ _____	_____ _____
(Refer to D.11a) If the respondent mentions "playing computer games", "watching VCD/DVD" or "listening to music"(D.11a = 02/03/04), continue with D.11b; otherwise, go to D.12a						
D.11b	Including all places, how many hours approximately do you use computer to play computer games, watch VCD/DVD and listen to music on average weekly? Please exclude online games and online music.	Q83a (3832-3836) ___hr__mins	Q83b (3837-3841) ___hr__mins	Q83c (3842-3846) ___hr__mins	Q83d (3847-3851) ___hr__mins	Q83e (3852-3856) ___hr__mins
	Not even once a week on average	99999	99999	99999	99999	99999

D. Usage of Computers and Internet

(III) Usage of Internet Service

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
D.12a	***[Ask if the respondent has computer knowledge (i.e. D2=1)]*** In the past 12 months, have you used these devices to connect to Internet? ***(Show card)*** Any others? Any others? ***[Ask if the respondent does not have computer knowledge (i.e. D2=2)]*** In the past 12 months, have you used TV/ PDA/ mobile phone to connect to internet? ***(Show card) (Allow multiple answers but only applicable to items a – f)***	Q84a (3872)	Q84b (3873)	Q84c (3874)	Q84d (3875)	Q84e (3876)
	Non-mobile Devices					
	(a) Desktop computer	1	1	1	1	1
	(b) Laptop / Notebook computer with wired Internet connection	2	2	2	2	2
	(c) Television.....	3	3	3	3	3
	Mobile Devices					
	(d) PDA	4	4	4	4	4
	(e) Mobile Phone.....	5	5	5	5	5
	(f) Laptop / Notebook computer with wireless Internet connection.....	6	6	6	6	6
	Haven't used any of the above to connect to Internet.....	9	9	9	9	9
D.12b	Do you have the following mobile web devices? ***(For each type of device with an answer "yes", probe:)*** "How many do you have?"	Q85a (3880) Q86a (3921-3922)	Q85b (3914) Q86b (3929-3930)	Q85c (3915) Q86c (3937-3938)	Q85d (3916) Q86d (3945-3946)	Q85e (3917) Q86e (3953-3954)
	(a) Personal Digital Assistant (PDA) (R1)	1_____	1_____	1_____	1_____	1_____
	(b) Mobile Phone with Internet connection capability (R2).....	2_____	2_____	2_____	2_____	2_____
	(c) Laptop / Notebook with wireless connection (R3)	3_____	3_____	3_____	3_____	3_____
	(d) Wireless LAN connected to Internet (R4)	4_____	4_____	4_____	4_____	4_____
	(e) None of above (R5).....	9	9	9	9	9

D. Usage of Computers and Internet

(IV) Usage of Internet Services via Non-mobile Devices [including (i) desktop computers, (ii) laptop / notebook computers or (iii) television]

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
If the respondent has used Internet services via non-mobile devices (i.e. D.12a = 1/2/3), continue with D13-D16bc; otherwise, go to D.17 (i.e. those who have used mobile devices for internet access) or D.24 (i.e. those who are aged 15 and above) or Part F (i.e. those aged below 15).						
D.13	How often do you use Internet services via (desktop computer) (and / or laptop / notebook computer) (and / or television)?	Q87a (4018)	Q87b (4019)	Q87c (4020)	Q87d (4021)	Q87e (4022)
	Once or more a day	1	1	1	1	1
	Once every 2 to 4 days	2	2	2	2	2
	Once every 5 to 7 days	3	3	3	3	3
	Less than once a week but at least once every 2 weeks	4+ +***go to D.16a***	4+ +***go to D.16a***	4+ +***go to D.16a***	4+ +***go to D.16a***	4+ +***go to D.16a***
	Less than once every 2 weeks but at least once a month	5¦	5¦	5¦	5¦	5¦
	Less than once a month	6+	6+	6+	6+	6+

* Interview note: Answer in D12b(a) should be? answer in C2(cii)

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
D.14	In the past 12 months, where have you used Internet services via (desktop computer) (and / or laptop / notebook computer) (and / or television)? Any other places? Any others? ***(Show card) (Allow multiple answers)***	Q88a (4026)	Q88b (4027)	Q88c (4028)	Q88d (4029)	Q88e (4030)
D.15	On average, approximately how many hours do you spend weekly on using Internet services via (desktop computer) (and / or laptop/notebook computer) (and / or television) at ***(read out the answers in D.14a one by one)***?	Q89a (4034-4038)	Q89b (4064-4068)	Q89c (4127-4131)	Q89d (4157-4161)	Q89e (4220-4224)
	(a) Home (R1)	1 (___hr__mins)	1 (___hr__mins)	1 (___hr__mins)	1 (___hr__mins)	1 (___hr__mins)
	(b) Place of work (R2)	2 (___hr__mins)	2 (___hr__mins)	2 (___hr__mins)	2 (___hr__mins)	2 (___hr__mins)
	(c) Place of study (R3)	3 (___hr__mins)	3 (___hr__mins)	3 (___hr__mins)	3 (___hr__mins)	3 (___hr__mins)
	(d) Places with public computer facilities (e.g. Home Affairs Department district offices, community halls / centres, public libraries, post offices, community organisations or voluntary agencies, etc.) (R4)	4 (___hr__mins)	4 (___hr__mins)	4 (___hr__mins)	4 (___hr__mins)	4 (___hr__mins)
	(e) Cyber-café* (R5)	5 (___hr__mins)	5 (___hr__mins)	5 (___hr__mins)	5 (___hr__mins)	5 (___hr__mins)
	(f) Other places (e.g. restaurants / bars / shops/ coffee shops, homes of friends / relatives, computer training centres, etc) (R6)	6 (___hr__mins)	6 (___hr__mins)	6 (___hr__mins)	6 (___hr__mins)	6 (___hr__mins)

* *Cyber-café refers to shops which specialise in providing computer and Internet facilities, and online games to attract customers. Cyber-café usually charge on hourly basis and provide (free) snack / beverage. Please note that coffee shops or fast food shops which mainly provide food, drinks and free computers facilities to the customers, e.g. Pacific Coffee, are not regarded as cyber-cafés*

D. Usage of Computers and Internet

		Member (H/H head)____	Member _____	Member _____	Member _____	Member _____
		All Places	All Places	All Places	All Places	All Places
D.16a	Including all places, for what purposes do you usually use Internet services via (desktop computer) (and / or laptop / notebook computer) (and / or television) usually? Any other purposes? Any others? ***(Show card) (Allow multiple answers)***	Q90a (4373)	Q90b (4378)	Q90c (4416)	Q90d (4421)	Q90e (4426)
	Communicating with others, e.g. ICQ, NetMeeting, sending and receiving e-mail / fax, using Internet Phone etc.....	01	01	01	01	01
	Browsing Government webpages or downloading application form	02	02	02	02	02
	Using online services provided by Government webpage, e.g. bill payment or application	03	03	03	03	03
	Browsing webpages (excluding Government webpages)	04	04	04	04	04
	Searching for / downloading information online (excluding Government webpages)	05	05	05	05	05
	Reading magazines / newspapers	06	06	06	06	06
	Using e-business services♦	07	07	07	07	07
	Downloading software	08	08	08	08	08
	Playing online games.....	09	09	09	09	09
	Listening to online music / radio programmes	10	10	10	10	10
	Watching online video programmes.....	11	11	11	11	11
	Online word processing (excluding ICQ & email, etc.) ..	12	12	12	12	12
	Online graphics/image processing.....	13	13	13	13	13
	Online data processing / analysis / database management.....	14	14	14	14	14
	Online graphic / 3-D design, e.g. CAD-CAM, AUTO-CAD.....	15	15	15	15	15
	Self-studying online.....	16	16	16	16	16
	Designing homepage online	17	17	17	17	17
	Online programming	18	18	18	18	18
	Using custom-made computer system online, e.g. accounting and human resources management.....	19	19	19	19	19
	Others (please specify)	_____ _____	_____ _____	_____ _____	_____ _____	_____ _____

♦ *E-business services include: online searching for information on products / services, online searching for financial information (e.g. stock price), online-banking services (e.g. transferring money), online payment, online purchasing goods / ordering services, online auction services, online stock trading, online request for customer services (e.g. arranging delivery and technical support of products), online making reservations / booking tickets, online searching for information on travelling / hotel and air ticket reservation, and online searching for job vacancies.*

D. Usage of Computers and Internet

	Member (H/H head)____	Member _____	Member _____	Member _____	Member _____
(Refer to D.16a) If the respondent mentions "playing online games", "listening to online music / radio programmes" or "watching online video programmes" (D.16a = 09/10/11), continue with D.16b; otherwise go to D.17 (has used Internet services via mobile devices) or D.20 (not used Internet services via mobile devices).					
D.16b Including all places, on average how many hours do you approximately spend <u>weekly</u> on…	Q91a (4446-4450)	Q91b (4466-4470)	Q91c (4519-4523)	Q91d (4539-4543)	Q91e (4559-4563)
(a) Playing online games (R1)…..	___hr__mins	___hr__mins	___hr__mins	___hr__mins	___hr__mins
(b) Listening to online music / radio programmes(R2).....	___hr__mins	___hr__mins	___hr__mins	___hr__mins	___hr__mins
(c) Watching online video programmes (R3).....	___hr__mins	___hr__mins	___hr__mins	___hr__mins	___hr__mins
Not even once a week on average (R4).....	99999	99999	99999	99999	99999

(V) Usage of Internet Service via Mobile Devices [including (i) PDA or (ii) Mobile Phone (iii) Laptop/notebook computer with wireless Internet connection]

	Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
If the respondent <u>has used</u> Internet services via any <u>mobile</u> devices (i.e. D.12a=4/5/6), continue with D.17 - D.19; otherwise, go to D.20 or D.24 or Part F					
D.17 How often do you <u>use Internet services</u> via (PDA or Mobile Phone or Laptop/notebook computer with wireless Internet connection capability)? (Q92a)	Q92a (4672)	Q92b (4673)	Q92c (4674)	Q92d (4675)	Q92e (4676)
Once or more a day	1	1	1	1	1
Once every 2 to 4 days	2	2	2	2	2
Once every 5 to 7 days	3	3	3	3	3
Less than once a week but at least once every 2 weeks	4+	4+	4+	4+	4+
Less than once every 2 weeks but at least once a month	5+ ***go to D.19a***	5+ ***go to D.19a***	5+ ***go to D.19a***	5+ ***go to D.19a***	5+ ***go to D.19a***
Less than once a month	6+	6+	6+	6+	6+
D.18 On average, how many hours do you <u>use Internet services</u> via ***(read out the mobile devices used in D.12a)*** <u>weekly</u>? (Q93a)	Q93a (4680-4717)	Q93b (4728-4732)	Q93c (4743-4747)	Q93d (4758-4762)	Q93e (4773-4777)
(a) PDA	___hr__mins	___hr__mins	___hr__mins	___hr__mins	___hr__mins
(b) Mobile phone	___hr__mins	___hr__mins	___hr__mins	___hr__mins	___hr__mins
(c) Laptop/notebook computer with wireless Internet connection.....	___hr__mins	___hr__mins	___hr__mins	___hr__mins	___hr__mins

D. Usage of Computers and Internet

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
D.19a	For what purposes do you usually <u>use Internet services</u> via (PDA or Mobile Phone or Laptop/notebook computer with wireless Internet connection)? Any other purposes? Any others? ***(Allow multiple answers)*** ***(Show card)*** ***(Refer to the answers on the right side and fill in the appropriate codes.)***	Communicating with others, e.g. sending or receiving e-mail, etc. .....01 Searching for information, e.g., news, stock price, property information, traffic news, etc. .....02 Searching for entertainment and leisure guide, e.g. movies information, shopping guides, restaurant guides, etc.....03 Using e-commerce services, e.g. online-banking services, trading stocks, buying ticket, booking hotel / air ticket, buying goods from department stores / super-markets, joining auction, etc. .....04 Playing online games.....05 Downloading graphics, ringing tones, etc.....06 Connecting to Corporate/Office Internal Network .....07 Others (please specify): _____				
		Q94a (4866) Q95a (4923) Q96a (4947)	Q94b (4869) Q95b (4926) Q96b (4950)	Q94c (4872) Q95c (4929) Q96c (4953)	Q94d (4875) Q95d (4932) Q96d (4956)	Q94e (4878) Q95e (4935) Q96e (4959)
	(a) PDA.....	_____	_____	_____	_____	_____
	(b) Mobile phone.....	_____	_____	_____	_____	_____
	(c) Laptop or Notebook with wireless Internet connection	_____	_____	_____	_____	_____
D.19b	What kind of wireless technologies are used by your (Read out the mobile devices used in D. 12a)?	Wi-Fi.....01 GRPs.....02 3G .....03 Others (please specify): _____				
		Q97a (4971) Q98a (5028) Q99a (5052)	Q97b (4974) Q98b (5031) Q99b (5055)	Q97c (4977) Q98c (5034) Q99c (5058)	Q97d (4980) Q98d (5037) Q99d (5061)	Q97e (5016) Q98e (5040) Q99e (5064)
	(a) PDA.....	_____	_____	_____	_____	_____
	(b) Mobile phone.....	_____	_____	_____	_____	_____
	(c) Laptop or Notebook with wireless Internet connection	_____	_____	_____	_____	_____

D. Usage of Computers and Internet

(VI) Usage of E-business Services and Digital Certificate

	Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
If the respondent is below 15 (i.e. D.1 < 15), go to Part F;					
If the respondent has used Internet services in the past 12 months [i.e. D.12a = 1/2/3/4/5/6], continue with D.20; otherwise, go to D.24.					
D.20 In the past 12 months, which of the following e-business services have you used ***(Show card)*** for personal matters (i.e. not for work)? Any others? ***(Allow multiple answers)*** ***(Probe until no more mentions)*** ***(If "yes", probe:)*** How often do you use the service? ***(Refer to the table on the right side and fill in the appropriate codes.)***	Once or more a day ....1 Once every 2 to 4 days ....2 Once every 5 to 7 days ....3 Less than once a week but at least once every 2 weeks ....4 Less than once every 2 weeks but at least once a month ....5 Less than once a month 6				
	Q100a (5076) Q101a (5125)	Q100b (5078) Q101b (5144)	Q100c (5080) Q101c (5163)	Q100d (5115) Q101d (5215)	Q100e (5117) Q101e (5234)
(a) Online searching for financial information (e.g. stock price)	01 ( )	01 ( )	01 ( )	01 ( )	01 ( )
(b) Online searching for information on products / services	02 ( )	02 ( )	02 ( )	02 ( )	02 ( )
(c) Online searching for job vacancies	03 ( )	03 ( )	03 ( )	03 ( )	03 ( )
(d)? Online stock trading	04 ( )	04 ( )	04 ( )	04 ( )	04 ( )
(e)? Online making reservations / booking tickets	05 ( )	05 ( )	05 ( )	05 ( )	05 ( )
(f)? Online purchasing goods / ordering services	06 ( )	06 ( )	06 ( )	06 ( )	06 ( )
(g)? Online auction services (including bidding or successful auction)	07 ( )	07 ( )	07 ( )	07 ( )	07 ( )
(h)? Online-banking services (e.g. transferring money)	08 ( )	08 ( )	08 ( )	08 ( )	08 ( )
(i)? Online payment	09 ( )	09 ( )	09 ( )	09 ( )	09 ( )
(j) Online request for customer services (e.g. arranging service delivery or technical support)	10 ( )	10 ( )	10 ( )	10 ( )	10 ( )
Others (please specify): _____	_____	_____	_____	_____	_____
None of the above	20	20	20	20	20
If the respondent has not used any of the (d) to (i) types of e-business service (i.e. has not used any ? and ? item, D.20 ≠ 4 / 5 / 6 / 7 / 8 / 9), continue with D.21; otherwise, go to D.22 (has used any of the (e) to (g) e-business services) or D.24.					
D.21 What are your reasons for not using (d) to (i) types of e-business services for personal matters? ***(Show card)*** Any other reasons? Any others? ***(Allow multiple answers)***	Q102a (5343)	Q102b (5346)	Q102c (5349)	Q102d (5352)	Q102e (5355)
Do not know how to use	01 +	01 +	01 +	01 +	01 +
No need	02	02	02	02	02
Fear of inputting inaccurate information	03	03	03	03	03
Security concern, e.g. leakage of information, theft of account	+ ***go to D.24*** 04	+ ***go to D.24*** 04	+ ***go to D.24*** 04	+ ***go to D.24*** 04	+ ***go to D.24*** 04
Other alternatives available	05	05	05	05	05
Others(please specify) :	___ +	___ +	___ +	___ +	___ +

D. Usage of Computers and Internet

If the respondent <u>has used</u> any of the (e) to (g) types of e-business services (i.e. <u>has used</u> any of the ? items,D.20 = 5 / 6 / 7), continue with D.22; otherwise, go to D.24.

		Q103a (5367)	Q103b (5371)	Q103c (5375)	Q103d (5379)	Q103e (5416)
D.22	In <u>the past 12 months</u>, which types of the following goods or services have you purchased <u>online</u>? ***(Show card)*** Any other types? Any others? ***(Allow multiple answers)***					
<u>For each item mentioned, continue with D.23</u>		Q104a (5432-5433)	Q104b (5545-5546)	Q104c (5658-5659)	Q104d (5771-5772)	Q104e (5917-5918)
D.23 (i)	<u>In the past 6 months</u>, how many times have you used ***(read out the item)***?					
(ii)	In the past 6 months, how much have you spent on ***(read out the item)*** in Hong Kong dollar approximately?	Q105a (6369-6374)	Q105b (6741-6746)	Q105c (7080-7118)	Q105d (7452-7457)	Q105e (7824-7829)
	(a) Online ticket reservation, e.g. buying movie, concert, or seminar tickets, etc.	01 ___ times HK$___	01 ___times HK$___	01 ___times HK$___	01 ___times HK$___	01 ___times HK$___
	(b) Online travel arrangement, e.g. booking vehicle / ship / air tickets, booking hotels, buying insurance, etc.	02 ___times HK$___	02 ___times HK$___	02 ___times HK$___	02 ___times HK$___	02 ___times HK$___
	(c) Online reservation of sport facilities	03 ___time HK$___	03 ___times HK$___	03 ___times HK$___	03 ___times HK$___	03 ___times HK$___
	(d) Online purchase/ auction of books, newspapers and magazines	04 ___times HK$___	04 ___times HK$___	04 ___times HK$___	04 ___times HK$___	04 ___times HK$___
	(e) Online purchase/ auction of clothes and accessories	05 ___times HK$___	05 ___times HK$___	05 ___times HK$___	05 ___times HK$___	05 ___times HK$___
	(f) Online purchase/ auction of electrical appliances	06 ___times HK$___	06 ___times HK$___	06 ___times HK$___	06 ___times HK$___	06 ___times HK$___
	(g) Online purchase of supermarket goods	07 ___times HK$___	07 ___times HK$___	07 ___times HK$___	07 ___times HK$___	07 ___times HK$___
	(h) Online purchase/ auction of gifts, e.g. flowers, etc	08 ___times HK$___	08 ___times HK$___	08 ___times HK$___	08 ___times HK$___	08 ___times HK$___
	(i) Online purchase/ auction of goods delivered through electronic means, e.g. software, books, songs, electronic games, etc	09 ___times HK$___	09 ___times HK$___	09 ___times HK$___	09 ___times HK$___	09 ___times HK$___
	(j) Others (please specify:)	10 ___times HK$___	10 ___times HK$___	10 ___times HK$___	10 ___times HK$___	10 ___times HK$___
	Have used in the past 12 months but not in the past 6 months	40	40	40	40	40

D. Usage of Computers and Internet

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
D.24	In the past 12 months, have you ever used these e-business services ***(Show card)*** for personal matters? Any other services? Any others? ***(Allow multiple answers) (Probe until no more mentions) (If "yes", probe:)*** How often do you use the service? ***(Refer to the table on the right side and fill in the appropriate codes.)***	Once or more a day.....1 Once every 2 to 4 days.....2 Once every 5 to 7 days.....3 Less than once a week but at least once every 2 weeks.....4 Less than once every 2 weeks but at least once a month.....5 Less than once a month.....6				
		Q106a (9246) Q107a (9254)	Q106b (9247) Q107b (9262)	Q106c (9248) Q107c (9270)	Q106d (9249) Q107d (9278)	Q106e (9250) Q107e (9319)
	(a) Withdrawal, deposit, transfer of money or checking balance of account via ATM.....	1 ( )	1 ( )	1 ( )	1 ( )	1 ( )
	(b) Payment by ATM.....	2 ( )	2 ( )	2 ( )	2 ( )	2 ( )
	(c) Payment by PPS.....	3 ( )	3 ( )	3 ( )	3 ( )	3 ( )
	(d) EPS.....	4 ( )	4 ( )	4 ( )	4 ( )	4 ( )
	(e) Fare payment by Octopus.....	5 ( )	5 ( )	5 ( )	5 ( )	5 ( )
	(f) Payment by Octopus during shopping.....	6 ( )	6 ( )	6 ( )	6 ( )	6 ( )
	(g) Purchasing goods or acquiring services via IVRS, e.g. buying movie tickets, banking services, stock prices, weather or telephone enquiry hotline, etc.....	7 ( )	7 ( )	7 ( )	7 ( )	7 ( )
	(h) Making transaction or acquiring services via interactive short message services, e.g. banking services, stock prices, etc	8 ( )	8 ( )	8 ( )	8 ( )	8 ( )
	None of the above.....	9	9	9	9	9

If the respondent knows how to use computer (D.2 = 1), continue with D.25; otherwise go to Part E.

Read out: Next, I'd like to ask you questions about the digital certificate, which is like the "electronic ID" of the holder and used for the authentication of the identities of the parties involved in the electronic transactions. It also ensures the integrity and confidentiality of the informaion transmitted. Moreover, digital certificate ensures non-repudiation in electronic transactions.

D.25	Do you have a digital certificate, irrespective of whether it is/ they are issued by local or overseas Certification Authorities (CAs)? Please include those applied for you by your company.	Q108a (9351)	Q108b (9352)	Q108c (9353)	Q108d (9354)	Q108e (9355)
	Yes Issued by Local CAs ..... Issued by Overseas CAs.....	1+ +*go to D.27* 2+	1+ +*go to D.27* 2+	1+ +*go to D.27* 2+	1+ +*go to D.27* 2+	1+ +*go to D.27* 2+
	No	3	3	3	3	3

D. Usage of Computers and Internet

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
D.26	What are your reasons for not applying for a digital certificate? Any other reasons? Any others? ***(Allow multiple answers)***	Q109a (9359)	Q109b (9362)	Q109c (9365)	Q109d (9368)	Q109e (9371)
	Never heard of it	01	01	01	01	01
	Do not know its usage	02	02	02	02	02
	Do not want to pay for it	03	03	03	03	03
	Unaware of the channel of application	04 ***go to Part E***	04 ***go to Part E***	04 ***go to Part E***	04 ***go to Part E***	04 ***go to Part E***
	No need to do e-trade	05	05	05	05	05
	Digital certificate not needed for the e-trade done	06	06	06	06	06
	Others (please specify)	___ ___	___ ___	___ ___	___ ___	___ ___
D.27	What <u>personal matters</u> have you handled by using digital certificate? ***(Show card)*** Any other matters? Any others? ***(Allow multiple answers)***	Q110a (9416)	Q110b (9418)	Q110c (9420)	Q110d (9422)	Q110e (9424)
	Use Government service	01	01	01	01	01
	Use non-government online shopping / booking service	02	02	02	02	02
	Use online-banking service	03	03	03	03	03
	Use non-government bill payment service	04	04	04	04	04
	Trade stock online	05	05	05	05	05
	Send email	06	06	06	06	06
	Use online betting service	07	07	07	07	07
	Others (please specify)	_____	_____	_____	_____	_____
	Haven't used for handling personal matters	20	20	20	20	20

E. E-Government Services (Including ESD Life)

		Member (H/H head)_____	Member _____	Member _____	Member _____	Member _____
Only ask if the respondent is aged 15 or above (D.1 ≥ 15)						
E.1	In the past 12 months, have you used any of the - government services for personal matters, i.e. obtain Government information, apply application, registration, tax paying or paying any governmental charges, etc.)	Q111a (9432)	Q111b (9433)	Q111c (9434)	Q111d (9435)	Q111e (9436)
	Yes	1	1	1	1	1
	No	2 - *go to E.6*	2 - *go to E.6*	2 - *go to E.6*	2 - *go to E.6*	2 - *go to E.6*
E.2	In the past 12 months, have you used any of the government services for your personal matters via Internet services?	Q112a (9440)	Q112b (9441)	Q112c (9442)	Q112d (9443)	Q112e (9444)
	Yes	1	1	1	1	1
	No	2 - *go to E.5*	2 - *go to E.5*	2 - *go to E.5*	2 - *go to E.5*	2 - *go to E.5*

E. E-Government Services (Including ESD Life)

		Member (H/H head)_____	Member _____	Member _____	Member _____	Member _____
E.3	In the past 12 months, have you used any of the E-government services for your personal matters? ***(Show card) (Allow multiple answers)***	Q113a (9448)	Q113b (9458)	Q113c (9468)	Q113d (9478)	Q113e (9521)
	Browse and enquire information disseminated by the Government via the Internet (e.g. enquiring about weather condition, traffic condition, statistical data, air pollution index, Government news etc.) ..	01	01	01	01	01
	Online financial management (e.g. Paying various Government bills, such as rates, land rents, water charges, tax, etc, purchasing tax reserve certificates, paying fixed penalty tickets for traffic offences or littering)	02	02	02	02	02
	Online appointment booking or licenses/certificates application (e.g. appointment booking for road test and vehicle examination, renewing driving and vehicle licenses, appointment booking for registration of identity card/ giving of marriage notice, applying for copy of birth/ death/ marriage certificates)	03	03	03	03	03
	Online registration services (e.g. voter registration, volunteer scheme registration and applying for Senior Citizen Cards)	04	04	04	04	04
	Online change of personal particulars (e.g. changing address).....	05	05	05	05	05
	Online job search and recruitment (e.g. searching for job vacancies, registering job vacancies and searching for suitable candidates).....	06	06	06	06	06
	Online purchase of Government publications and Government statistical publications.....	07	07	07	07	07
	Online booking of Government venues or facilities (e.g. sports venues, training courses or leisure facilities)	08	08	08	08	08
	Online submission of information to Government (e.g. filing of tax return)	09	09	09	09	09
	Online library services (e.g. book reservation, book renewal)	10	10	10	10	10
	Download Government forms	11	11	11	11	11
	General browsing of government websites (with no specific purpose).....	12	12	12	12	12
	Others (please specify)	_____	_____	_____	_____	_____
	Have used, but forget the types of service	96	96	96	96	96

E. E-Government Services (Including ESD Life)

		Member (H/H head)_____	Member _____	Member _____	Member _____	Member _____
E.4	In general, how would you rate the E-Government services? ***(Probe the degree)***	Q114a (9561)	Q114b (9562)	Q114c (9563)	Q114d (9564)	Q114e (9565)
	Very good	1+	1+	1+	1+	1+
	Quite good	2	2	2	2	2
	Average	3+ ***go to E.6***	3+ ***go to E.6***	3+ ***go to E.6***	3+ ***go to E.6***	3+ ***go to E.6***
	Quite poor	4	4	4	4	4
	Very poor	5+	5+	5+	5+	5+
E.5	What are your reasons for not using it? Any other reasons? ***(Allow multiple answers)***	Q115a (9569)	Q115b (9574)	Q115c (9579)	Q115d (9617)	Q115e (9622)
	Don't know how to use computer	01	01	01	01	01
	Don't know how to use Internet services	02	02	02	02	02
	Not aware of/don't know how to access Government/ESD Life websites	03	03	03	03	03
	Don't know how to use online Government services	04	04	04	04	04
	Unclear about what Government services are available online	05	05	05	05	05
	No need	06	06	06	06	06
	Fear of inputting inaccurate information	07	07	07	07	07
	Security concern, e.g. leakage of information, theft of account	08	08	08	08	08
	Other alternatives available	09	09	09	09	09
	Inconvenient	10	10	10	10	10
	Others (Please specify)	_____	_____	_____	_____	_____
E.6	The Government launched "Electronic Service Delivery" (ESD) scheme in December 2000 to provide public services to the citizens through "ESD Life" website. Have you ever heard of this?	Q116a (9642)	Q116b (9643)	Q116c (9644)	Q116d (9645)	Q116e (9646)
	Yes	1	1	1	1	1
	No	2- ***go to E.8***	2- ***go to E.8***	2- ***go to E.8***	2- ***go to E.8***	2- ***go to E.8***
If respondent haven't used E-Government services (i.e. E.2 = 2), go to E.8						
E.7	Do you use online Government service through the "ESD Life" website or other Government webpages?	Q117a (9650)	Q117b (9651)	Q117c (9652)	Q117d (9653)	Q117e (9654)
	"ESD Life" website	1	1	1	1	1
	Other Government webpages	2	2	2	2	2
	Both	3	3	3	3	3
E.8	In the next 12 months, will you use these online Government services for personal matters (including the services provided by ESD Life website)? ***(Show card)*** ***(Probe the degree)***	Q118a (9658)	Q118b (9659)	Q118c (9660)	Q118d (9661)	Q118e (9662)
	Definitely will	5	5	5	5	5
	Probably will	4	4	4	4	4
	May or may not	3	3	3	3	3
	Probably not	2+	2+	2+	2+	2+
	Definitely not	+***go to Part F*** 1+	+***go to Part F*** 1+	+***go to Part F*** 1+	+***go to Part F*** 1+	+***go to Part F*** 1+

E. E-Government Services (Including ESD Life)

	Member (H/H head)_____	Member _____	Member _____	Member _____	Member _____
E.9 Which of the following online Government services on this card ***(Show card)*** will you use for <u>personal matters</u>? Any other services? Any others? ***(Allow multiple answers)***	Q119a (9666)	Q119b (9671)	Q119c (9676)	Q119d (9714)	Q119e (9719)
Browse and enquire information issued by the Government via the Internet (e.g. enquiring about weather condition, traffic condition, statistical data, air pollution index, Government news etc.)	01	01	01	01	01
Online financial management (e.g. Paying various Government bills, such as rates, land rents, water charges, tax, etc, purchasing tax reserve certificates, paying fixed penalty tickets for traffic offences or littering)	02	02	02	02	02
Online appointment booking or licenses/certificates application (e.g. appointment booking for road test and vehicle examination, renewing driving and vehicle licenses, appointment booking for registration of identity card/ giving of marriage notice, applying for copy of birth/ death/ marriage certificates)	03	03	03	03	03
Online registration services (e.g. voter registration, volunteer scheme registration and applying for Senior Citizen Cards)	04	04	04	04	04
Online change of personal particulars (e.g. changing address)	05	05	05	05	05
Online job search and recruitment (e.g. searching for job vacancies, registering job vacancies and searching for suitable candidates)	06	06	06	06	06
Online purchase of Government publications and Government statistical publications	07	07	07	07	07
Online booking of Government venues or facilities (e.g. sports venues, training courses or leisure facilities)	08	08	08	08	08
Online submission of information to Government (e.g. filing of tax return)	09	09	09	09	09
Online library services (e.g. book reservation, book renewal)	10	10	10	10	10
Download Government forms	11	11	11	11	11
General browsing of government websites (with no specific purpose)	12	12	12	12	12
Others (please specify)	_____	_____	_____	_____	_____

F. Computer and Internet Security

For Part F, ask all persons aged 10 or above (i.e. D.1 ≥ 10)

Read out: Next, I'd like to talk with you something about computer or Internet security.

	Member (H/H head)_____			Member _____			Member _____			Member _____			Member _____		
F.1 Have you heard about ***(read out the items in rotation)***? ***(Show card)*** ***(If "yes", probe:)*** Then, do you know what ***(read out the item)*** means?	Q120a (9739)			Q120b (9742)			Q120c (9745)			Q120d (9748)			Q120e (9751)		
	Yes			Yes			Yes			Yes			Yes		
	Know	Don't Know	Haven't heard about	Know	Don't Know	Haven't heard about	Know	Don't Know	Haven't heard about	Know	Don't Know	Haven't heard about	Know	Don't Know	Haven't heard about
(a) Computer virus (R1)	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
(b) Hacking (R2)	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
(c) Denial of service (R3)	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3

If the respondent doesn't know how to use computer (D.2 = 2) or knows how to use but hasn't used computer in the past 12 months (i.e. D.2 = 1 & D.7 = 2), go to Part G; otherwise, continue with F.2.

	Q121a (9763-9764)		Q121b (9767-9768)		Q121c (9771-9772)		Q121d (9775-9776)		Q121e (9779-9780)	
F.2 In the past 12 months, when you handled personal matters, has the information you saved in computer or transmitted through Internet been ***(read out the item)***? ***(If "yes", probe:)*** Approximately how many times in the past 12 months?	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
(a) Deliberately destroyed or changed (R1)	___times	97	___times	97	___times	97	___times	97	___times	97
(b) Stolen/ divulged (R2)	___times	97	___times	97	___times	97	___times	97	___times	97
F.3 When you handle personal matters, what security measures have you taken ***(read out the items one by one)***? Ay other measures? Any others? ***(Allow multiple answers)***	Q122a (9828)		Q122b (9838)		Q122c (9848)		Q122d (9858)		Q122e (9868)	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
(a) Use password to open the files (R1)	1	2	1	2	1	2	1	2	1	2
(b) Encrypt the file, i.e. save the file in codes which cannot be identified by others (R2)	1	2	1	2	1	2	1	2	1	2
(c) Others (please specify) (R3)	1	2	1	2	1	2	1	2	1	2
(d) None of the abvoe (R4)	9		9		9		9		9	

J. Employment Situation

Read out: For the sake of analysis, I'd like to know some of your personal information. The information you provided will be kept strictly confidential.

		Member (H/H head _____	Member _____	Member _____	Member _____	Member _____
Only ask those aged 15 or above (i.e. D.1 ≥ 15) for Part J; otherwise, go to Part K						
J.1a	Have you worked full-time or part-time in the past 7 days? Running your own business or helping your family's business without being paid are also included.	Q163a (21464)	Q163b (21465)	Q163c (21466)	Q163d (21467)	Q163e (21468)
	Yes	1	1	1	1	1
	No	2 - ***go to J.1d***	2 - ***go to J.1d***	2 - ***go to J.1d***	2 - ***go to J.1d***	2 - ***go to J.1d***
J.1b	Which industry are you engaged in? What position do you hold?	Q164a (21472-21474)	Q164b (21478-21480)	Q164c (21517-21519)	Q164d (21523-21525)	Q164e (21529-21531)
	Industry: (R1)	_____	_____	_____	_____	_____
	Position: (R2)	_____	_____	_____	_____	_____
(If respondent is aged 60 or above, continue with J.1c; otherwise, go to Part K)						
J.1c	On average, how many hours do you work in a week?	Q165a (21553-21555) _____ hrs ***(go to J.1j)***	Q165b (21556-21558) _____ hrs ***(go to J.1j)***	Q165c (21559-21561) _____ hrs ***(go to J.1j)***	Q165d (21562-21564) _____ hrs ***(go to J.1j)***	Q165e (21565-21567) _____ hrs ***(go to J.1j)***
J.1d	If someone offered you a job, were you available for work in the past 7 days?	Q166a (21577)	Q166b (21578)	Q166c (21579)	Q166d (21580)	Q166e (21614)
	Yes	1 - ***go to J.1h***	1 - ***go to J.1h***	1 - ***go to J.1h***	1 - ***go to J.1h***	1 - ***go to J.1h***
	No	2	2	2	2	2
J.1e	Why were you not available?	Q167a (21618)	Q167b (21623)	Q167c (21628)	Q167d (21633)	Q167e (21638)
	Attendance at educational institutions	01 +	01 +	01 +	01 +	01 +
	Engagement in household duties	02 + ***go to Part K***	02 + ***go to Part K***	02 + ***go to Part K***	02 + ***go to Part K***	02 + ***go to Part K***
	Sickness (permanent)*	03 +	03 +	03 +	03 +	03 +
	Sickness (temporary)	04 - ***go to J.1h***	04 - ***go to J.1h***	04 - ***go to J.1h***	04 - ***go to J.1h***	04 - ***go to J.1h***
	Retirement	05	05	05	05	05
	Others (please specify) :	_____ _____	_____ _____	_____ _____	_____ _____	_____ _____
If respondent is aged 60 or above, continue with J.1f; otherwise, go to Part K)						
J.1f	Which industry were you engaged in before your retirement? What position did you hold?	Q168a (21658-21660)	Q168b (21664-21666)	Q168c (21670-21672)	Q168d (21676-21678)	Q168e (21715-21717)
	Industry: (R1)	_____	_____	_____	_____	_____
	Position: (R2)	_____	_____	_____	_____	_____
J.1g	How old were you when you retired?	Q169a (21739-21741) _____years old ***(go to Part K)***	Q169b (21742-21744) _____years old ***(go to Part K)***	Q169c (21745-21747) _____years old ***(go to Part K))***	Q169d (21748-21750) _____years old ***(go to Part K)***	Q169e (21751-21753) _____years old ***(go to Part K)***
J.1h	Did you seek work in the past 30 days?	Q170a (21763)	Q170b (21764)	Q170c (21765)	Q170d (21766)	Q170e (21767)
	Yes	1 - ***go to J.1j***	1 - ***go to J.1j***	1 - ***go to J.1j***	1 - ***go to J.1j***	1 - ***go to J.1j***
	No	2	2	2	2	2

* *If respondent is aged 60 or above, check with IA.21-22*

J. Employment Situation

		Member (H/H head _____	Member _____	Member _____	Member _____	Member _____
J.1i	Why did you not seek work?	Q171a (21771)	Q171b (21775)	Q171c (21779)	Q171d (21816)	Q171e (21820)
	Believe no work available.....	01	01	01	01	01
	Wait to take up new job	02	02	02	02	02
	Start business at subsequent date	03	03	03	03	03
	Expect to return to original job.....	04	04	04	04	04
	Poor health condition, not suitable for work.....	05	05	05	05	05
	Others (please specify):	_____	_____	_____	_____	_____
(If respondent is aged 60 or above, and is employed or unemployed (J.1a Code 1/ J.1h Code 1/ J.1i Code 01-05), continue withJ.1j; otherwise, go to Part K						
J.1j	If you have a choice, would you prefer retirement or continue to work? If "continue to work" (Probe: Do you want to be engaged in full time or part time job?)	Q172a (21836)	Q172b (21837)	Q172c (21838)	Q172d (21839)	Q172e (21840)
	Continue to work?					
	Full time job	1	1	1	1	1
	Part time job	2	2	2	2	2
	Retirement.....	3	3	3	3	3
J.1k	Having a choice, when do you plan to stop working?	Q173a (21844-21846)	Q173b (21850-21852)	Q173c (21856-21858)	Q173d (21862-21864)	Q173e (21868-21870)
		_____ years old	_____ years old	_____ years old	_____ years old	_____ years old
	Until losing work ability	99	99	99	99	99

K. Basic Demographic

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
K.1a	***Interviewer: record sex of the respondent)*** (Q174a)	Q174a (21925)	Q174b (21926)	Q174c (21927)	Q174d (21928)	Q174e (21929)
	Male	1	1	1	1	1
	Female	2	2	2	2	2
K.1b	How old are you?	Q55a (3016-3018) _____years old	Q55b (3019-3021) _____years old	Q55c (3022-3024) _____years old	Q55d (3025-3027) _____years old	Q55e (3028-3030) _____years old
K.1c	What is your highest educational attainment?	Q61a (3121-3122)	Q61b (3123-3124)	Q61c (3125-3126)	Q61d (3127-3128)	Q61e (3129-3130)
	No schooling, completely illiterate	01	01	01	01	01
	No formal schooling, but able to write / recognise some words	02	02	02	02	02
	Kindergarten	03	03	03	03	03
	Primary	04	04	04	04	04
	Lower secondary (F.1 - F.3)	05	05	05	05	05
	Upper secondary (F.4 - F.5 and Project Springboard)	06	06	06	06	06
	Matriculation (F.6 - F.7)	07 *go to D1r*	07 *go to D1r*	07 *go to D1r*	07 *go to D1r*	07 *go to D1r*
	Technical / vocational training (apprenticeship)	08	08	08	08	08
	Technical / vocational training (certificate courses, excluding higher diploma courses)	09	09	09	09	09
	Tertiary: (non-degree courses, excluding sub-degree courses)	10	10	10	10	10
	Technical / vocational training (Higher diploma courses)	11	11	11	11	11
	Tertiary(sub-degree, including higher diploma courses, honours diploma courses and associate degree courses)	12	12	12	12	12
	Tertiary: (undergraduate courses)	13 *continue with D.1h*	13 *continue with D.1h*	13 *continue with D.1h*	13 *continue with D.1h*	13 *continue with D.1h*
	Tertiary: (master's degree or doctor's degree courses)					
	Taught postgraduate	14	14	14	14	14
	Research postgraduate	15	15	15	15	15

K. Basic Demographic

		Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
K.2	What is your current marital status?	Q175a (21933)	Q175b (21934)	Q175c (21935)	Q175d (21936)	Q175e (21937)
	Single	1	1	1	1	1
	Married	2	2	2	2	2
	Separated / divorced	3	3	3	3	3
	Widowed	4	4	4	4	4
	Others (please specify):	_____ _____	_____ _____	_____ _____	_____ _____	_____ _____
K.3a	Have you lived in HK for more than 7 years?	Q176a (21941)	Q176b (21942)	Q176c (21943)	Q176d (21944)	Q176e (21945)
	Yes	1 - *go to K.4*	1 - *go to K.4*	1 - *go to K.4*	1 - *go to K.4*	1 - *go to K.4*
	No	2	2	2	2	2
K.3b	I'd like to know about the pattern of information technology usage among new arrivals from the Mainland, were you holder of one-way exit permit from the Mainland?	Q177a (21949)	Q177b (21950)	Q177c (21951)	Q177d (21952)	Q177e (21953)
	Yes	1	1	1	1	1
	No	2 - *go to K.4*	2 - *go to K.4*	2 - *go to K.4*	2 - *go to K.4*	2 - *go to K.4*
K.3c	Which year and month did you come to reside in Hong Kong?	Q178a (21957-21958) (21959-21960)	Q178b (21961-21962) (21963-21964)	Q178c (21965-21966) (21967-21968)	Q178d (21969-21970) (21971-21972)	Q178e (21973-21974) (21975-21976)
	(R1)	Year _____	Year _____	Year _____	Year _____	Year _____
	(R2)	Month _____	Month _____	Month _____	Month _____	Month _____
Only ask family members aged 60 or below for K.4. For family members aged 60 or above, interviewer record the income source after finishing Pat I (ID.1). Note: please exclude source of income from live-in sons/daughters in K.4						
K.4	Which of the following sources of income do you have? Any other sources? Any others? ***(Show card) (Allow multiple answers)***	Q179a (22022)	Q179b (22026)	Q179c (22030)	Q179d (22034)	Q179e (22038)
	Job income / salary	01	01	01	01	01
	Bonus	02	02	02	02	02
	Housing allowance	03	03	03	03	03
	Pension	04	04	04	04	04
	Comprehensive Social Security Assistance	05	05	05	05	05
	Disability Allowance	06	06	06	06	06
	Old Age Allowance	07	07	07	07	07
	Interest / dividend	08	08	08	08	08
	Financial support from relatives / friends living apart	09	09	09	09	09
	Rent income	10	10	10	10	10
	Others (please specify):	_____ _____	_____ _____	_____ _____	_____ _____	_____ _____
	No income	40	40	40	40	40
		go toK.6		*Interview next Member or end interview*		

K. Basic Demographic

	Member (H/H head) _____	Member _____	Member _____	Member _____	Member _____
Only ask family members aged 60 or below for K.5. For family members aged 60 and above, interviewer, record the income in the appropriate space below by deducting the income provided by live-in sons/daughters after finishing Part I (ID.3).					
K.5 Including all sources of income and MPF contribution, how much is your <u>personal</u> monthly income approximately? ***(Show card)***	Q180a (22054-22055)	Q180b (22056-22057)	Q180c (22058-22059)	Q180d (22060-22061)	Q180e (22062-22063)
$1 - $999	20	20	20	20	20
$1,000 – $1,999	19	19	19	19	19
$2,000 – $2,999	18	18	18	18	18
$3,000 – $3,999	17	17	17	17	17
$4,000 – $4,999	16	16	16	16	16
$5,000 – $5,999	15	15	15	15	15
$6,000 – $6,999	14	14	14	14	14
$7,000 – $7,999	13	13	13	13	13
$8,000 – $8,999	12	12	12	12	12
$9,000 – $9,999	11	11	11	11	11
$10,000 – $12,499	10	10	10	10	10
$12,500 – $14,999	09	09	09	09	09
$15,000 – $19,999	08	08	08	08	08
$20,000 – $24,999	07	07	07	07	07
$25,000 – $29,999	06	06	06	06	06
$30,000 – $39,999	05	05	05	05	05
$40,000 – $49,999	04	04	04	04	04
$50,000 – $59,999	03	03	03	03	03
$60,000 – $69,999	02	02	02	02	02
$70,000 or above	01	01	01	01	01
Ask the "Household head" only					
K.6 Including all sources of income and MPF contribution, how much is your monthly <u>household</u> income approximately? ***(Show card)***	Q181 (22070-22071)				
$1 - $999	20				
$1,000 - $1,999	19				
$2,000 – $2,999	18				
$3,000 - $3,999	17				
$4,000 – $4,999	16				
$5,000 – $5,999	15				
$6,000 – $6,999	14				
$7,000 – $7,999	13				
$8,000 – $8,999	12				
$9,000 – $9,999	11				
$10,000 – $12,499	10				
$12,500 – $14,999	09				
$15,000 – $19,999	08				
$20,000 – $24,999	07				
$25,000 – $29,999	06				
$30,000 – $39,999	05				
$40,000 – $49,999	04				
$50,000 – $59,999	03				
$60,000 – $69,999	02				
$70,000 or above	01				
No income (Pleas specify):	97 - ***Interview next Member or end interview***				

End the interview and thank the respondent

ANNEX 5

Annual Survey on Information Technology Usage and Penetration in Business Sector Questionnaire 2004

香港特別行政區 政府統計處
CENSUS AND STATISTICS DEPARTMENT
HONG KONG SPECIAL ADMINISTRATIVE REGION

2004 年資訊科技在工商業的使用情況和普及程度按年統計調查
ANNUAL SURVEY ON INFORMATION TECHNOLOGY USAGE AND PENETRATION IN THE BUSINESS SECTOR FOR 2004

致
TO :

或上列地址的使用者
or the occupier of these premises

注意事項

1. 這項統計調查是根據《普查及統計條例》(第 316 章)第 IIIA 部進行，並由香港特別行政區政府憲報於 2001 年 3 月 2 日所刊登第 1271 號政府公告上宣布進行。條例規定，本處對個別機構單位的資料必須嚴加保密，日後只發表整體性而不會顯示個別機構單位的資料。
2. 請填妥本問卷及用所附上的信封在 **2004 年 6 月 7 日** 或以前寄回：
   香港 北角英皇道 250 號 北角城中心 6 樓 政府統計處 資訊科技及電訊統計組
3. 除特別註明外，填報的數據應以填報問卷時的情況為依據。**E** 欄內有關購買和業務收入的全年數據是指所述年份或由該年 1 月 1 日至翌年 3 月 31 日期間任何連續 12 個月的資料，視乎貴機構的會計慣例而定。
4. 有關本問卷內以***粗斜體*** 印出的詞彙的釋義，請參閱「***註釋***」。倘未能提供準確數據，請提供最佳的估計。如有查詢或需要協助填報問卷，請與本處陸國華先生聯絡(電話：**3104 8171**)。
5. 請在適當空格 '☐' 內加 '✓'。

Points to Note

1. The survey is conducted under Part IIIA of the Census and Statistics Ordinance (Chapter 316), as notified in the General Notice No. 1271 in the Government of the Hong Kong Special Administrative Region Gazette of 2 March 2001. In accordance with the provisions of the Ordinance, the collected information relating to individual establishments will be kept in strict confidence. Only aggregate information, which does not reveal details of individual establishments, will be released.
2. Please complete this questionnaire and return it under the enclosed cover to :
   Census and Statistics Department, Information Technology and Telecommunications Statistics Section, 6/F., Fortress Tower, 250 King's Road, North Point, Hong Kong.
   not later than **7 June 2004.**
3. Data provided should refer to the position when completing the questionnaire, unless it is specified otherwise. Information on value of purchases and business receipts for a year in Section **E** refers to that of the specified calendar year or a 12-month period between 1 January of that year and 31 March of the following year, according to the accounting practice of your firm.
4. Please refer to the ***Explanatory Notes*** for the definition of those terms printed in ***bold and italic*** in this questionnaire. If exact figures are not available, please provide best estimates. For enquiry or assistance in completing this questionnaire, please contact our Mr. LUK Kwok-wah at **3104 8171**.
5. Please '✓' in the appropriate box '☐'.

I. 一般資料 GENERAL INFORMATION

A1. 貴機構的業務性質。*(請簡述貴機構所生產或提供的主要產品及服務。)*
Nature of business of your firm.
(Please describe the major products and services produced or offered by your firm.)

A2. 在 2004 年 3 月底貴機構的***就業人數***。
Number of ***persons engaged*** in your firm as at end March 2004. ☐☐☐☐

II. 個人電腦的應用 PERSONAL COMPUTER USAGE

B1. 貴機構有沒有使用***個人電腦***？
Does your firm use ***personal computer(s)*** (PCs)?

☐ 1 有 → 自從 ☐☐☐☐ (年份) (請跳至 **B3**)
Yes, since ☐☐☐☐ (year) (Please go to **B3**)

☐ 2 沒有 → 貴機構有沒有使用***主機電腦／小型電腦***？
No. Does your firm use ***mainframe/mini computers***?

- ☐ 1 有 Yes
- ☐ 2 沒有 No.

B2. 貴機構有沒有計劃裝置個人電腦？
Is your firm planning to install PCs?

☐ 1 有 → 預計在 ☐☐ / ☐☐☐☐ (月份／年份) (請跳至 **C1**)
Yes, in ☐☐ / ☐☐☐☐ (mm/yyyy) (Please go to **C1**)

☐ 2 沒有 → 請提供原因(可選多項，但請圈出最主要的一項)及跳至 **C1**。
No. Please give reason(s) (may select more than one but please encircle the major one) and go to **C1**.

- ☐ 1 缺乏對應用個人電腦有認識的員工
  Lack of personnel familiar with using PC
- ☐ 2 缺乏懂得發展電腦應用系統的員工
  Lack of personnel knowledgeable in developing computer application systems
- ☐ 3 個人電腦的購置及保養成本高昂
  Costly in procuring and maintaining the PC equipment
- ☐ 4 軟件的購置及發展成本高昂
  Costly in procuring and developing software
- ☐ 5 聘用資訊科技人員的成本高昂
  Costly in employing IT personnel
- ☐ 6 擔心使用電腦時的資料保密事宜
  Concern about security issue in using computer
- ☐ 7 電腦並不可靠
  Consider computer not reliable
- ☐ 8 裝置電腦對業務沒有裨益
  No business benefit to install PCs
- ☐ 9 其他(請註明)：
  Others (please specify): _____

B3. 請按以下類別，註明貴機構所使用的個人電腦數量：
Number of PCs in use by the following categories:

	數量（部） Number of sets
(a) 桌面電腦 Desktop computer	☐☐☐☐
(b) 便攜式電腦／筆記簿型電腦 Laptop or notebook computer	☐☐☐☐
(c) ***個人數碼助理*** ***Personal Digital Assistant (PDA)***	☐☐☐☐
(d) 其他(請註明)： Others (please specify): _____	☐☐☐☐
總計 Total	☐☐☐☐

B4. 貴機構的個人電腦有沒有裝置／接達以下類別的***應用軟件***：
Whether your firm's PCs have installed/access to the following categories of ***application software***:

	有 Yes	沒有 No
(a) 文字處理 Word processing	1	2
(b) 試算表 Spreadsheet	1	2
(c) 數據庫管理 Database management	1	2
(d) 通訊 Communication	1	2
(e) ***電腦保安及防毒*** ***Computer security and anti-virus***	1	2
(f) ***多媒體工具*** (影像及聲音) ***Multi-media tools*** (video and sound)	1	2
(g) 其他***實用程式*** Other ***utility***	1	2
(h) ***電腦輔助設計／電腦輔助製造*** ***Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM)***	1	2
(i) 互聯網瀏覽器 Internet browser	1	2
(j) 銀行及金融／會計 Banking and finance/Accounting	1	2
(k) 採購／處理銷售訂單 Purchasing/Sales and order processing	1	2
(l) 人力資源管理／培訓 Human resource management/Training	1	2
(m) 其他(請註明)： Others (please specify): _____	1	2

B5. 貴機構的個人電腦有沒有接達以下類別的***特製電腦系統***：
Whether your firm's PCs have access to the following categories of ***tailor-made computer system***:

	有 Yes	沒有 No
(a) 電腦輔助設計／電腦輔助製造 CAD/CAM	1	2
(b) 銀行及金融／會計 Banking and finance/Accounting	1	2
(c) 採購／處理銷售訂單 Purchasing/Sales and order processing	1	2
(d) 人力資源管理／培訓 Human resource management/Training	1	2
(e) 其他(請註明)： Others (please specify): _____	1	2

III. 互聯網的應用 INTERNET USAGE

C1. 貴機構有沒有連接***互聯網***？
Does your firm have ***Internet*** connection?

1 有 Yes, → 自從 since ____ (年份 year) (請跳至 **C3**) (Please go to **C3**)

2 沒有 No

C2. 貴機構有沒有計劃連接互聯網？
Is your firm planning to have Internet connection?

1 有 Yes, → 預計在 in ___/___ (月份／年份) (mm/yyyy) (請跳至 **C5**) (Please go to **C5**)

2 沒有 No. → 請提供原因(可選多項，但請圈出最主要的一項)及跳至 **C5**。
Please give reason(s) (may select more than one but please encircle the major one) and go to **C5**.

1 缺乏熟悉互聯網的員工
Lack of personnel familiar with Internet

2 個人電腦的購置及保養成本高昂
Costly in procuring and maintaining the PC equipment

3 軟件的購置及發展成本高昂
Costly in procuring and developing software

4 聘用資訊科技人員的成本高昂
Costly in employing IT personnel

5 擔心使用互聯網時的資料保密事宜
Concern about security issue in using Internet

6 互聯網並不可靠
Consider Internet not reliable

7 連接互聯網對業務沒有裨益
No business benefit to have Internet connection

8 害怕員工使用互聯網作私人用途
Fear of access to Internet by employees for personal use

9 其他(請註明)：
Others (please specify): _____

C3. 貴機構通常使用互聯網作何種用途？(可選多項，但請圈出最主要的一項)
What does your firm usually use Internet for? (May select more than one but please encircle the major one)

1 ***電子郵件***
Electronic-mail (e-mail)

2 網上資料搜集
On-line source of information

3 網上購買／預訂貨品、服務或資料
On-line purchase/ordering of goods, services or information

4 網上獲取貨品、服務或資料
On-line receipt of goods, services or information

5 網上售賣貨品、服務或資料
On-line sales of goods, services or information

6 網上遞送貨品、服務或資料
On-line delivery of goods, services or information

7 網上付款
On-line payments

8 使用政府網上服務
Access to on-line government services

9 網上向供應商／商業伙伴提出查詢
Make on-line enquiry to suppliers/business partners

10 網上向顧客／購買商／商業伙伴提供資料／意見
On-line provision of information/feedback to customers/buyers/business partners

11 下載軟件
Software downloads

12 電子銀行服務(例如轉帳)
Electronic banking services (e.g. transferring money)

13 金融交易服務(例如買賣股票)
Financial transaction services (e.g. stock trading)

14 其他(請註明)：
Others (please specify): _____

C4. 貴機構是如何連接互聯網的？(可選多項)
How is your firm connected to the Internet? (May select more than one)

1 ***撥號式調解器*** (透過電話線)
Dial-up Modem (through telephone line)

寬頻
Broad-band

2 每秒 1.5 至 3 兆位元
1.5 – 3 Megabit per second (Mbps)

3 每秒 > 3 至 6 兆位元
> 3 – 6 Mbps

4 每秒 > 6 至 10 兆位元
> 6 – 10 Mbps

5 每秒 > 10 兆位元
> 10 Mbps

專用線路
Dedicated circuits

6 每秒 < 1.5 兆位元
< 1.5 Mbps

7 每秒 1.5 至 3 兆位元
1.5 – 3 Mbps

8 每秒 > 3 至 6 兆位元
> 3 – 6 Mbps

9 每秒 > 6 至 10 兆位元
> 6 – 10 Mbps

10 每秒 > 10 兆位元
> 10 Mbps

流動網絡
Mobile network

11 經公眾蜂窩式電話網絡連接
Connection via the public cellular telephone network

12 經 ***Wi-Fi (無線相容性認證)***連接
Connection via ***Wi-Fi (Wireless Fidelity)***

C5. 貴機構是否擁有無論是香港或香港以外核證機關發出的***數碼證書***？
Does your firm have ***digital certificate(s)***, irrespective of whether it is/they are issued by Certification Authorities in Hong Kong or outside?

1 有 → 自從 (年份)
Yes, since (year)

請按以下類別，註明貴機構所擁有數碼證書的數量：
Number of digital certificates by type:

	數量 Number
(i) 由本港核證機關發出 Issued by Certification Authorities in Hong Kong	
(a) 根據電子交易條例獲認可的核證機構 Recognised Certification Authorities under the Electronic Transactions Ordinance	
(b) 其他本港核證機構 (請註明) Other Certification Authorities in Hong Kong (please specify) _____	
(ii) 由香港以外核證機關發出 Issued by Certification Authorities outside Hong Kong	

2 沒有 → 貴機構有沒有計劃申請數碼證書？
No. Does your firm plan to acquire digital certificate(s)?

1 有 → 預計在 (月份／年份) (請跳至 **D1**)
Yes, in (mm/yyyy) (Please go to **D1**)

2 沒有 (請跳至 **C7**)
No (Please go to **C7**)

C6. 在過去 12 個月內，貴機構曾否使用數碼證書？
Has your firm used digital certificate(s) in the past 12 months?

1 有 → 請提供貴機構在哪方面使用數碼證書(可選多項)及跳至 **D1**。
Yes. Please provide the usage of the digital certificate by your firm (may select more than one) and go to **D1**.

- 1 對外與顧客進行交易／交換資料
  Business transaction/exchange of information with customers
- 2 對外與其他貿易伙伴進行交易／交換資料
  Business transaction/exchange of information with other business partners
- 3 對外與政府及有關機構進行交易／交換資料
  Business transaction/exchange of information with Government and related organizations
- 4 內部運作
  In-house operation
- 5 其他(請註明)：
  Others (please specify): _____

2 沒有
No

C7. 請提供貴機構沒有使用／沒有計劃申請數碼證書的原因。(可選多項，但請圈出最主要的一項)
Please give reason(s) for not having used/not having planned to apply for digital certificate(s).
(May select more than one but please encircle the major one)

- 1 甚少透過電子途徑進行商業交易
  Little use of electronic means in business transactions
- 2 沒有使用數碼證書加強保安的需要
  No need to enhance security by using digital certificate
- 3 沒有提供數碼簽署的需要
  No need to provide digital signature
- 4 只有少數政府服務或商業應用會要求使用數碼證書
  Limited Government/business applications/services requiring use of digital certificate
- 5 安裝程序繁複及不易使用
  Installation procedures cumbersome and not user-friendly
- 6 申請程序繁瑣
  Application procedures complicated
- 7 數碼證書的技術保安不足
  Digital certificate technology not secure
- 8 不知道數碼證書的存在或對此沒有認識
  Do not know existence of digital certificate or do not have knowledge about it
- 9 數碼證書費用昂貴
  Digital certificate too costly
- 10 其他(請註明)：
  Others (please specify): _____

IV. 網站的應用 WEB SITE USAGE

D1. 貴機構有沒有設立***網頁***或***網站***，包括掛在其他機構(例如香港貿易發展局、香港生產力促進局、互聯網服務供應商等)提供的網站？
Does your firm have a ***Web page*** or ***Web site***, including those hosted by third parties (e.g. Hong Kong Trade Development Council, Hong Kong Productivity Council, Internet service providers, etc)?

1 有 → 自從 _____ (年份)
Yes, since _____ (year)

網址 http://www. _____ (請跳至 **D3**)
Website address (Please go to **D3**)

2 沒有
No

D2. 貴機構有沒有計劃設立網頁或網站？
Does your firm plan to have a Web page or Web site?

1 有 Yes, → 預計在 in ___/___ (月份／年份) (mm/yyyy) (請跳至 **E1**) (Please go to **E1**)

2 沒有 No. → 請提供原因(可選多項，但請圈出最主要的一項)及跳至 **E1**。
Please give reason(s) (may select more than one but please encircle the major one) and go to **E1**.

1 缺乏熟悉保養／發展網頁或網站的員工
Lack of personnel familiar with maintaining/developing a Web page or Web site

2 個人電腦的購置及保養成本高昂
Costly in procuring and maintaining the PC equipment

3 軟件的購置及發展成本高昂
Costly in procuring and developing software

4 聘用資訊科技人員的成本高昂
Costly in employing IT personnel

5 擔心擁有網頁或網站時的資料保密事宜
Concern about security issue in having a Web page or Web site

6 擁有網頁或網站對業務沒有裨益
No business benefit to have a Web page or Web site

7 其他(請註明)：
Others (please specify): _____

D3. 貴機構有沒有***無線應用協定***版本的網頁或網站？
Does your firm have a ***Wireless Application Protocol (WAP)*** version of Web page or Web site?

1 有 Yes, → 自從 since ____ (年份) (year)

2 沒有 No. → 貴機構有沒有計劃增設？
Does your firm plan to add one?

1 有 Yes, → 預計在 in ___/___ (月份／年份) (mm/yyyy)

2 沒有 No

D4. 貴機構是否擁有自己的***網絡伺服器***？
Does your firm have your own ***Web server***?

1 有 Yes

2 沒有 No

D5. 貴機構的網頁或網站有沒有連接到機構內的資料庫？
Does your firm's Web page or Web site have connection with the related in-firm database?

1 有 Yes, → 自從 since ____ (年份) (year)

2 沒有 No. → 貴機構有沒有計劃將網頁或網站連接到機構內的資料庫？
Is your firm planning to connect the firm's Web page or Web site with the related in-firm database?

1 有 Yes, → 預計在 in ___/___ (月份／年份) (mm/yyyy)

2 沒有 No

D6. 貴機構的網頁或網站有沒有連接到商業伙伴的電腦系統作商業交易或交換資料？
Does your firm's Web page or Web site have connection with business partners' computer systems to conduct business transactions or information exchange?

1 有 Yes, → 自從 since ____ (年份) (year)

2 沒有 No. → 貴機構有沒有計劃將網頁或網站連接到商業伙伴的電腦系統作商業交易或交換資料？
Is your firm planning to connect the firm's Web page or Web site with business partners' computer systems to conduct business transactions or information exchange?

1 有 Yes, → 預計在 in ___/___ (月份／年份) (mm/yyyy)

2 沒有 No

D7. 貴機構的網頁或網站可提供的商業交易／服務是：(可選多項，但請圈出最主要的一項)
Type(s) of business transactions/services offered by the Web page or Web site of your firm is/are:
(May select more than one but please encircle the major one)

1 提供機構和其產品及服務的資料(對象包括顧客及員工)
Providing information on the firm and products and services offered (both for use by customers and staff)
2 網上訂購機構的產品及服務
On-line ordering of the firm's products and services
3 網上付款
On-line payments
4 網上遞送產品及服務
On-line delivery of the firm's products and services
5 網上售後服務
On-line after sales services
6 網上收集顧客的意見
On-line collection of feedback from customers
7 網上處理商業查詢(例如提供報價)
On-line handling of business enquiry (e.g. provision of quotation)
8 其他(請註明)：
Others (please specify): _____

V. 電子商業/電子貿易 ELECTRONIC BUSINESS/ELECTRONIC COMMERCE

1. *透過電子途徑預訂或購買貨品、服務或資料* *Ordering or Purchases of Goods, Services or Information through Electronic Means*

E1. 在過去 12 個月內，貴機構有沒有透過***電子途徑***預訂或購買貨品、服務或資料？
Has your firm ordered or purchased goods, services or information through ***electronic means*** in the past 12 months?

1 有
Yes
2 沒有 → 請提供原因(可選多項，但請圈出最主要的一項)及跳至 **E6**。
No. Please give reason(s) (may select more than one but please encircle the major one) and go to **E6**.

1 缺乏熟悉透過電子途徑預訂或購買貨品、服務或資料的員工
Lack of personnel familiar with ordering or purchasing goods, services or information through electronic means
2 業內並不普遍
Not popular in the industry
3 電腦設備的購置及保養成本高昂
Costly in procuring and maintaining the computer equipment
4 軟件的購置及發展成本高昂
Costly in procuring and developing software
5 聘用資訊科技人員的成本高昂
Costly in employing IT personnel
6 擔心透過電子途徑預訂或購買貨品、服務或資料時的資料保密事宜
Concern about security issue in ordering or purchasing goods, services or information through electronic means
7 透過電子途徑預訂或購買貨品、服務或資料並不可靠
Consider ordering or purchasing goods, services or information through electronic means not reliable
8 透過電子途徑預訂或購買貨品、服務或資料對業務沒有裨益
No business benefit to order or purchase goods, services or information through electronic means
9 所需的貨品、服務或資料沒有在網上銷售
Goods, services or information required not available for sale through electronic means
10 其他(請註明)：
Others (please specify): _____

E2. 貴機構透過電子途徑預訂或購買貨品、服務或資料的原因是：(可選多項，但請圈出最主要的一項)
Reason(s) for ordering or purchasing goods, services or information through electronic means is/are:
(May select more than one but please encircle the major one)

1 更加方便
More convenient
2 價格／成本更低
Lower price/cost
3 更多選擇
More choices
4 節省時間
Less processing time
5 其他(請註明)：
Others (please specify): _____

E3. 貴機構曾透過電子途徑預訂或購買貨品、服務或資料的種類是：(可選多項，但請圈出最主要的一項)
Type(s) of goods, services or information ordered or purchased through electronic means is/are: (May select more than one but please encircle the major one)

1 預訂或補購存貨
Order or purchase for replenishment of inventory

2 預訂、購買或申請政府的貨品、服務或資料
Order, purchase of or application for government goods, service or information

3 預訂、購買旅遊服務
Order or purchase of travel service

4 預訂、購買金融工具(例如股票)
Order or purchase of financial instruments (e.g. stock)

5 預訂或購買其他貨品、服務或資料 (請註明)
Order or purchase of other goods, services or information (please specify)

E4. (a) 貴機構在 2003 年***購買的貨品、服務或資料總值***中，透過各類電子途徑購買的項目佔總購買開支的百分比是：
Percentage of ***value of goods, services or information purchased*** through electronic means to the total value of purchase by your firm in 2003 is:

1 < 1%

2 1-5%

3 6-10%

4 11-15%

5 > 15% (請註明)
(please specify) _____

(b) 在透過電子途徑購買的貨品、服務或資料總值中，各類電子途徑所佔的百分比分別是：(若曾使用有關電子途徑類別購買，但其所佔的百分比少於一，請以"*"號表示)
Percentage breakdowns of value of goods, services or information purchased through electronic means by type of electronic means are: (if the type of electronic means concerned has been used for purchasing but its percentage is <1, please mark an "*")

(i) 經個人電腦連接互聯網
Internet via PCs ____ %

(ii) 經流動裝置(如支援無線應用協定的流動電話、個人數碼助理)連接互聯網
Internet via mobile devices (such as WAP phones, Personal Digital Assistants) ____ %

(iii) ***專用私人網絡***
Designated private network ____ %

(iv) ***透過電話網絡的交互式話音應答系統***
Interactive Voice Response System through telephone network ____ %

(v) ***其他透過流動電訊網絡的交互式應答系統 (例如短訊服務)***
Other Interactive Response System (such as Short Message Service) through mobile telecommunications network ____ %

(vi) 其他(請註明)：
Others (please specify): _____ ____ %

總計
Total **1 0 0** %

E5. 貴機構在 2003 年透過互聯網購買的項目總開支中，經由***網上付款***所佔的百分比是：
Percentage of ***payment through Internet*** in the total value of purchase through Internet of your firm in 2003 is:

1 0 %

2 < 1%

3 1-5%

4 6-10%

5 11-15%

6 > 15% (請註明)
(please specify) _____

2. *透過電子途徑獲取貨品、服務或資料*
Receipt of Goods, Services or Information through Electronic Means

(a) 政府貨品、服務或資料
Government Goods, Services or Information

E6. 在過去 12 個月內，貴機構曾否透過電子途徑獲取政府貨品、服務或資料？
Has your firm obtained government goods, services or information through electronic means in the past 12 months?

[1] 有 Yes.
(a) 透過哪種電子途徑？(可選多項，但請圈出最主要的一項)
Through what electronic means?(May select more than one but please encircle the major one)

- [1] 經個人電腦連接互聯網
  Internet via PCs
- [2] 經流動裝置(如支援無線應用協定的流動電話、個人數碼助理)連接互聯網
  Internet via mobile devices (such as WAP phones, Personal Digital Assistants)
- [3] 透過電話網絡的交互式話音應答系統
  Interactive Voice Response System through telephone network
- [4] 專用私人網絡
  Designated private network
- [5] 設置於政府辦公室的終端機
  Terminals at government offices
- [6] 其他(請註明)：
  Others (please specify): _____

(b) 透過哪種電子平台？(可選多項，但請圈出最主要的一項)
Through what electronic platform?(May select more than one but please encircle the major one)

- [1] ***公共服務電子化計劃***(www.esd.gov.hk)／***生活易***(www.esdlife.com)
  Electronic Service Delivery Scheme (ESD) (www.esd.gov.hk) **/**
  ESD Life (www.esdlife.com)
- [2] 其他政府網站
  Other government websites
- [3] 其他(請註明)：
  Others (please specify): _____

[2] 沒有 → 請提供原因(可選多項，但請圈出最主要的一項)及跳至 **E8**。
No. Please give reason(s) (may select more than one but please encircle the major one) and go to **E8**.

- [1] 缺乏熟悉透過電子途徑獲取政府貨品、服務或資料的員工
  Lack of personnel familiar with receiving government goods, services or information through electronic means
- [2] 業內並不普遍
  Not popular in the industry
- [3] 電腦設備的購置及保養成本高昂
  Costly in procuring and maintaining the computer equipment
- [4] 軟件的購置及發展成本高昂
  Costly in procuring and developing software
- [5] 聘用資訊科技人員的成本高昂
  Costly in employing IT personnel
- [6] 擔心透過電子途徑獲取政府貨品、服務或資料時的資料保密事宜
  Concern about security issue in receiving government goods, services or information through electronic means
- [7] 透過電子途徑獲取政府貨品、服務或資料並不可靠
  Consider receiving government goods, services or information through electronic means not reliable
- [8] 透過電子途徑獲取政府貨品、服務或資料對業務沒有裨益
  No business benefit to receive government goods, services or information through electronic means
- [9] 所需的政府貨品、服務或資料沒有以電子途徑遞送
  Government goods, services or information required not delivered through electronic means
- [10] 不方便用戶使用
  Not user-friendly
- [11] 不清楚何種政府貨品、服務或資料可透過電子途徑獲取
  Do not know what government goods, services or information are available through electronic means
- [12] 擔心員工代公司處理網上付款事宜
  Concern about employees handling online payment for the firm
- [13] 其他(請註明)：
  Others (please specify): _____

E7. 貴機構透過電子途徑獲取政府貨品、服務或資料的種類是：(可選多項，但請圈出最主要的一項)
Type(s) of government goods, services or information received through electronic means is/are:
(May select more than one but please encircle the major one)

1 獲取數碼形式的產品及服務
Receipt of products and services in digital form
2 獲取、瀏覽或尋找其他資料
Receipt of, browsing or searching for other information
3 遞交與貿易有關的文件(如報關表)
Submission of trade-related documents (e.g. trade declarations)
4 遞交其他表格或文件
Submission of other forms or documents etc.
5 提出查詢
Submission of enquiry
6 電子付款服務
e-payment services
7 其他(請註明)：
Others (please specify): _____

(b) 其他貨品、服務或資料
Other Goods, Services or Information

E8. 在過去 12 個月內，貴機構有沒有透過電子途徑獲取貨品、服務或資料(除政府提供以外)？
Has your firm received goods, services or information (other than from the government) through electronic means in the past 12 months?

1 有 → 透過哪種電子途徑？(可選多項，但請圈出最主要的一項)
Yes. Through what electronic means?(May select more than one but please encircle the major one)

1 經個人電腦連接互聯網
Internet via PCs
2 經流動裝置(如支援無線應用協定的流動電話、個人數碼助理)連接互聯網
Internet via mobile devices (such as WAP phones, Personal Digital Assistants)
3 專用私人網絡
Designated private network
4 透過電話網絡的交互式話音應答系統
Interactive Voice Response System through telephone network
5 其他透過流動電訊網絡的交互式應答系統(例如短訊服務)
Other Interactive Response System (such as Short Message Service) through mobile telecommunications network
6 其他(請註明)：
Others (please specify): _____

2 沒有 → 請提供原因(可選多項，但請圈出最主要的一項)及跳至 **E10**。
No. Please give reason(s) (may select more than one but please encircle the major one) and go to **E10**.

1 缺乏熟悉透過電子途徑獲取貨品、服務或資料的員工
Lack of personnel familiar with receiving goods, services or information through electronic means
2 業內並不普遍
Not popular in the industry
3 電腦設備的購置及保養成本高昂
Costly in procuring and maintaining the computer equipment
4 軟件的購置及發展成本高昂
Costly in procuring and developing software
5 聘用資訊科技人員的成本高昂
Costly in employing IT personnel
6 擔心透過電子途徑獲取貨品、服務或資料時的資料保密事宜
Concern about security issue in receiving goods, services or information through electronic means
7 透過電子途徑獲取貨品、服務或資料並不可靠
Consider receiving goods, services or information through electronic means not reliable
8 透過電子途徑獲取貨品、服務或資料對業務沒有裨益
No business benefit to receive goods, services or information through electronic means
9 所需的貨品、服務或資料不能透過電子途徑送遞
Goods, services or information required cannot be delivered through electronic means
10 擔心員工代公司處理網上付款事宜
Concern about employees handling online payment for the firm
11 其他(請註明)：
Others (please specify): _____

E9. 貴機構透過電子途徑獲取貨品、服務或資料(除政府提供的以外)的種類是：
(可選多項，但請圈出最主要的一項)
Type(s) of goods, services or information (other than from government) received through electronic means is/are: (May select more than one but please encircle the major one)

1 電子銀行服務(例如轉帳)
Electronic banking services (e.g. transferring money)

2 查詢財經資料(例如股票價格)
Search for financial information (e.g. stock price)

3 獲取數碼形式的產品及服務
Receipt of products and services in digital form

4 獲取、瀏覽或尋找其他資料
Receipt of, browsing or searching for other information

5 電子付款服務
e-payment services

6 其他(請註明)：
Others (please specify): _____

3. ***透過電子途徑售賣貨品、服務或資料***
Sales of Goods, Services or Information through Electronic Means

E10. 在過去 12 個月內，貴機構有沒有透過電子途徑售賣貨品、服務或資料？
Has your firm sold your goods, services or information through electronic means in the past 12 months?

1 有 → 自從 ____ (年份)
Yes, since ____ (year)

2 沒有 → 貴機構有沒有計劃透過電子途徑售賣貨品、服務或資料？
No. Is your firm planning to sell your goods, services or information through electronic means?

1 有 → 預計在 __ / ____ (月份／年份) (請跳至 **E13**)
Yes, in __ / ____ (mm/yyyy) (Please go to **E13**)

2 沒有 → 請提供原因(可選多項，但請圈出最主要的一項)及跳至 **E13**。
No. Please give reason(s) (may select more than one but please encircle the major one) and go to **E13**.

1 缺乏熟悉透過電子途徑售賣貨品、服務或資料的員工
Lack of personnel familiar with selling goods, services or information through electronic means

2 業內並不普遍
Not popular in the industry

3 電腦設備的購置及保養成本高昂
Costly in procuring and maintaining the computer equipment

4 軟件的購置及發展成本高昂
Costly in procuring and developing software

5 聘用資訊科技人員的成本高昂
Costly in employing IT personnel

6 在發展電腦應用系統方面缺乏資訊科技人才
Lack of IT personnel to develop computer application systems

7 擔心透過電子途徑售賣貨品、服務或資料時的資料保密事宜
Concern about security issue in selling goods, services or information through electronic means

8 透過電子途徑售賣貨品、服務或資料並不可靠
Consider selling goods, services or information through electronic means not reliable

9 透過電子途徑售賣貨品、服務或資料對業務沒有裨益
No business benefit to sell goods, services or information through electronic means at this time

10 大部分顧客仍未有準備使用電子商貿
Most customers not ready to use electronic commerce

11 有關的貨品、服務或資料不能以電子途徑售賣
Goods, services or information could not be sold through electronic means

12 其他(請註明)：
Others (please specify): _____

E11. 貴機構透過電子途徑售賣貨品、服務或資料的原因是：(可選多項，但請圈出最主要的一項)
Reason(s) for selling your goods, services or information through electronic means is/are:
(May select more than one but please encircle the major one)

1 增強競爭力
To enhance competitiveness

2 改善生產力
To improve productivity

3 改善效率及流程
To improve efficiency and streamline workflow

4 減低成本
To reduce cost

5 改善對顧客的服務
To improve customer services

6 提高業務靈活性／商機
To increase business flexibility/opportunities

7 其他(請註明)：
Others (please specify): _____

E12. (a) 貴機構在 2003 年透過電子途徑售賣貨品、服務及資料所帶來的***業務收入***。
Business receipts of your firm received in 2003 through selling goods, services and information through electronic means.
港元$ HK$ ____ ____ ____ ____

(b) 透過不同電子途徑類別所帶來的業務收入所佔的百分比分別是：(佔問題 **E12(a)** 的總值的百分比。若曾使用有關電子途徑類別售賣，但其所佔的百分比少於一，請以"*"號表示)
Percentage breakdowns of business receipts by type of electronic means are: (as a percentage to the total value in question **E12(a)**. If the type of electronic means concerned has been used for selling but its percentage is <1, please mark an "*")

(i) 互聯網(經無線應用協定版本網站／網頁) Internet (via WAP version of Web site/page) ____ %

(ii) 互聯網(經其他一般網站／網頁) Internet (via Web site/page other than WAP version) ____ %

(iii) 專用私人網絡 Designated private network ____ %

(iv) 透過電話網絡的交互式話音應答系統 Interactive Voice Response System through telephone network ____ %

(v) 其他透過流動電訊網絡的交互式應答系統(例如短訊服務) Other Interactive Response System (such as Short Message Service) through mobile telecommunications network ____ %

(vi) 其他(請註明)： Others (please specify): _____ ____ %

總計 Total **1 0 0** %

(c) 不同顧客類別所帶來的業務收入所佔的百分比是：(佔 **E12(a)** 的總值的百分比)
Breakdowns of business receipts by customer group are: (as a percentage to the total value in **E12(a)**)

(i) 消費者 Consumers ____ %

(ii) ***政府及有關機構*** ***Government and related organizations*** ____ %

(iii) ***商業及其他機構*** ***Business and other establishments*** ____ %

總計 Total **1 0 0** %

(d) 透過互聯網售賣貨品、服務及資料所帶來的業務收入中，經由***網上收款***所佔的百分比是：
Percentage of ***payment received through Internet*** in the receipts of goods, services or information sold through Internet is:

- [1] 0 %
- [2] < 1%
- [3] 1-5%
- [4] 6-10%
- [5] 11-15%
- [6] > 15% (請註明) (please specify) _____

E13. 貴機構在 2003 年的業務總收入。 港元$
Total business receipts of your firm in 2003. HK$ |___|___|___|___|___|___|___|___|

E14. 與 2002 年比較，貴機構在 2003 年的業務總收入的變動百分率為：
(請圈出適當的 +/- 符號) +/- |___|___|%
Percentage change of total business receipts of your firm in 2003 compared with 2002 is: (Please encircle +/- sign as appropriate)

4. *透過電子途徑遞送貨品、服務或資料*
Delivery of Goods, Services or Information through Electronic Means

E15. 在過去 12 個月內，貴機構有沒有透過電子途徑遞送貨品、服務或資料？
Has your firm delivered your goods, services or information through electronic means in the past 12 months?

- [1] 有 Yes, → 自從 since |___|___|___|___| (年份) (year)
- [2] 沒有 No. → 貴機構有沒有計劃透過電子途徑遞送貨品、服務或資料？
  Is your firm planning to deliver your goods, services or information through electronic means?
  - [1] 有 Yes, → 預計在 in |___|___| / |___|___|___|___| (月份／年份) (mm/yyyy) (請跳至 **F1**) (Please go to **F1**)
  - [2] 沒有 No. → 請提供原因(可選多項，但請圈出最主要的一項)及跳至 **F1**。
    Please give reason(s) (may select more than one but please encircle the major one) and go to **F1**.
    - [1] 缺乏熟悉透過電子途徑遞送貨品、服務或資料的員工
      Lack of personnel familiar with delivering goods, services or information through electronic means
    - [2] 業內並不普遍
      Not popular in the industry
    - [3] 電腦設備的購置及保養成本高昂
      Costly in procuring and maintaining the computer equipment
    - [4] 軟件的購置及發展成本高昂
      Costly in procuring and developing software
    - [5] 聘用資訊科技人員的成本高昂
      Costly in employing IT personnel
    - [6] 在發展電腦應用系統方面缺乏資訊科技人才
      Lack of IT personnel to develop computer application systems
    - [7] 擔心透過電子途徑遞送貨品、服務或資料時的資料保密事宜
      Concern about security issue in delivering goods, services or information through electronic means
    - [8] 透過電子途徑遞送貨品、服務或資料並不可靠
      Consider delivering goods, services or information through electronic means not reliable
    - [9] 透過電子途徑遞送貨品、服務或資料對業務沒有裨益
      No business benefit to deliver goods, services or information through electronic means at this time
    - [10] 有關的貨品、服務或資料不能以電子途徑遞送
      Goods, services or information could not be delivered through electronic means
    - [11] 其他(請註明)：
      Others (please specify): _____

E16. 貴機構透過電子途徑遞送貨品、服務或資料的原因是：(可選多項，但請圈出最主要的一項)
Reason(s) for delivering your goods, services or information through electronic means is/are:
(May select more than one but please encircle the major one)

1 增強競爭力
To enhance competitiveness

2 改善生產力
To improve productivity

3 改善效率及流程
To improve efficiency and streamline workflow

4 減低成本
To reduce cost

5 改善對顧客的服務
To improve customer services

6 提高業務靈活性／商機
To increase business flexibility/opportunities

7 其他(請註明)：
Others (please specify): _____

E17. 貴機構透過電子途徑遞送貨品、服務或資料的種類是：(可選多項，但請圈出最主要的一項)
Type(s) of goods, services or information delivered through electronic means is/are:
(May select more than one but please encircle the major one)

1 遞送數碼形式的產品及服務
Delivery of products and services in digital form

2 在網站提供機構／產品資料
Provision of information on the firm/product on the Web site

3 遞送金融資料(例如股票價格)
Delivery of financial information (e.g. stock price)

4 遞送其他資料
Delivery of other information

5 電子付款服務
e-payment services

6 其他(請註明)：
Others (please specify): _____

E18. 貴機構透過電子途徑遞送貨品、服務或資料的媒介是：(可選多項)
The media for delivering your goods, services or information through electronic means is/are:
(May select more than one)

1 互聯網(經無線應用協定版本網站／網頁)
Internet (via WAP version of Web site/page)

2 互聯網(經其他一般網站／網頁)
Internet (via Web site/page other than WAP version)

3 專用私人網絡
Designated private network

4 透過電話網絡的交互式話音應答系統
Interactive Voice Response System through telephone network

5 其他透過流動電訊網絡的交互式應答系統(例如短訊服務)
Other Interactive Response System (such as Short Message Service) through mobile telecommunications network

6 其他(請註明)：
Others (please specify): _____

VI. 資訊科技項目的財政預算 BUDGET FOR INFORMATION TECHNOLOGY

F1. 貴機構有沒有為下列項目訂下 2004 年的財政預算？
Does your firm have a budget for year 2004 for the following purposes?

	有 Yes	沒有 No	不肯定 Uncertain
(a) 為從事有關資訊科技***研究及發展***的活動 For performing ***research and development*** activities related to IT	1	2	3
(b) 為增購資訊科技設備及軟件 For procuring additional IT equipment and software	1	2	3
(c) 為增聘資訊科技員工 For employing additional IT personnel	1	2	3
(d) 為採用資訊科技應用服務或將有關服務外判 For using IT application services or by outsourcing	1	2	3
(e) 為資訊科技培訓 For IT training	1	2	3
(f) 為資訊科技保安用途 For IT security purposes	1	2	3
(g) 為設立／接達數據通訊網絡(例如寬頻) For setting up/access to data communication network (e.g. broad-band)	1	2	3
(h) 為***無線及流動服務和技術*** For ***wireless and mobile services and technology***	1	2	3

F2. 貴機構為下列項目所訂下的 2004 年財政預算，與 2003 年比較，會增加、減少或不變呢？
Has the budget for year 2004 for the following purposes been increased, decreased or the same compared with that for 2003?

	增加 Increased	減少 Decreased	不變 Same	不肯定 Uncertain	不適用 Not Applicable
(a) 為從事有關資訊科技研究及發展的活動 For performing research and development activities related to IT	1	2	3	4	5
(b) 為增購資訊科技設備及軟件 For procuring additional IT equipment and software	1	2	3	4	5
(c) 為增聘資訊科技員工 For employing additional IT personnel	1	2	3	4	5
(d) 為採用資訊科技應用服務或將有關服務外判 For using IT application services or by outsourcing	1	2	3	4	5
(e) 為資訊科技培訓 For IT training	1	2	3	4	5
(f) 為資訊科技保安用途 For IT security purposes	1	2	3	4	5
(g) 為設立／接達數據通訊網絡(例如寬頻) For setting up/access to data communication network (e.g. broad-band)	1	2	3	4	5
(h) 為無線及流動服務和技術 For wireless and mobile services and technology	1	2	3	4	5

F3. 貴機構有沒有為下列項目訂下 2005 的財政預算？
Does your firm have a budget for year 2005 for the following purposes?

	有 Yes	沒有 No	不肯定 Uncertain
(a) 為從事有關資訊科技研究及發展的活動 For performing research and development activities related to IT	1	2	3
(b) 為增購資訊科技設備及軟件 For procuring additional IT equipment and software	1	2	3
(c) 為增聘資訊科技員工 For employing additional IT personnel	1	2	3
(d) 為採用資訊科技應用服務或將有關服務外判 For using IT application services or by outsourcing	1	2	3
(e) 為資訊科技培訓 For IT training	1	2	3
(f) 為資訊科技保安用途 For IT security purposes	1	2	3
(g) 為設立／接達數據通訊網絡(例如寬頻) For setting up/access to data communication network (e.g. broad-band)	1	2	3
(h) 為無線及流動服務和技術 For wireless and mobile services and technology	1	2	3

F4. 貴機構為下列項目所訂下的 2005 年財政預算，與 2004 年比較，會增加、減少或不變呢？
Has the budget for year 2005 for the following purposes been increased, decreased or the same compared with that for 2004?

	增加 Increased	減少 Decreased	不變 Same	不肯定 Uncertain	不適用 Not Applicable
(a) 為從事有關資訊科技研究及發展的活動 For performing research and development activities related to IT	1	2	3	4	5
(b) 為增購資訊科技設備及軟件 For procuring additional IT equipment and software	1	2	3	4	5
(c) 為增聘資訊科技員工 For employing additional IT personnel	1	2	3	4	5
(d) 為採用資訊科技應用服務或將有關服務外判 For using IT application services or by outsourcing	1	2	3	4	5
(e) 為資訊科技培訓 For IT training	1	2	3	4	5
(f) 為資訊科技保安用途 For IT security purposes	1	2	3	4	5
(g) 為設立／接達數據通訊網絡(例如寬頻) For setting up/access to data communication network (e.g. broad-band)	1	2	3	4	5
(h) 為無線及流動服務和技術 For wireless and mobile services and technology	1	2	3	4	5

VII. 資訊科技保安 INFORMATION TECHNOLOGY SECURITY

G1. 在過去 12 個月內，貴機構的電腦曾否受到入侵／襲擊？
Has your firm suffered from computer attacks in the past 12 months?

1 有 → 受襲次數
Yes, Number of attacks ⌊_ _ _⌋

2 沒有 (請跳至 **G4**)
No. (Please go to **G4**)

G2. 貴機構的電腦受到何種襲擊：(可選多項)
Type(s) of computer attacks suffered is/are: (May select more than one)

1 ***電腦病毒***
Virus

2 ***黑客***
Hacking

3 ***阻斷服務***
Denial of service

4 資料被竊
Theft of information

5 其他(請註明)：
Others (please specify): _____

G3. 貴機構在電腦受襲後，採取了何種行動：(可選多項)
Action(s) taken after suffered from computer attacks is/are : (May select more than one)

1 修補漏洞
Patched holes

2 向管理層匯報
Report to senior management

3 向警方報案
Report to police

4 向香港電腦保安事故協調中心匯報
Report to Hong Kong Computer Emergency Response Team Coordination Centre

5 使用更多保安技術
Use more security technologies

6 其他(請註明)：
Others (please specify): _____

7 沒有特別行動
No specific action

G4. 貴機構有沒有採用以下保安技術來保護貴機構的電腦系統及資料？(可選多項)
Has your firm adopted the following security technology(ies) to protect the computer system and information of your firm? (May select more than one)

- [1] 防毒軟件 Anti-virus software
- [2] 密碼／個人辨認密碼 Password/Personal Identity Number (PIN)
- [3] 實體保安 Physical security
- [4] ***防火牆*** ***Firewall***
- [5] ***檔案加密*** ***File encryption***
- [6] 接達管制 Access control
- [7] 入侵偵測系統 Intrusion detection system
- [8] 數碼證書 Digital certificate
- [9] 其他(請註明)： Others (please specify): _____
- [10] 沒有任何上述保安技術→ None of the above.
  請提供原因(可選多項)及跳至 **G6**。 Please give reason(s) (may select more than one) and go to **G6**.
  - [1] 財政限制 Budget constraint
  - [2] 缺乏有關範疇的知識 Lack of expertise in the field
  - [3] 沒有需要／不預期有保安問題 Don't see the need/don't foresee any security problem
  - [4] 資訊保安的優先次序較低 Information security is considered a low priority
  - [5] 其他(請註明)： Others (please specify): _____

G5. 貴機構在處理保安問題上遇到哪些限制？(可選多項，但請圈出最主要的一項)
What is/are the obstacles to addressing security concerns in your firm?
(May select more than one but please encircle the major one)

- [1] 財政限制 Budget constraint
- [2] 員工缺乏資訊保安的意識 Lack of employee awareness
- [3] 缺乏管理層的支持 Lack of management support
- [4] 缺乏有關範疇的知識 Lack of expertise in the field
- [5] 有關產品的技術複雜 Technical/complexity of products
- [6] 缺乏有關資訊科技保安的策略及指引 Lack of policy and guideline on IT security
- [7] 其他(請註明)： Others (please specify): _____
- [8] 沒有限制 No obstacles

G6. 如貴機構有透過電子途徑售賣貨品、服務或資料，貴機構如何核實客戶身分及／或為客戶提供保密接達服務？(可選多項)
If your firm sells goods, services or information through electronic means, how do you provide authentication and/or provide secure access for your clients? (May select more than one)

- [1] ***保密插口層*** / ***Secure Sockets Layer (SSL)***
- [2] ***保密電子交易*** / ***Secure Electronic Transaction (SET)***
- [3] 個人數碼證書 / Personal digital certificate
- [4] 伺服器數碼證書 / Server digital certificate
- [5] 用戶名稱 / User name
- [6] 密碼／個人辨認密碼 / Password/Personal Identity Number
- [7] 其他(請註明)： / Others (please specify): _____
- [8] 不適用 / Not applicable

G7. 如貴機構有內部通訊系統，貴機構如何核實僱員身分？(可選多項)
If your firm has internal communication system, how do you authenticate your employees? (May select more than one)

- [1] 個人數碼證書 / Personal digital certificate
- [2] 用戶名稱 / User name
- [3] 密碼／個人辨認密碼 / Password/Personal Identity Number
- [4] 其他(請註明)： / Others (please specify): _____
- [5] 不適用 / Not applicable

VIII. 無線及流動服務和技術 WIRELESS AND MOBILE SERVICES AND TECHNOLOGY

H1. 貴機構有沒有應用以下無線及流動裝置？ / Does your firm use any of the following wireless and mobile devices?

	有 Yes	沒有 No
(a) 連接無線數據通訊網絡的流動電話 / Mobile phone connected to a wireless data communication network	1	2
(b) 連接無線數據通訊網絡的個人數碼助理 / Personal Digital Assistant connected to a wireless data communication network	1	2
(c) 連接無線數據通訊網絡的便攜式電腦／筆記簿型電腦 / Laptop or notebook computer connected to a wireless data communication network	1	2
(d) 連接無線數據通訊網絡的桌面電腦 / Desktop computer connected to a wireless data communication network	1	2
(e) 無線區域網絡接達點(包括***無線熱點***) / Wireless LAN access point (including ***hotspot***)	1	2
(f) ***射頻識別技術***裝置 / ***Radio Frequency Identification (RFID)*** device	1	2
(g) ***非接觸式智能卡***閱讀器 / ***Contactless smart card*** reader	1	2
(h) 其他(請註明)： / Others (please specify): _____	1	2

如貴公司沒有使用 H1 所列的裝置，請跳至 **H5**
If your firm do not use any of the devices listed in H1, please go to **H5**

H2. 貴機構有沒有應用以下無線及流動傳送技術？
Does your firm use any of the following wireless and mobile transmission technology?

	有 Yes	沒有 No
(a) ***通用分組無線電服務*** ***General Packet Radio Service (GPRS)***	1	2
(b) ***全球演進式數據速率增強技術*** ***Enhanced Data rates for Global Evolution (EDGE)***	1	2
(c) ***第三代無線通訊系統*** ***Third Generation Wireless System (3G)***	1	2
(d) 無線應用協定 Wireless Application Protocol	1	2
(e) 無線區域網絡 Wireless LAN	1	2
(f) ***藍芽技術*** ***Bluetooth***	1	2
(g) 射頻識別技術 Radio Frequency Identification (RFID)	1	2
(h) ***流動保安解決方案***(例如流動數碼證書) ***Mobile security solution*** (e.g. mobile digital certificate)	1	2
(i) 其他(請註明)： Others (please specify): _____	1	2

H3. 貴機構有沒有應用以下無線及流動服務？
Does your firm use any of the following wireless and mobile services?

	有 Yes	沒有 No
(a) ***短訊服務*** ***Short Message Service (SMS)***	1	2
(b) ***增強型短訊服務*** ***Enhanced Messaging Service (EMS)***	1	2
(c) ***多媒體短訊服務*** ***Multimedia Messaging Service (MMS)***	1	2
(d) ***基於位置的服務*** ***Location Based Service (LBS)***	1	2
(e) ***全球定位系統*** ***Global Positioning Service (GPS)***	1	2
(f) 無線電郵 Wireless e-mail	1	2
(g) 無線上網 Wireless web surfing	1	2
(h) 資訊娛樂服務 Infotainment service	1	2
(i) 視像通訊 Video call	1	2
(j) 其他(請註明)： Others (please specify): _____	1	2

H4. 貴機構有沒有應用以下***無線及流動應用系統***？
Does your firm use any of the following ***wireless and mobile applications***?

	有 Yes	沒有 No
(a) ***地理資訊系統*** ***Geographic Information System (GIS)***	1	2
(b) 短訊廣播及警報(短訊服務、多媒體短訊服務等) Message broadcast and alert (SMS, MMS, etc.)	1	2
(c) 辦公室自動化(文書處理、試算表等) Office automation (word processing, spreadsheet, etc.)	1	2
(d) 無線應用協定的網站 WAP site	1	2
(e) 工作管理 Job management	1	2
(f) 車隊管理 Fleet management	1	2
(g) 外勤考查及文件傳送 Outdoor site survey and documentation	1	2
(h) 存貨控制 Inventory control	1	2
(i) 流動金融服務(銀行、買賣股票等) Mobile financial services (banking, stock trading, etc)	1	2
(j) 流動銷售點 Mobile Point-Of-Sales	1	2
(k) 與業務伙伴(包括政府)進行交易 Transaction with business partners (including the government)	1	2
(l) 視訊串流 Video streaming	1	2
(m) 其他(請註明)： Others (please specify): _____	1	2

請跳至**第 IX 部份**
Please go to **section IX**

H5. 貴機構沒有應用無線及流動服務及技術的原因是：(可選多項，但請圈出最主要的一項)
Please give reason(s) for not using wireless and mobile services and technology.
(May select more than one but please encircle the major one)

1 缺乏熟悉無線及流動服務及技術的員工
Lack of personnel familiar with wireless and mobile services and technology

2 業內並不普遍
Not popular in the industry

3 無線及流動服務及技術的應用投資成本高昂
High investment cost in using wireless and mobile services and technology

4 無線及流動服務及技術的應用運作費用高昂
High operating cost in using wireless and mobile services and technology

5 投資無線及流動服務及技術的回報率沒有保證
Uncertain Return-On-Investment in using wireless and mobile services and technology

6 擔心應用無線及流動服務及技術時的資料保密及可靠性事宜
Concern about security and reliability issues in using wireless and mobile services and technology

7 應用無線及流動服務及技術對業務沒有裨益
No business benefit in using wireless and mobile services and technology

8 大部分顧客仍未有準備使用無線及流動服務及技術
Most customers not ready to use wireless and mobile services and technology

9 市場沒有合適的無線及流動服務及技術
No suitable wireless and mobile services and technology in the market

10 不清楚市場有何種無線及流動服務及技術
Unfamiliar with the wireless and mobile services and technology available in the market

11 其他(請註明)：
Others (please specify): _____

IX. 問卷填報人資料 PARTICULARS OF PERSON COMPLETING THIS QUESTIONNAIRE

倘對本問卷有疑問，可向下述人士查詢：
Person to be consulted if questions arise about this questionnaire:

聯絡人(先生/女士)
Contact person (Mr./Ms.) _____

職位
Position _____

聯絡電話號碼
Contact telephone number |_|_|_|_|_|_|_|_|

傳真號碼
Fax number |_|_|_|_|_|_|_|_|

電郵地址
e-mail address _____

此欄不用填寫
FOR OFFICIAL USE

(a) FIELD OFFICER			
	Initial (Code)	Date	Action taken
Visits			
Collection			
Verification			
(b) OFFICE EDITOR			
	Initial (Code)	Date	Remarks
Coding			
Verification			
Detailed edit			

香港特別行政區　政府統計處

CENSUS AND STATISTICS DEPARTMENT
HONG KONG SPECIAL ADMINISTRATIVE REGION

2004 年資訊科技在工商業的使用情況和普及程度按年統計調查

ANNUAL SURVEY ON INFORMATION TECHNOLOGY USAGE AND PENETRATION IN THE BUSINESS SECTOR FOR 2004

註釋	Explanatory Notes
I. 一般資料	**I. GENERAL INFORMATION**
問題A2	**Question A2**
就業人數	**Persons engaged**
就業人數包括在職東主、在職合夥人、無酬家屬幫工及所有在一間機構一天工作不少於一小時的僱員。	Persons engaged includes working proprietors, active partners, unpaid family workers and all employees of a firm who worked at least for one hour a day in the firm.
II. 個人電腦的應用	**II. PERSONAL COMPUTER USAGE**
問題B1	**Question B1**
個人電腦	**Personal computer**
個人電腦是指為個人使用而設的電腦，包括桌面電腦，便攜式電腦／筆記簿型電腦和個人數碼助理。不包括伺服器及用於主機或小型電腦的工作站和終端機。把個人電腦接駁一起可組成區域網絡或廣域網絡系統。	Personal computer refers to a computer designed for individual use. Personal computer includes desktop computer, laptop/notebook computer and Personal Digital Assistant. Servers, workstations and terminals of mainframe or minicomputer are not included. Personal computers may be connected to form a Local Area Network (LAN) or Wide Area Network (WAN) system.
主機電腦	**Mainframe**
主機電腦指大型中央電腦系統，通常應用於整個大型機構。主機電腦通常由一個中央處理器連接著一組工作站及終端機所組成。	Mainframe refers to large centralised computer system, usually serving the whole of a large organisation. It usually consists of a Central Processing Unit connected with a number of workstations and terminals.
小型電腦	**Mini computer**
小型電腦指中型電腦系統，通常應用於大型機構的個別部門，並由一個中央處理器連接著一組工作站及終端機所組成。	Mini computer refers to medium-sized computer system, usually serving a department within a large organisation. It usually consists of a Central Processing Unit connected with a number of workstations and terminals.
問題B3	**Question B3**
個人數碼助理	**Personal Digital Assistant (PDA)**
個人數碼助理是指體積細小的袋裝掌上電腦，可提供計算及資料存取功能作個人或商業用途，亦可用作流動電話、傳真發送機或個人行事曆。但電子記事簿和電子詞典則不應界定為個人數碼助理。	Personal Digital Assistant (PDA) refers to a handheld computer small enough to fit inside a jacket pocket, providing computing and information storage and retrieval capabilities for personal and business use. Besides, it may function as a mobile phone, fax sender, and personal organiser. However, digital diary and electronic dictionary alone are not regarded as PDA.
問題B4	**Question B4**
應用軟件	**Application software**
應用軟件是指一般在市面上可買到的電腦程式。	Application software refers to computer program directly purchasable in the market.
電腦保安及防毒	**Computer security and anti-virus**
這些是指保護電腦系統的電腦程式，以免系統因受意外或惡意行動（如電腦病毒襲擊）而有所損壞。	These are computer programs designed to protect computer systems from damages arising from accidents or malicious actions including virus attacks.
多媒體工具	**Multi-media tools**
這些是指可處理不只於文字的數碼資訊的電腦程式。一些較普遍的工具用作處理數碼影像（圖片及電影）及聲音資訊。	These are computer programs designed to handle digital information not restricted to text form. Some of the more common tools deal with digitized video (pictures and movies) and sound information.

註釋	Explanatory Notes
實用程式 **實用程式是指提供在操作系統以外的基本服務和功能的電腦程式，如硬盤管理軟件。**	**Utility** Utility is a computer program that provides basic services and functions on top of the capabilities provided by the operating system, e.g. harddisk management software.
電腦輔助設計 **電腦輔助設計是指利用電腦在產品及建築設計和繪圖過程中製作詳細幾何資料及標籤。**	**Computer-Aided Design (CAD)** Computer-Aided Design (CAD) is the use of computers to create the geometric detail and labeling involved in product and architectural design and drafting.
電腦輔助製造 **電腦輔助製造泛指對製造程序所提供的電腦支援。**	**Computer-Aided Manufacturing (CAM)** Computer-Aided Manufacturing (CAM) is a general term for computer support for the manufacturing process.
問題B5 **特製電腦系統** **特製電腦系統是指由機構本身的資訊科技人員或其他編寫軟件的公司根據該機構特定的用戶需求而設計的電腦應用系統。**	**Question B5** **Tailor-made computer system** Tailor-made computer system refers to computer application developed by in-house IT personnel or outside software house according to specific user requirements in a firm.
III. 互聯網的應用	**III. INTERNET USAGE**
問題C1 **互聯網** **互聯網是指可提供多項服務的全球性公眾電腦網絡，包括萬維網、電子郵件、新聞組及檔案傳遞等服務。**	**Question C1** **Internet** Internet is the world-wide public computer network, which provides access to a wide range of services including the world wide web, e-mail, newsgroup and file transfer.
問題C3 **電子郵件** **電子郵件是一種提供本地和全球性網絡用戶互換訊息（包括文字和附件）的設施。**	**Question C3** **Electronic-mail** Electronic-mail is a facility which allows network users locally and world-wide to exchange messages, including text and attachments.
問題C4 **撥號式調解器** **這是一種以調解器（內部或對外）透過電話線或綜合服務數碼網絡而進行的通訊技術，通常須撥號以取得連線。**	**Question C4** **Dial-up Modem** Communication technology implemented through modems (internal or external) via telephone lines or Integrated Services Digital Network (ISDN), typically requires a dial up process to gain connection.
寬頻 **這是一種具備每秒傳送數據1.5兆位元或以上的接達方式。方法是透過採用數字式用戶環路(DSL)、導線調解器、光纖到樓、本地微波配送系統(LMDS) 或相類似的技術接達接入網絡；或是透過採用異步傳輸模式(ATM)、網際規約(IP)或相類似的技術接達核心網絡。但不包括專用連接，雖然其對客戶而言亦是提供長期連接。**	**Broad-band** Connections with data rates at or above 1.5 Megabits per second (Mbps) established over access networks based on Digital Subscriber Loop (DSL), cable modem, fibre-to-the-building, Local Microwave Distribution System (LMDS) or similar technology and core networks based on Asynchronous Transfer Mode (ATM), Internet Protocol (IP) or similar technology. Exclude dedicated connections, although the connections may appear to the users as "always on".
專用線路 **這是一種以全部容量供客戶專用的非交換式連接方式。**	**Dedicated Circuits** Unswitched connections with capacity dedicated to the users.
流動網絡 **這是一種為流動或手提裝置而設的連接方式。**	**Mobile networks** Connections established for use with mobile or handheld devices.
Wi-Fi (無線相容性認證) **一個為無線裝置而制定的鑑定標準，以保證獲認可的產品可相互操作。**	**Wi-Fi (Wireless Fidelity)** A certification standard for wireless devices to ensure the certified products are interoperable.

註釋	Explanatory Notes
問題C5	**Question C5**
數碼證書	**Digital certificate**
數碼證書可用作生產數碼簽署，以核實證書持有人的身份及承認證書持有人透過電子途徑傳送的資訊。數碼證書普遍用於某些電子政府服務、電子銀行、網上股票買賣及以電子資料聯通方式透過貿易通遞交貿易文件。 至2003年3月底，根據電子交易條例獲認可的核證機關共有四所，分別為： • 香港郵政署核證機關 • 銀聯通寶有限公司 • 網際威信（香港）有限公司 • 電子核證服務有限公司（註：此公司是貿易通的全資附屬公司，而現時以電子資料聯通方式透過貿易通遞交貿易文件時，貿易通採納此公司發出的一類指定的數碼證書作此用途。）	A digital certificate can be used to generate a digital signature for the purpose of authenticating the holder of the certificate and approving information communicated electronically by the holder. Digital certificates are commonly used in certain e-government services, e-banking, online stock trading and submission of trade-related documents through the Electronic Data Interchange (EDI) services of Tradelink Electronic Commerce Limited. As at end March 2003, there are four recognised certification authorities under the Electronic Transactions Ordinance. They are: • Hong Kong Post Certificate Authority • Joint Electronic Teller Services Limited • HiTRUST.COM (HK) Incorporated Limited • Digi-Sign Certification Services Limited (note: This is a wholly-owned subsidiary of Tradelink. Currently, a specific type of digital certificate issued by this CA is adopted by Tradelink for the purpose of submission of trade-related documents through EDI services of Tradelink.)
IV. 網站的應用	**IV. WEB SITE USAGE**
問題D1	**Question D1**
網頁	**Web page**
網頁是一種可在互聯網上開啟的電子文件，提供文字、圖像或多媒體形式的資訊。	Web page is an electronic document accessible in the Internet, which provides information in a textual, graphical or multimedia format.
網站	**Web site**
網站是一組以本頁為首頁的相關網頁。每一網站通常都有一個獨一無二的網上地址，以供用戶尋找所需的首網頁。	Web site is a related collection of Web pages that includes a beginning page called a home page. A Web site has an address (often unique) to facilitate the users to get their intended home page.
問題D3	**Question D3**
無線應用協定	**Wireless Application Protocol (WAP)**
無線應用協定是一組通訊協定的標準規格，使流動通訊器材如流動電話和無線電收發器能使用互聯網提供的服務，包括電子郵件、萬維網、新聞組和互聯網交談室。	Wireless Application Protocol (WAP) is a specification for a set of communication protocol to standardize the way that wireless devices, such as cellular telephones and radio transceivers, can be used for Internet access, including email, the world wide web, newsgroups and the Internet Relay Chat.
問題D4	**Question D4**
網絡伺服器	**Web server**
網絡伺服器是一組安裝在一個特定電腦內的電腦程式，應用戶要求提供及傳送網頁給互聯網上的用戶。該特定電腦一般亦被稱為網絡伺服器。	Web server is the computer program (resided in a designated computer) that provides and transmits Web pages to users in the Internet upon request. The designated computer housing the computer program is commonly called the Web server.
V. 電子商業／電子貿易	**V. ELECTRONIC BUSINESS/ELECTRONIC COMMERCE**
問題E1-E5	**Question E1-E5**
透過電子途徑預訂或購買貨品、服務或資料	**Ordering or Purchases of Goods, Services or Information through Electronic Means**
機構單位如有透過電子途徑確認整個預訂或購買過程，便會視為有透過電子途徑預訂或購買貨品、服務或資料。	An establishment is considered to have ordered or purchased goods, services or information through electronic means if the confirmation of order or purchase is completely done through electronic means.
電子途徑	**Electronic means**
電子途徑是指以電子媒介（例如互聯網及專用私人網絡等）處理及傳送數碼數據。	Electronic means refer to the processing and transmission of digitized data, which are transmitted through electronic media such as the Internet and designated private network.

註釋	Explanatory Notes
問題E4	**Question E4**
購買貨品、服務或資料的總值	**Value of goods, services or information purchased**
購買貨品、服務或資料的總值是指貴機構用於購買自用或作轉賣用途的貨品、服務或資料的總值。	Value of goods, services or information purchased refers to the total value of purchases of the firm, both for own consumption and for resale.
透過電話網絡的交互式話音應答系統	**Interactive Voice Response System through telephone network**
透過電話線的交互式話音應答系統指經電話線或流動電訊網絡自動以話音應答客戶需求的程序系統。	Interactive Voice Response System through telephone line refers to an automated system which deals with clients with voice response through telephone lines or mobile telecommunications network.
其他透過流動電訊網絡的交互式應答系統（例如短訊服務）	**Other Interactive Response System (such as Short Message Service) through mobile telecommunications network**
其他透過流動電訊網絡的交互式應答系統（例如短訊服務）指經流動電訊網絡以非話音方式自動回應客戶需求的程序系統。例如在金融與銀行業廣泛應用在流動交易處理的短訊服務。	Other Interactive Response System (such as Short Message Service) through mobile telecommunications network refers to an automated system which deals with clients through mobile telecommunications network without using voice response. Example is Short Message Service, which is commonly used in mobile transactions in financial and banking sector.
專用私人網絡	**Designated private network**
專用私人網絡是某機構內或某組特定機構之間的通訊網絡。	Designated private network is a communications network within an organization or among a group of designated organizations.
問題E5	**Question E5**
網上付款	**Payment through Internet**
是指透過互聯網完成付款交易，而無需使用語音電話，以支票／匯票郵寄付款，或親身交費。	Completion of payment transaction through Internet without the need to make voice phone-calls, mail payment in cheque/money order or make payment in person.
問題E6-E9	**Question E6-E9**
透過電子途徑獲取貨品、服務或資料	**Receipt of Goods, Services or Information through Electronic Means**
網上瀏覽資料亦視為透過電子途徑獲取貨品、服務或資料。至於能透過電子途徑獲取貨品，就只限可以電子途徑傳遞的產品，如套裝軟件及歌曲。	Browsing of information on the Internet is also considered as receiving information through electronic means. Goods received through electronic means are only restricted to products which could be transmitted through electronic means, such as software packages and songs.
問題E6	**Question E6**
公共服務電子化計劃／生活易	**Electronic Service Delivery Scheme (ESD)/ ESD Life**
「公共服務電子化計劃」是香港特別行政區政府「數碼21」資訊科技策略下的一項重要措施，透過互聯網及其他電子途徑為市民提供140多項電子公共服務，包括遞交報稅表，申請個人獨資/合夥經營業務的商業或分行登記，繳交政府收費，登記職位空缺及挑選求職者等。	Electronic Service Delivery Scheme is a key initiative under the "Digital 21" Information Technology Strategy of the Government of the Hong Kong Special Administrative Region to provide over 140 types of online public services to the community through the Internet and other electronic means. Examples of services include filing of tax returns, application for business registration certificate by sole proprietors and partnerships, paying of Government bills, registration of job vacancies, and searching for job applicants, etc.
就這問題而言，選項(a)「公共服務電子化計劃」是指透過*www.esd.gov.hk*或*www.esdlife.com*網站或此計劃的公眾資訊服務站(即生活站)獲取政府貨品、服務或資料。	For the purpose of this question, option (a) "Electronic Service Delivery Scheme" means obtaining government goods, services or information via the website *www.esd.gov.hk* or *www.esdlife.com* or through ESD kiosks.

註釋	Explanatory Notes
問題E10-E14 **透過電子途徑售賣貨品、服務或資料** **若機構單位有提供並接納完全透過電子途徑預訂或購買其貨品、服務或資料，則會視為有透過電子途徑售賣其貨品、服務或資料。除一般透過互聯網、電話等電子途徑售賣貨品、服務或資料外，亦包括如機構單位根據與客戶訂立的協議，當機構單位透過電子途徑得悉客戶某產品的存貨量降低至某水平時即自動遞送該產品予客戶，供其補充存貨。**	**Question E10-E14** **Sales of Goods, Services or Information through Electronic Means** An establishment is considered to have sold their goods, services or information through electronic means if they offered and accepted orders or purchases that were placed completely through electronic means. Apart from the sales of goods, services or information through electronic means such as the Internet, telephone, etc., this should include cases where an establishment, in accordance with an agreement with its client, automatically delivers certain product to the client for replenishment of stock when the establishment learns, through electronic means, that the stock kept by the client falls to a certain level.
問題E12 **業務收入** **業務收入是指貴機構透過銷售貨品及服務所賺取的收入。** **政府及有關機構** **政府及有關機構包括所有政府部門及半官方機構，例如醫院管理局和職業訓練局等。** **商業及其他機構** **商業及其他機構包括商業機構、公用服務機構（例如電力及燃氣業）、學校及非牟利團體等。** **網上收款** **是指透過互聯網完成收款程序，而無需顧客使用語音電話，以支票／匯票郵寄付款，或親身交費。**	**Question E12** **Business receipts** Business receipts refers to income received through sales of goods and services. **Government and related organizations** Government and related organizations include all government offices and quasi-government organizations such as the Hospital Authority and Vocational Training Council. **Business and other establishments** Business and other establishments include private business establishments; utilities companies (e.g. electricity and gas); schools and non-profit making bodies. **Payment received through Internet** Completion of receipt of payment through Internet without the need for the customer to make voice phone-calls, mail payment in cheque/money order or make payment in person.
問題E15-E18 **透過電子途徑遞送貨品、服務或資料** **把有關機構單位或其所售賣產品的資料放在互聯網上亦視為有透過電子途徑遞送貨品、服務或資料。**	**Question E15-E18** **Delivery of Goods, Services or Information through Electronic Means** Placing information on the Internet about an establishment or the products sold is considered to have delivered their goods, services or information through electronic means.
VI. 資訊科技項目的財政預算	**VI. BUDGET FOR INFORMATION TECHNOLOGY**
問題F1-F4 **研究及發展** **研究及發展是指有系統及創意的活動，其目的為提高對某些知識的瞭解，而這些知識有助於發明新產品、計劃新服務或應用；亦可改良現有的產品、服務及應用。研究及發展通常都帶有創新和改革的元素。** **無線及流動服務和技術** **建基於無線／流動裝置（請參閱問題H1的例子）及應用無線／流動傳送技術（請參閱問題H2的例子）的服務及技術。**	**Question F1-F4** **Research and development** Research and development is defined as any systematic and creative work undertaken in order to increase the stock of knowledge and use of this knowledge to devise new products/ services/applications as well as improvement of existing products/ services. It generally refers to activities with the element of novelty or innovation. **Wireless and mobile services and technology** Services and technology based on wireless/mobile devices (please refer to examples in Question H1) and making use of wireless/mobile transmission technology (please refer to examples in Question H2)

註釋	Explanatory Notes
VII. 資訊科技保安	**VII. INFORMATION TECHNOLOGY SECURITY**
問題G2	**Question G2**
電腦病毒	**Virus**
是指以電子形式從一部電腦散播到另一部電腦，並能影響電腦系統正常運作的電腦程式。病毒入侵所造成的影響參差不同，從惡作劇（如對屏幕顯示造成滋擾）到惡意破壞（如洗掉數據）。	Programs that spread from one computer to another electronically, and can affect the normal operation of a computer system. Virus attacks can range from practical jokes (e.g. annoying screen display) to malicious destruction (e.g. erasing data).
黑客	**Hacking**
非授權人士，為嬉戲或惡意的目的，嘗試接達到電腦或其他相關資源。這些行動通常稱為「襲擊」，而進行方式通常是靠迴避正常的保安程序或利用開放給外界接達的電腦系統的弱點或開放式插口。	Attempts by unauthorised parties to gain access to computers or other related resources either for fun or for malicious intend. These moves are usually called "attacks" and are usually conducted online circumventing normal security procedures or exploiting weak points or open ports in computer systems open to outside access.
阻斷服務	**Denial of service**
在目標電腦製造非預期的活動，使其不能正常運作，例如不能提供網絡服務給用家。通常是透過一些方法（例如發放大量電子郵件）使目標電腦超出負荷。	Creation of unexpected activities in the targeted computers in such a way that the prey failed to perform its usual service, such as providing network service to its users. Typically conducted via overloading the targeted computer by means such as sending out unsolicited e-mail in bulk.
問題G4	**Question G4**
防火牆	**Firewall**
防火牆是一組位於網絡通訊閘伺服器的相關電腦程式，目的是保護一個私人網絡的資源，免受外界的侵擾。外界人士在嘗試接達該受保護的網絡時，會受到審查，而只有有效的要求才會轉達。如此，外界人士便不能直接連結到該受保護網絡的資源，而其重要的資料亦可避免受到黑客入侵。	A firewall is a set of related programs, located at a network gateway server, that protects the resources of a private network from outsiders. Attempts by outside users to access the protected network will be screened and only valid requests will be redirected. In this way, outsiders cannot directly establish links to the resources of the protected network, and vital information of the protected network masked to avoid attacks from hackers.
檔案加密	**File encryption**
檔案加密是一個程序，目的是將電腦數據檔案轉化到一個非授權人士不能閱讀的格式。而授權人士通常會被給予一個解密工具，以將加密的檔案還原至一個可正常閱讀的格式。	File encryption is a process whereby computer data files are converted to a form unreadable to unauthorised users. Authorised users are typically given a decryption tool to revert the encrypted files to a readable form for normal access.
問題G6	**Question G6**
保密插口層	**Secure Sockets Layer (SSL)**
保密插口層是一個電腦程式層，目的是透過加密程序，提供在互聯網傳送私人資料（如付款資料）時的數據保安。	Secure Sockets Layer is a program layer that provides data security (through encryption) for transmitting private information (such as payment information) through the Internet.
保密電子交易	**Secure Electronic Transaction (SET)**
是一套由信用卡公司發展的協定，目的是為網上付款提供身分驗證及批核。客戶會被給予一個錢包（信用卡的軟件版本）以進行網上購物。和使用信用卡親身付款的情況大致一樣，網上賣家的身分資料會被傳送到信用卡公司，以作即時審查買賣相方身分及批核該宗交易之用。	A set of protocol developed for use by Credit Card companies to replicate the process of authenticating and approval of credit card transactions in online payment. Customers are given a cardholder wallet (software version of credit card) with which to perform purchases online. This initiates a transaction which also collects identity information of the online sales vendor for onward passage to the credit card company for instant online authentication of both buyer and seller and then approval of transaction, in a way similar to using credit cards in making payment in person.

註釋	Explanatory Notes
VIII. 無線及流動服務和技術	**VIII. WIRELESS AND MOBILE SERVICES AND TECHNOLOGY**
問題H1	**Question H1**
無線熱點	**Hotspot**
無線熱點是無線區域網路應用之一，即由網絡服務供應商所安裝，在指定位置的互聯網接達的供應，利用無線連接到達接達點。	Wireless Hotspot is one of the Wireless LAN applications, which means the provision of Internet access at specific location through wireless connection to the access points installed by the service providers.
射頻識別技術裝置 (RFID)	**Radio Frequency Identification (RFID)**
基本的RFID**系統包括天線、收發器(與譯碼器)和儲存資訊的**RFID**標籤。天線和收發器可設計成手提或固定裝置。在標籤和收發器之間的數據通訊由天線控制，發射或接收無線信號以啟動標籤，從而讀取或寫入數據。**	A basic RFID system consists of an antenna, a transceiver (with decoder) and RFID tags that store information. The antenna and the transceiver can be designed as a handheld or fixed-mount device. Data communication between the tag and the transceiver is controlled by the antenna, which emits/receives radio signals to activate the tag, and then data are read/written from/onto it.
非接觸式智能卡	**Contactless smart card**
非接觸式智能卡是一種建基於隱藏式模組及利用射頻信號通訊的智能卡。	A contactless smart card is a smart card with no visible module that communicates by means of a radio frequency signal.
問題H2	**Question H2**
通用分組無線電服務 (GPRS)	**General Packet Radio Service (GPRS)**
GPRS**是一個覆蓋在現有**GSM**網路的無線通訊服務。這是從**GSM**所演進，過渡往**3G (**第三代流動服務**) **的另一種技術，所以**GPRS**亦被稱為** 2.5G **技術。**	GPRS is a wireless communication service overlaying on the existing GSM network. It is another technology evolved from GSM, which is a transition technology towards 3G (Third Generation Mobile Services), therefore we also called GPRS 2.5G technology.
全球演進式數據速率增強技術 (EDGE)	**Enhanced Data Rates for Global Evolution (EDGE)**
EDGE**是一種**3G**技術，它支援流動裝置以類似寬頻速度傳送數據。它允許用戶以比普通的**GSM/GPRS**網路快三倍的速度連接到互聯網，以傳送和接收資料，包括數碼圖像、網頁和相片，。**	EDGE is a 3G technology that delivers broadband-like data speeds to mobile devices. It allows consumers to connect to the Internet and send and receive data, including digital images, web pages and photographs, three times faster than possible with an ordinary GSM/GPRS network.
第三代無線通訊系統 (3G)	**Third Generation Wireless System (3G)**
3G**是新一代的流動服務。它的標準基於國際流動電信**2000 (IMT-2000)**，保證了不同的**3G**系統與國際漫遊的兼容和共用性。**3G**使用分組交換的連接及網際規約**(IP)**，即終端機永久虛擬地連接到網絡。它能夠在一個固定或穩定的無線環境以**2Mbps**速率和一個流動環境以**384kbps**速率傳送文字、數碼化話音、錄像和多媒體資訊。**	3G is the new generation of mobile services. Its standard is based on International Mobile Telecommunication 2000 (IMT-2000) which ensures the compatibility and interoperability of different 3G systems and global roaming. 3G uses packet-switched connection and the Internet Protocol (IP), it means that the terminal is virtually always connected to the network. It can be used to transmit text, digitized voice, video, and multimedia at data rates up to 2Mbps in a fixed or stationary wireless environment and 384kbps in a mobile environment.
藍芽技術	**Bluetooth**
藍芽是一個低成本、低功率、短程及無線的技術，應用於筆記簿型電腦、手提裝置和流動電話與其它周邊設備和家庭電器之間的區域話音和數據通訊。	Bluetooth is a low-cost, low-power, short-range, wireless technology designed for local voice and data communications between notebook computers, handheld devices, mobile phones and other peripherals and home appliances.
流動保安解決方案	**Mobile security solution**
為流動裝置和流動連接而制訂的保安政策和程序。	Security policies and procedures for mobile devices and over mobile connections.

註釋	Explanatory Notes
問題H3	**Question H3**
短訊服務 (SMS)	**Short Message Service (SMS)**
短訊服務是一項透過GSM網絡傳送多達160個英文字母或70個中文字的訊息到流動電話的服務。如透過CDMA網絡，則SMS的最大長度是120個英文字母或55個中文字。	SMS is a service for sending messages of up to 160 English characters or 70 Chinese characters to mobile phones with GSM network. With CDMA network, maximum length of SMS can be 120 English characters or 55 Chinese characters.
增強型短訊服務 (EMS)	**Enhanced Messaging Service (EMS)**
增強型短訊服務是SMS的增強版本，訊息以3GPP標準傳送。EMS訊息包含文字和簡單像素映像的組合、動畫和旋律。用戶可以由互聯網下載圖像、動畫和旋律，甚至更可以自由發揮，在他們的電話上創製上述的訊息。有別於SMS訊息， EMS訊息的文字可以格式化為各樣字體、大小、樣式等。	EMS is an enhanced version of SMS. Message is sent with the 3GPP standard. EMS message contains a combination of text and simple pixel image, animation and melody. Users may download images, animation and melodies from the Internet, or for even greater self-expression, create them on their phone. Unlike SMS messages, the text of an EMS message can be formatted using a variety of fonts, sizes, type styles, etc.
多媒體短訊服務 (MMS)	**Multimedia Messaging Service (MMS)**
MMS是一種包含多媒體項目在流動環境下的新訊息服務。有關訊息可包含靜態圖像、話音或輯錄音像。將來更可支援錄像短片。	MMS is a new message service for the mobile environment with multimedia items. The message can contain still images, voice or audio clips. Video clips will also be supported later.
基於位置的服務 (LBS)	**Location Based Service (LBS)**
LBS亦稱為位置服務、基於位置的流動服務、無線位置服務，經常與地理資訊服務結合，提供根據用戶地理位置的相關位置資訊。	LBS, also known as location services, mobile location-based services, wireless location services, is often used in conjunction with Geographic Information Services to provide location sensitive/dependent information based on the geographical location of the user.
全球定位系統 (GPS)	**Global Positioning System (GPS)**
GPS 是由24個圍繞地球的人造衛星所組成，以找出地理位置。對普通用戶而言，準確範圍達10到100米。GPS由美國國防部控制，但開放給世界任何人使用。需要GPS接收器從人造衛星獲取資料。根據四枚衛星的資料，接收器可以確定經度、緯度和高度。其它資訊也可被計算，例如一名移動中的用戶的速度。相關的位置、地圖和其它結果可顯示在接收器的螢幕上。	The GPS is composed of 24 satellites that orbit the Earth for locating geographical positions. The accuracy ranges from 10 to 100 meters for normal users. The GPS is controlled by the U.S. Department of Defense but can be used by anyone around the world. A GPS receiver is required to obtain data from the satellites. Based on data from four satellites, the receiver can determine the longitude, latitude and altitude. Other information can also be calculated such as the speed of a moving user. The position, map and other results can be displayed on the screen of the receiver.
地理資訊系統 (GIS)	**Geographic Information System (GIS)**
GIS是用作獲取、整理和分析地理和相關的資料。地理數據包括經度、緯度和數碼化地圖，而相關數據可以是街道地址和大廈名稱。數據會被存放為不同層面的資訊。用戶可以結合不同層面的資訊以配合其特殊目的。所有數據會被地圖化，以便回答一個有關某特殊地點的詢問時，其它相關的資訊亦可一併提供。查詢結果通常透過地圖和圖表顯示。	A GIS is used to capture, manipulate and analyse geographic and relevant data. The geographic data includes longitude, latitude and digitised maps, related data can be street addresses and building names. The data will be stored as different layers of information. The user can combine different number of layers of information to suit his particular purpose. All the data are mapped so that enquiry on a particular location can also return other relevant information. The results are usually visualised using maps and graphs.
問題H4	**Question H4**
無線和流動應用系統	**Wireless and mobile applications**
無線和流動應用系統是建基於無線和流動服務和技術的系統，通常涉及使用裝置例如流動電話、個人數碼助理(PDA)、筆記簿型電腦和其它流動手提裝置，配合流動技術，接達互聯網或公司的服務和應用系統。	Wireless and mobile applications are applications based on wireless and mobile services and technology. They usually involve using devices such as mobile phones, Personal Digital Assistants (PDA), notebook computers and other mobile/handheld devices, together with mobile technology, to access Internet/corporate services and applications.

ANNEX 6

Core list of ICT indicators

Infrastructure and access core indicators

Basic core	
A-1	Fixed telephone lines per 100 inhabitants
A-2	Mobile cellular subscribers per 100 inhabitants
A-3	Computers per 100 inhabitants
A-4	Internet subscribers per 100 inhabitants
A-5	Broadband Internet subscribers per 100 inhabitants
A-6	International Internet bandwidth per inhabitant
A-7	Percentage of population covered by mobile cellular telephony
A-8	Internet access tariffs (20 hours per month), in US$, and as a percentage of per capita income
A-9	Mobile cellular tariffs (100 minutes of use per month), in US$, and as a percentage of per capita income
A-10	Percentage of localities with public Internet access centres (PIACs) by number of inhabitants (rural/urban)
Extended core	
A-11	Radio sets per 100 inhabitants
A-12	Television sets per 100 inhabitants

Core indicators on access and use of ICTs by households and individuals

Basic core	
HH-1	Proportion of households with a radio
HH-2	Proportion of households with a TV
HH-3	Proportion of households with a fixed line telephone
HH-4	Proportion of households with a mobile cellular telephone
HH-5	Proportion of households with a computer
HH-6	Proportion of individuals that used a computer (from any location) in the last 12 months
HH-7	Proportion of households with Internet access at home
HH-8	Proportion of individuals that used the Internet (from any location) in the last 12 months
HH-9	Location of individual use of the Internet from all locations in the last 12 months Response categories: • At home • At work • Place of education • At another person's home • Free Public Internet Access Centre (specific denomination depends on national practices) • Charged Public Internet Access Centre (specific denomination depends on national practices) • Others
HH-10	Internet activities undertaken by individuals in the last 12 months Response categories: • For getting information o About goods or services o Related to health or health services o From government organisations/public authorities via websites or e-mail o Other information or general Web browsing • For communicating • Purchasing or ordering goods or services • Internet banking or other financial services • For education and learning • For dealing with government organisations/public authorities • For leisure activities o Playing/downloading video or computer games o Obtaining movies, music or software o Reading/downloading electronic books, newspapers or magazines o Other leisure activities
Extended core	
HH-11	Proportion of individuals with use of a mobile telephone
HH-12	Proportion of households with access to the Internet by type of access from home • Response categories should allow an aggregation to narrowband and broadband, where broadband will exclude slower speed technologies, such as dial -up modem, ISDN and most 2G mobile phone access, and which will usually result in a speed of at least 256 kbit/s.
HH-13	Frequency of individual access to the Internet in the last 12 months (from any location) Response categories: • at least once a day • at least once a week but not every day • at least once a month but not every week • less than once a month
Reference indicator	
HH-R1	Proportion of households with electricity
1. Since electricity is not specifically an ICT commodity, but important nevertheless for developing countries prerequisite for GDP etc. will be.	

Core indicators on access and use of ICTs by businesses

Basic core	
B-1	Proportion of businesses using computers
B-2	Proportion of employees using computers
B-3	Proportion of businesses using the Internet
B-4	Proportion of employees using the Internet
B-5	Proportion of businesses with a website (or web presence where the business has control over the content)
B-6	Proportion of businesses with an intranet
B-7	Proportion of businesses receiving orders over the Internet
B-8	Proportion of businesses placing orders over the Internet
Extended core	
B-9	Proportion of businesses accessing the Internet by modes of access • Response categories should allow an aggregation to narrowband and broadband, where broadband will exclude slower speed technologies, such as dial -up modem, ISDN and most 2G mobile phone access, and which will usually result in a speed of at least 256 kbit/s.
B-10	Proportion of businesses with a Local Area Network (LAN)
B-11	Proportion of businesses with an extranet
B-12	Proportion of businesses using the Internet by type of activity Response categories: • Internet e-mail • Getting information o About goods or services o From government organisations/public authorities via websites or e-mail o Other information searches or research activities • Performing Internet banking or accessing other financial services • Dealing with government organisations/public authorities • Providing customer services • Delivering products online
ICT sector basic core	
ICT-1	Proportion of total workforce involved in the ICT sector
ICT-2	Value added in the ICT sector (as a percentage of total value added)
ICT-3	ICT goods imports as percentage of total imports
ICT-4	ICT goods exports as percentage of total exports

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