

**World Telecommunications/ICT Indicators Meeting  
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**- An overview of ICT Statistical Activities in Malaysia -**

This paper describes the status quo in ICT statistical activity in Malaysia insofar as the 2 main agencies that collect official ICT statistics, at the national level, on a regular basis are concerned. It borrows heavily from the paper prepared by the Department of Statistics Malaysia (DOSM) for the Thirteenth Session of the ESCAP Committee on Statistics (Measuring the Knowledge-Based Economy), in Bangkok, 27 - 29 November 2002. That paper was titled *Discussion Paper on ICT Statistics: Malaysian Perspective*. This paper also draws from *Background paper for Malaysia* presented by the Malaysian Communications and Multimedia Commission (MCMC) at the 3<sup>rd</sup> World Telecommunication / ICT Indicators Meeting at Geneva, 15 – 17 January 2003. Due care has been taken in updating.

By and large, Malaysia practises a centralized statistical system. The power to collect and compile official statistics is vested in the DOSM. However other government agencies and regulators such as the MCMC do collect primary and secondary data on their own accord in their own areas of specialization through their statistical units. The MCMC in particular is committed to providing official statistics in the area of Communications and Multimedia and has built up a primary data capability in the form of a CATI centre. A high degree of cooperation exists between these two agencies as demonstrated by the fact that they use each others data as inputs in deriving indicators as well as quote each other's statistics in their respective publications.

#### The DOSM

The Censuses and Surveys conducted by the DOSM do provide ICT statistics that cover both the supply and the demand side.

Following is a list of major surveys and censuses conducted by DOSM which include ICT related questions:

##### Demand side

- Population and Housing Census 2000
- Household Expenditure Survey
- Household Income Survey
- Labour Force Survey

##### Supply side

- Annual Survey of Manufacturing Industries
- Census of Computer and Telecommunications Services Establishment
- Economic Census

- Distributive Trade Survey/Census

In addition, trade data on ICT related items are compiled by DOSM from trade declaration forms on a monthly basis.

Amongst the major ICT indicators made available by the DOSM are as follows:

- Principal statistics of the ICT industries: -
- Number of Establishments in ICT industries
  - Number employed in ICT industries
  - Output – ICT Manufacturing Industry
  - Input – ICT Manufacturing Industry
  - Value Added
  - Salaries and Wages
  - Fixed Assets
  - Revenue – ICT Service Industry
  - Expenditure – ICT Service Industry

Import and export of ICT related commodities

- Radios per 1000 population
- Television per 1000 population
- Telephone mainlines per 1000 population
- Mobile Telephones per 1000 population
- Internet hosts per 1000 population
- Consumer Price Index for mobile phone
- Consumer Price Index for PC with printer
- Telephone penetration rate
- Internet penetration rate
- Number of Internet subscribers
- Number of PCs installed
- Monthly expenditure of households on ICT related appliances and services
- Percentage of households with PCs
- Percentage of households with access to Internet
- Number employed in ICT related occupation
- Number of graduates in ICT related fields
- Number of students in ICT related fields
- Number of computers in schools

#### CURRENT DOSM STATISTICAL PROGRAMS ON ICT

Following is a brief description of DOSM current household and establishment surveys and censuses that cover ICT related questions:-

##### Establishment Surveys and Censuses

### (i) Manufacturing

The Annual Survey of Manufacturing Industries provides data on the products and activities of establishments classified under Manufacturing. Probability sampling is used. Data on industries related to the manufacture of ICT products are covered in this survey. The publishing industries that are part of the MSIC 2000 ICT – Information Content sector are also covered in this survey. The Annual Survey of Manufacturing Industries has been conducted annually since 1975 (with the exception of reference years 1980 and 1998). Basic data collected in the Annual Survey of Manufacturing Industries include

- value of production,
- cost of materials,
- capital expenditure (by type) inventories,
- employment and
- payroll.

The Census of Manufacturing Industries, conducted once in five years (except for 1998) collects data from all manufacturing establishments. Data provided by the census is the same as for the Annual Survey of Manufacturing Industries.

### (ii) Telecommunications (and Broadcasting)

An annual “survey” of telecommunications provides national-level estimates of revenues and expenditures for the telephone, radio and television broadcasting and other communication services industries. Data for the broadcasting and telecommunications industries are collected on an establishment basis. Basically, since the number of players in this industry is limited, a complete set of accounts is requested. This “survey” commenced for reference year 1987, and has been conducted each year thereafter. However there has been no consistency in data content. The 2001 Economic Census however marks the initial coverage of the telecommunications and broadcasting industries in a more formal manner. Data for the broadcasting and telecommunications industries will be collected on an establishment basis. The census collects data on

- revenue (by source),
- operating expenditure (by type) and
- employment and payroll.

### (iii) Computer and related activities

This has been one area where data collection has been lacking. However, with the Economic Census 2001, dearth of data in this component of the ICT sector should be overcome. The Economic Census covers all the industries in this sub group. A Census of computer and telecommunications services establishment was carried out in 2001 for the first time.

(iv) Wholesale of machinery equipment and supplies (ICT goods)

This sub sector of the ICT industries is canvassed on a quarterly basis on sales and cost of sales. This is a purposively selected sample covering the market leaders in this industry. Data collection on a quarterly basis commenced in 1998 and has been on-going since.

Population and Housing Census and Household Surveys

(i) Population and Housing Census

In the 2000 Population and Housing Census of Malaysia, questions on the availability of personal computers at home as well as subscription to Internet facilities in the household were asked for the first time. This was a result of a strong demand from stakeholders comprising planning agencies, human resource and educational departments as well as other ministries apart from the private sector. In addition questions on occupations were asked of every person aged 10 years and above. These were canvassed ever since Malaysia conducted its population censuses. Data collected in the 2000 Census is extremely useful when used in conjunction with other information collected in the census such as ethnic group, education, labour force and urban/rural areas. The cross-tabulation of these variables with the information on availability of personal computers and Internet facilities in the household yields important information on the penetration rates of ICT for identified target groups and the digital divide that exists amongst them.

(ii) Household Expenditure Survey (HES)

The Household Expenditure Survey (HES) conducted by DOSM is the only survey at present that provides data on ICT usage in households. The survey is conducted once in every five years to update the pattern and the basket of goods and services to provide the weights for the consumer price index (CPI). Household consumption/usage on items such as telephone, mobile phone, fax, PC and Internet services were tracked in the quinquennial survey.

(iii) Labour Force Survey (LFS)

Questions on occupation of the labour force were asked in the annual Labour Force Survey. However detailed classification of occupation to enable identification of ICT related occupation is not possible given the constrain of the sample size, which covered only 1.2% of the total households.

(iv) Household Income Survey (HIS)

Past Household Income Surveys did not cover ICT related questions. However in the recent HIS, which was carried out in the year 2002, questions on telecommunications and usage of ICT appliances and subscription of Internet services in households were covered.

## The MCMC

The MCMC has always recognised the importance of quality and timely statistics in ICT in general and in communications and multimedia in particular. Efforts made by the MCMC in this area are all but ad-hoc. Some features of MCMC's statistical system are described below:

### Secondary data

Since its inception in 1998, the MCMC has collated data from the administrative records of its licensees. Those covered included

- Fixed line operators
- Cellular operators
- Internet service providers
- VoIP operators
- Public Mobile Radio operators
- Messaging Service operators
- Certification authorities

Reports are canvassed on a quarterly basis and replies are founded on the administrative records of the licensees. These submissions would then undergo rather stringent quality checks and unusual changes referred back to their originators. To keep up with changing trends, the reporting forms are reviewed periodically. Recent reviews have found it necessary to include questions on SMS/MMS usage as well as the broadband subscriber base and hotspots.

A major portion of what is collected is published and disseminated in a quarterly statistical bulletin. Selected key statistics are also published on MCMC's website <http://www.mcmc.gov.my>

Although the response to the above required reporting is generally satisfactory, it could be better in terms of completeness and timeliness. With an eye on improving performance vis-à-vis these two aspects, the MCMC is in the midst of developing its legislative powers to compel licensees to keep a predetermined set of records of sufficient detail under Record Keeping Rules (Section 268 of the Communications and Multimedia Act 1998) to be submitted at regular intervals through a secure online delivery system. This will ultimately replace all other modes of submission.

With issues of completeness and timeliness out of the way, the MCMC will make available the data aggregated from the submissions of the licensees “on tap” through the online delivery system, taking into consideration confidentiality and time sensitivity concerns of the licensees

The MCMC also conducts Consumer Satisfaction Surveys in periodic waves and from its results compute the Consumer Satisfaction Indices. These are benchmarked against set targets specified in the Framework for Industry Development. These indices are also posted on the website.

### Primary data

2004 was a landmark year for the MCMC insofar as its statistical activities are concerned. In that year, the MCMC established its very own CATI centre to collect primary data from the demand side. This underscores MCMC's commitment to make available to itself, the government, the industry and the public, quality as well as timely statistics to complement and supplement those already disseminated by the DOSM. This is because as the regulator of the industry, the MCMC feels the need for some very specialised data to discern trends in consumer behaviour which will have an impact on the industry. It also requires such data to play its mandated role to regulate for industry health and growth as well as to facilitate equitable access to communications.

The first survey to roll out of MCMC's CATI centre is the Hand Phone Users Survey, 2004. This survey is the subject of another paper that was / to be presented at this meeting.

In brief, the primary purpose of this survey is to estimate proportions of the subscriber base that fall into the classes of the various categorization schemes of the key variables.

Proper use of these estimated proportions in conjunction with the total known subscriber base as well as population estimates from the DOSM will facilitate the derivation of the various hand phone penetration rates.

These include hand phone penetration rates by

- state
- ethnicity
- gender
- broad age group; and
- the urban and rural sectors

The survey also probes the following:

- SMS usage
- average monthly charges
- preferred payment plan
- multiplicity of hand phone ownership and use
- incidence of fixed lines
- inclination to use hand phone over fixed line phone

- educational attainment
- broad occupational classes
- income classes

The main highlights of the survey is reported in a new series called *statistical briefs* published by the MCMC. Statistical Brief Number One featured the Hand Phone Users Survey 2004 and a copy may be downloaded from the MCMC website.

This survey will be conducted henceforth in July every year.

Other primary surveys in the pipeline are Household Use of the Internet Survey (projected for a 2 April launch this year) and a Business Use of the Internet Survey (projected for a third quarter launch also this year). The first of abovementioned two surveys will very likely feature a hybrid approach viz CATI-web survey methodology.

#### Survey counts

The MCMC also does survey counts to generate very basic but much needed data. Such efforts included:

- Survey count of DELs
- Survey count public payphones

to count the number of DELs and public payphones according to the various sectors such as the urban/rural dichotomy etc.

In conclusion, it may be asserted that the awareness of the need of quality ICT statistics has always been felt in Malaysia. Concrete steps are underway in both the MCMC and the DOSM and in the near future, a collage of the output of their separate but coordinated efforts will go a long way in painting the bigger picture of the state of ICT in Malaysia.