

COLLECTION OF ICT STATISTICS IN SINGAPORE

INTRODUCTION

1 The key responsibilities of the Infocomm Development Authority of Singapore (IDA) are to:

- a. Cultivate a vibrant and competitive infocomm industry in Singapore that attracts foreign investment and sustains long-term GDP growth;
- b. Put in place a robust national infocomm infrastructure to meet the needs of the government, businesses and people;
- c. Promote the adoption of infocomm technology as a key enabler to enhance Singapore's economic competitiveness;
- d. Regulate the telecommunication sector; and
- e. Function as the Chief Information Officer for the Singapore Government that helps in the running of an effective and efficient government to serve the needs of citizens and businesses.

2 Since 1973, a de-centralised statistical system has been adopted in Singapore. Official statistics are collected and compiled by The Singapore Department of Statistics (DOS), the central statistical authority responsible for official statistics on the Singapore economy and population, as well as Research and Statistics Units (RSUs) in various government ministries and statutory boards, including the IDA. The RSUs specialise in statistics on key areas under the purview of their parent organisations.

3 The IDA collects ICT statistics to measure both the Information Society and the Information Economy in Singapore via two main means: Administrative Data and stand-alone ICT Surveys.

ADMINISTRATIVE DATA

4 IDA-licensed telecommunication operators are required to submit information on various telecommunication indicators covering subscription and usage. Most of the information are provided on a monthly basis; much of the information are also aggregated before disseminated via IDA's website <http://www.ida.gov.sg> under the "[Facts and Figures](#)" heading.

ICT SURVEYS

5 IDA also conducts various surveys (Table 1) to gauge ICT adoption and usage among households and enterprises; ICT manpower employed in the economy and the profile of the ICT industry. The sampling frames for these surveys are obtained from DOS¹. The key findings from the surveys are also available on the IDA website.

Table 1: ICT Surveys

Survey	Scope of Survey	Frequency	Target Respondents
ICT Usage in Households and by Individuals	To collect statistics on ICT adoption and usage in households and by individuals in Singapore	Annual	Households & Individuals
ICT Industry	To determine the profile of the ICT industry in Singapore		ICT sector
Business ICT Usage	To collect statistics on ICT adoption and usage by enterprises in Singapore		All enterprises in Singapore
ICT Manpower	To determine the profile of ICT manpower employed in Singapore		

HOUSEHOLD SURVEY

6 Annual Survey on ICT Usage in Households and by Individuals: This survey aims to:

- a. Gauge the ownership of ICT appliances and subscriptions to ICT services;
- b. Assess the sophistication and extent of ICT usage; and
- c. Identify the barriers to, and motivations for, ICT adoption and usage in Singapore households and among the resident population.

7 A sample of residential addresses is selected via a 2-stage stratified design by geographical location and dwelling type from DOS' National Database of Dwellings in Singapore where each address is visited for a face-to-face interview.

8 The survey report presents the findings on ICT usage among households and by residents of various age groups in Singapore.

¹ DOS conducts an annual survey on the services industries, including the infocomm industry, to collect a wide range of data. Key indicators such as operating receipts, operating expenditure, value-added, employment size and remuneration of the industry are derived from the survey. The information collected is used for studying the structure and performance of the industry, compiling national accounts and other industry-specific studies.

ENTREPRISE SURVEYS

9 Annual Survey on ICT Industry: This survey aims to determine the profile of the ICT industry in Singapore. The key findings from this survey include industry revenues by market segment² and export destinations. A census approach, where all the units are selected, is adopted for “large-sized” companies as defined by their operating receipts. For the remaining (“small to medium-sized”) companies, a sample stratified by the Singapore Standard Industrial Classification (SSIC)³ codes is selected.

10 Annual Survey on ICT Manpower and Usage by Businesses: This survey aims to profile the ICT manpower employed in the economy as well as to gauge the adoption and usage of ICT amongst all enterprises. This survey adopts a similar sampling approach as the ICT Industry Survey.

11 The enterprise surveys are conducted primarily through mail inquiry via questionnaires where respondents could submit their returns by mail or through IDA’s online survey system.

CHALLENGES FACED AND MEASURES ADOPTED

12 IDA regularly reviews the conduct of the surveys and the administrative data gathering process. The aim is to ensure the continued relevance of the data collected and usefulness of the findings, bearing in mind the burden on the survey respondents and telecommunication licensees in providing the data.

13 The main challenges faced and our approach to mitigate these are:

- a. **Timeliness and Relevance of Data:** Given the fast changing nature of the ICT sector, IDA regularly reviews the data collected to ensure that they stay relevant given the evolving ICT landscape. For surveys, we update our questionnaires each year, in consultation with our line departments who are in close touch with the industry and making references to the model questionnaires by organisations such as the ITU, OECD, Eurostat. This is also to facilitate international benchmarking. For the administrative data collected, there is close consultation with the telecommunication licensees on proposed changes before implementation;

² The ICT cluster definition in Singapore comprises the ‘Hardware’, ‘Software’, ‘IT Services’, ‘Telecommunication Services’, ‘Content Services’ and ‘Postal & Courier Services’.

³ Developed and maintained by DOS, the latest edition, SSIC 2010 adopts the basic framework and principles of the International Standard Industrial Classification of All Economic Activities, Fourth Revision (ISIC Rev.4). It is reviewed and updated regularly to reflect significant changes in the structure of the Singapore economy and the emergence of new activities as well as to align with changes in the international standard.

- b. **Respondent Fatigue:** The primary challenge in the survey work is to manage respondent fatigue. The questionnaire is reviewed to ensure its focus is on the primary data of interest. Wherever we can, we complement with administrative data from other sources; and
- c. **Confidentiality:** All information provided to IDA, whether from administrative data or from surveys are treated on a strict confidential basis. Where information is to be disseminated, they are aggregated and reported as a total figure. Within IDA, there is also a clear demarcation of responsibility and access to data.

SUMMARY

14 ICT statistics and indicators help us to track and monitor Singapore's ICT progress and development. In order to provide useful inputs for policy review and formulation, there is a need to ensure the timeliness and accuracy of the data used. Hence, both the process and specific data collected continue to be improved to ensure the rigour of the process and value of the data collected. The sharing and dissemination of findings are equally important to promote better understanding and awareness of the state of ICT and its progress and development in Singapore.