

DATA COMMUNICATION – GIVE USERS WHAT THEY REALLY NEED

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Abstrak

Artikel ini memberikan gambaran terhadap sistem statistik yang diguna pakai oleh Jabatan Perangkaan, Malaysia (JP) dan membincangkan inisiatif yang diambil oleh JP untuk mengukuhkan peranannya sebagai pengeluar statistik rasmi khususnya dalam aspek komunikasi data. Ia juga membincangkan program yang dilaksanakan oleh JP dalam memenuhi keperluan pelanggan melalui strategi penyebaran data yang berkesan seperti yang telah digariskan dalam Pelan Strategik jabatan.

Kata kunci: Komunikasi data, Penyebaran data, Teknologi Maklumat dan Komunikasi (ICT), Pelan Strategik

Abstract

This paper provides insight of the statistical system adopted by the Department of Statistics, Malaysia (DOSM) and discusses the initiatives taken by DOSM to strengthen its role as the producer of official statistics particularly in data communication. It also deliberates on the programmes implemented by DOSM in meeting customers' needs through effective data dissemination strategies as identified in its strategic plan.

Keywords: Data communication, Data dissemination, Information and Communication Technology (ICT), Strategic Plan

Introduction

DOSM is the main government agency responsible for collecting, interpreting and disseminating statistics. Since its establishment in 1949, DOSM has been entrusted to carry out various socio-economic censuses and surveys as well compilation of statistics using secondary data. These data are used by the government in formulating and monitoring national policies, as a tool for market research by the business community as well as enabling comparison of data among countries. The role and importance of DOSM can be gauged from the acceptance and usage of statistics by the users as it provides information on past, present and insight to the future. Thus, DOSM is responsible to provide quality, reliable and timely statistics.

In recent years, there has been an increase in interest and demand for quality, reliable and timely data from the statistical community within and outside the country. Thus, it is

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important for DOSM to communicate with the public on the availability and use of data. It is also essential that users are satisfied with the data provided by DOSM.

In line with the vision to be a leading statistical agency by 2020, DOSM continuously improves its data collection activities to ensure the quality and reliability of data produced, as well as efficient data communication. While there are no restrictions in serving the stakeholders, care has to be exercised when serving other users in terms of data confidentiality.

Literature Review

Data dissemination is one of the main functions which are being emphasised by national statistical offices (NSO) or other statistical agencies worldwide in delivering their products and services. Larry Hartke (1997) stated that effective data dissemination means that statistical agencies should fully identify the potential data users community, actively solicit their needs and then respond promptly by providing the users with timely and affordable data products that meet those needs as closely as possible. In highlighting the importance of data dissemination, he wrote that "In order for the government investing in the statistical surveys and censuses to reap the rewards of their investment, the data from the surveys must be made available to as wide variety of data users as possible." He further noted that "To get statistical information into the hands of diverse analysts, the sponsoring organisation must develop an active data dissemination service". To facilitate this, he recommended that statistical agency to take on tasks and develop skills on marketing, customer service and public relations which are not well developed in the organisation.

Data dissemination methods had been diversified and new methods are being explored to ensure that statistical data are widely accessible to the users. Nilgün Dorsan (2007) of Turkish Statistical Institute (TURKSTAT) wrote that "With the rapid development in communication technologies, information becomes a strategic resource for public and private sectors. Improving dissemination and accessibility of the statistics is the core point on users' satisfaction". Therefore, TURKSTAT's targets are to provide user oriented policy, reaching and serving all user groups and providing quality information. To achieve these targets, TURKSTATS conducted Users Satisfaction Surveys, created web site design to give quick access and improved dissemination channels by giving options through SMS and Teletext.

To keep pace with the users' demands, the Census and Statistics Department, the Government of the Hong Kong Special Administrative Region has launched online Interactive Data Dissemination System (IDDS) for the 2006 Population By-census. The IDDS provides a dynamic and interactive platform for users to access a wide range of population statistics and to generate customised statistical tables, charts and thematic maps that could best meet individual needs.

Australian Bureau of Statistics (ABS) has developed the following strategies for improving the communication of statistics on the ABS website: using a layered approach for the presentation of information; developing basic guidelines for presenting/writing for the web; contextual linking of metadata with statistical data; and using the concept of web magazines to ensure that statistical stories are visible to web surfers.

Apart from having effective data dissemination methods, issues on confidentiality of data would be another key area for consideration. ABS wrote in their Statistics 2003 - 2004 Annual Report that the major enhancement to online services was the formal launch of the Remote Access Data Laboratory (RADL) for dissemination of Confidentialised Unit Record File (CURFs). The micro data are disclosed in the form of CURFs, which are files of responses to ABS surveys that have had specific identifying information about persons and organisations confidentialised. The RADL provides access to CURFs through a web-based interface allowing authorised users to submit analysis request using a range of statistical packages. The RADL facilitates greater access by researchers to ABS data while at the same time preserving the privacy and confidentiality of respondents.

Recognising the importance of disseminating official statistics as public goods, the Statistical Commission of the United Nations Statistics Division had outlined in its First Principle of The Fundamental Principles of Official Statistics that 'Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information'.

Data Communication – Terminology

In computer science term, data communication is usually referred to the process of transferring information from a source to a destination or from one point to another point through a communication channel. A communication channel is a pathway over which information can be conveyed (Christopher E. Strangio). Therefore, the communication process involves at least three elements which are the source of the information, communication channel and destination for the information.

Data dissemination in statistical term is distributing or transmitting statistical data to users through different means. Communication of statistics is dialogues between producers or data providers and users to make users understand better and use the statistics provided. Communicating and engaging with users is vital for NSOs to be more effective and relevant. In this paper, data communication refers to the dissemination and distribution of statistical data, the methods of data dissemination and how DOSM engages with users.

Data Dissemination in the “Generic Statistical Business Process Model”

A framework to describe the statistical production process was developed by the United Nations Economic Commission for Europe (UNECE) Steering Group on Statistical Metadata (METIS) based on the business process model developed by Statistics New Zealand. The Generic Statistical Business Process Model (GSBPM) is set to apply to all activities undertaken by producers of official statistics which result in data outputs. The original intention was for the GSBPM to provide a basis for statistical organisations to agree on standard terminology to aid their discussions on developing statistical metadata systems and processes. This model has been widely adopted by national statistical organisations around the world, and is intended to facilitate the convergence of statistical production processes, both within and between organisations. The GSBPM consists of nine (9) phases that include specify needs, design, build, collect, process, analyse, disseminate, archive and evaluate. Dissemination is in phase seven (7).

The current version of the model, GSBPM version 4.0 was adopted by the METIS Steering Group for public release in April 2009.

Table 1: Phases and Sub-processes of Generic Statistical Business Process Model Version 4.0

Quality management / Metadata management										
1 Specify Needs	2 Design	3 Build	4 Collect	5 Process	6 Analyse	7 Disseminate	8 Archive	9 Evaluate		
1.1 Determine needs for information	2.1 Design outputs	3.1 Build data collection instrument	4.1 Select sample	5.1 Integrate data	6.1 Prepare draft outputs	7.1 Update output systems	8.1 Define archive rules	9.1 Gather evaluation inputs		
1.2 Consult and confirm needs	2.2 Design variable descriptions	3.2 Build or enhance process components	4.2 Set up collection	5.2 Classify and code	6.2 Validate outputs	7.2 Produce dissemination products	8.2 Manage archive repository	9.2 Conduct evaluation		
1.3 Establish output objectives	2.3 Design data collection methodology	3.3 Configure workflows	4.3 Run collection	5.3 Review, validate and edit	6.3 Scrutinize and explain	7.3 Manage release of dissemination products	8.3 Preserve data and associated metadata	9.3 Agree action plan		
1.4 Identify concepts	2.4 Design frame and sample methodology	3.4 Test production system	4.4 Finalise collection	5.4 Impute	6.4 Apply disclosure control	7.4 Promote dissemination products	8.4 Dispose of data and associated metadata			
1.5 Check data availability	2.5 Design statistical processing methodology	3.5 Test statistical business process		5.5 Derive new variables and statistical units	6.5 Finalise outputs	7.5 Manage user support				
1.6 Prepare business case	2.6 Design processing systems and workflow	3.5 Finalise production systems		5.6 Calculate weights						
				5.7 Calculate aggregates						
				5.8 Finalise data files						

Source: (UNECE) Steering Group on Statistical Metadata (METIS)

Phase seven (7) of GSBPM illustrates the process of disseminating statistical products. It consists of five sub-processes, which are explained below:

a. Sub-processes 7.1. Update output systems

This sub-process manages the update of systems where data and metadata are stored for dissemination purposes, including:

- formatting data and metadata ready to be put into output databases;
- loading data and metadata into output databases; and
- ensuring data are linked to the relevant metadata.

b. Sub-processes 7.2. Produce dissemination products

This sub-process produces the products to meet user needs. The products can take many forms including printed publications, press releases and published through web sites. Typical steps include:

- preparing the product components (explanatory text, tables, charts etc.);
- assembling the components into products; and
- editing the products and checking that they meet publication standards.

c. Sub-processes 7.3. Manage release of dissemination products

This sub-process ensures that all elements for the release are in place including managing the timing of the release. It includes briefings for specific groups such as the press or ministers, as well as the arrangements for any pre-release embargoes. It also includes the provision of products to subscribers.

d. Sub-processes 7.4. Promote dissemination products

This sub-process concerns the active promotion of the statistical products produced in a specific statistical business process, to help them reach the widest possible audience. It includes the use of customer relationship management tools, to better target potential users of the products, as well as the use of tools including web sites, wikis and blogs to facilitate the process of communicating statistical information to users.

e. Sub-processes 7.5. Manage user support

This sub-process ensures that customer queries are recorded and those responses are provided within agreed deadlines. These queries should be regularly reviewed to provide an input to the over-arching quality management process, as they can indicate new or changing user needs.

The adoption of this framework by the national statistical organisations will enable standardisation of process terminology as well as define and describe statistical processes in a consistent way.

Malaysia Statistical System

Malaysia adopts a centralised statistical system whereby the major statistical collection and compilation is carried out by DOSM. Nevertheless, other government agencies may produce statistics according to their requirements. Section 2, Subsection 3 of Statistics Act 1965 (Revised–1989) states that:

“Save as hereinafter provided, the Department shall where they consider it in the public interest have power to communicate statistics collected by them or their interpretation of statistics so collected not only to the Government department or person for whom the information was collected but also to other authorities or persons to whom the information or interpretation may be useful.”

Therefore, it is important for DOSM to ensure that the statistical coordination among the government agencies is in place. As part of the effort, cadre officers are placed in other government agencies to provide statistical assistance as well as liaising with DOSM. In addition, statistical coordination activities are also undertaken such as standardisation of concepts and definitions, codes and classifications to ensure uniformity and comparability.

Understanding Users' Needs

Rapid growth of the global economy and its volatility has led to the increase in statistical demand. Statistics are needed not only to comprehend past and current scenarios; they are also used to gauge the future of social and economic situation. Thus, the scope and depth of existing data may not be adequate to fulfil these needs.

One of the fundamental ideas highlighted by the Economic Commission for Europe during the Conference of European Statisticians held on 8 – 10 June 2010 in Paris was that statistics are of paramount importance for the policymakers and good statistics as well as good policies depend on the quality of the interaction of statisticians with policymakers. In relation to this, the policymakers are the main users of DOSM's products and services. The formation of the Main User Committee (MUC) and the Inter Agency Planning Group (IAPG) are examples on how DOSM interacts with the stakeholders. These committees are represented by senior officers from DOSM and other related agencies.

DOSM also conducts biannual Main Users' Satisfaction Feedback Survey as an initiative to measure the satisfaction level of eight (8) main users' agencies with regards to DOSM's publications and data dissemination. Customers Feedback Form is also

provided for other government agencies and public users. Feedback from these exercises serves as input for further improvement of products and services.

Data Dissemination in Malaysia

The Federation of Malaya had enacted the Statistics Ordinance in year 1949 whereby a central agency is to be established with the main function to carry out the data collection for the government. Hence, the Statistics Sections in the Central Trade Registry and the Department of Agriculture were merged to become the Bureau of Statistics.

In 1965, the Statistics Act was passed by the Parliament and the Department was then known as what it is today. In line with this, the scope of data collection was extended to include industry, national income, household surveys, income and prices, population and demography. The data collected at this point of time were disseminated through methods such as publications and other printed reports.

To date, as the producer of national statistics, DOSM conducts censuses and surveys as well as compilations which cover the area of external sector; manufacturing; mining and quarrying; construction; services; business indicators; prices; household income and expenditure; labour force and social statistics; population and demography and agriculture.

DOSM Data Communication Evolution

DOSM has made numerous initiatives in disseminating information to users. In the past, most of the information was disseminated in printed forms. However, in tandem with the dynamic changes in ICT, data are now being made available and accessible online. To be at par with other leading NSO's and statistical agencies, benchmarking to the best practices are essential. This paper will further discuss some of the initiatives taken by DOSM to communicate data to users.

a. Enhancement of DOSM Official Website

Currently, the most popular communication channel is undoubtedly through the internet. With the development of ICT, the communication channels have been diversified. DOSM official website was first developed in 1998. Continuous improvements of the website's content and presentation had yield numerous awards and recognitions. The most recent award received by DOSM was the 5 Star Award of Excellence from the Malaysia Government Portals and Websites Assessment 2011 organised by the Multimedia Development Corporation or MDeC. To date, a wide range of DOSM's products and services are posted on the website. Statistics provided through the website are regularly updated as new data are made available. In addition, the information on current surveys and other activities undertaken by DOSM are also made available through the website.

b. Dissemination through other agencies' websites

Apart from disseminating data through its own website, DOSM statistical data are also disseminated through other agencies' websites such as Malaysian National News Agency (BERNAMA), Economic Planning Unit (EPU), Malaysia and Bank Negara Malaysia (BNM). Other than home ground, data are also disseminated through the international statistical agencies websites such as the United Nations Statistics Division and ASEAN Secretariat. This is to ensure that official statistics are widely accessible. In addition, main agencies such as EPU, BNM and international agencies also provide hyperlinks to DOSM's website.

c. Adherence to International Standards

As an initiative to provide comparable data globally, benchmarking to the international standards would be the best practice. Since August 21, 1996, Malaysia had been subscribing to the Special Data Dissemination Standard (SDDS), a standard set by the International Monetary Fund (IMF). BNM as the coordinator, together with DOSM and a few government agencies, provide data to SDDS.

The SDDS is a standard established by IMF in 1995 to guide members in the dissemination of their economic and financial data. Through SDDS, the subscribing countries are required to disseminate data using standard template to the IMF. In addressing the timeliness and towards improving data dissemination, DOSM certainly observes it seriously by complying with the Advanced Release Calendar set forth in the SDDS. Within five years, in 2001, Malaysia has met all SDDS requirements. The 2010 Annual Observance Report of the Special Data Dissemination Standard by IMF highlighted that "Malaysia met the SDDS requirements for coverage for all data categories and exceeded the SDDS periodicity requirement for Labour Market: Wages/Earning and Official Reserves Assets. Malaysia also exceeded the SDDS timeliness requirement for National Accounts, Labour Market: Wages/Earning, Merchandise Trade and International Investment Position". Other than the Official Reserves Assets, all of the data highlighted is produced and disseminated by DOSM.

Table 2: Periodicity and Timeliness Comparisons between SDDS requirements with DOSM's achievements, 2010

SDDS Data Category	Periodicity		Timeliness	
	SDDS	DOSM	SDDS	DOSM
Production index	Monthly	Monthly	6 weeks	6 weeks
Labour market: Wages/Earnings	Quarterly	Monthly	12 weeks	6 weeks
Price index: Consumer prices	Monthly	Monthly	4 weeks	3 weeks
Price index: Producer prices	Monthly	Monthly	4 weeks	4 weeks
Merchandise trade	Monthly	Monthly	8 weeks	6 weeks
National accounts	Quarterly	Quarterly	12 weeks	7 weeks
Labour market: Unemployment	Quarterly	Quarterly	12 weeks	7 weeks
Balance of payments	Quarterly	Quarterly	12 weeks	7 weeks
International investment position	Annually	Annually	3 quarters	Not later than 3 quarters
Population	Annually	Annually	nil	2 quarters

Source: International Monetary Fund (IMF)

d. Dissemination Policy for Unpublished Data and Free Download Policy

DOSM has undertaken continuous review in enhancing accessibility of products and services to users. To further enhance the dissemination services, DOSM's Data Dissemination Policy was outlined and agreed upon in June 2009. The purpose of this policy is to provide transparent guidelines on the procedures of handling data requests particularly micro data as well as detailed data. Through the implementation of this policy, DOSM identified 16 publications to be uploaded in the website in July, 2009 in

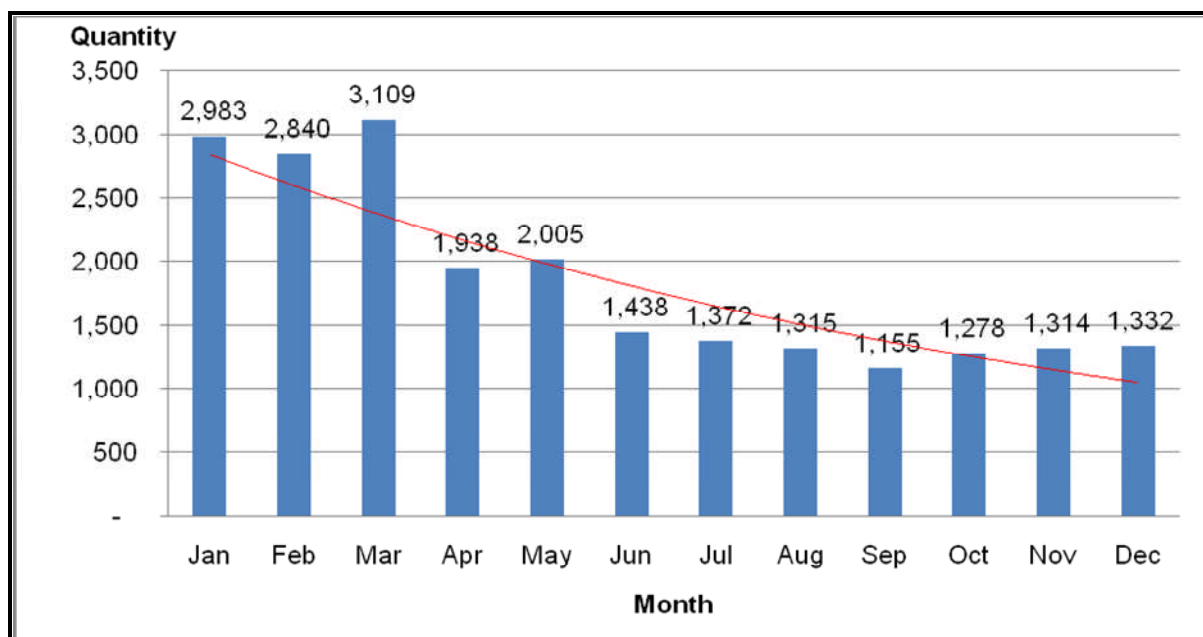
addition to other materials that are readily available for free downloads. The list of publications for free downloads was expanded further to 78 in October 2011.

In October 2009, there were a total of 6,349 hits with 39 titles of free downloads. For the whole year of 2010, there were 150,069 hits with a monthly average of 12,506 hits.

This practice is also part of DOSM's strategies to migrate from paper-based to electronic publishing. It is also in line with DOSM Strategic Plan (DSP) 2010 – 2014 that is to leverage on ICT for data dissemination. In addition, this will also contribute towards environmental friendly dissemination platform as well as reducing printing and postage costs; and also space for storage.

As a result from the implementation of the free download policy, there was a notable decline in the number of data requests received. In year 2010, the number of data requests received by DOSM showed a decreasing trend due to the wealth and availability of data provided through the website. In January 2010, there were 2,983 requests but by the end of the year, the number had declined to 1,332.

Chart 1: Number of data request received by DOSM from January to December 2010



e. Central Repository

In enhancing data communication, requirements of ICT are spelled out in the ICT Strategic Plan 2011 - 2015. ICT will be used to enhance integration of application and intelligent data sharing whereby National Enterprise-Wide Statistical Systems (NEWSS) framework was developed as the platform.

NEWSS is an integrated framework of data collection, processing, analysis and dissemination through leveraging on ICT. This project commenced in August 2008 and

is fully in operation effective from April 2010. One of the objectives of this project is to develop the Central Repository, a single point of access to the statistical data available in DOSM. The Central Repository will provide comprehensive catalogued information storage for data sharing among the subject matters divisions within DOSM, stakeholders and other users.

f. Interactive Databases

DOSM puts high priority in fulfilling and satisfying the stakeholders' data requirement. Through its website, interactive databases were made available and accessible. Interested users are able to exercise data mining and create tables, charts and analysis of their preference. Recently developed are the External Trade Statistics System, Population Quick Info and the Malaysia's Millennium Development Goals database. These databases which can be accessed by all users with no requirement for registration had been very well accepted by the users since it were introduced. The total number of transactions recorded for the External Trade Statistics System since its launching on 15 December 2010 was 12,634 in November, 2011 while the Population Quick Info which was launched on 14 April 2011 recorded a total of 10,705 transactions (July - November 2011). Through these controlled environment databases, users are able to make customised tabulations for the external trade or population data. More interactive database will be made available upon completion of the Central Repository.

g. Mobile Technology

To make use of the mobile technology, DOSM had taken a step further by disseminating data through short messaging service (SMS). The Government has introduced mySMS as part of its e-KL initiative of "Delivering services through an integrated and connected Klang Valley" via one SMS shortcode that is 15888. DOSM participated in this initiative which kicked off in June 2009, whereby seven (7) data categories are disseminated via mySMS. The data categories include population, gross domestic product, consumer price index, external trade, index of industrial production, labour force, and monthly manufacturing statistics. Additional indicators will be considered in the future.

Beginning April 2010, DOSM's website can also be accessed via Personal Digital Assistance (PDA) and mobile phones. The mobile version of the website provides selected key statistics, latest statistical releases and highlights of statistical information. These two mobile facilities provide effective and hassle free way to obtain the latest statistical information.

h. Advisory Services

Statistics produced should facilitate proper interpretation for expert as well as generic users. DOSM is being referred to by users on sampling methodology, questionnaire design, coding and utilisation and application of statistical software. These advisory and

consultancy services are provided not only to government agencies but also to the public such as academia and researchers, locally and internationally.

i. Promotion and Publicity

How will anyone know about the products and services offered by an organisation without promotion and publicity? Promotions keep the products and services offered in the mind of customers and help to stimulate demand for the products and services whilst publicity creates awareness amongst the public. The multi-pronged strategy carried out by DOSM in educating the public on the proper usage as well as the importance of official statistics is also aimed to encourage the use of statistics as a tool for analysis, planning and formulating business strategies. Ongoing efforts of promotion and publicity activities undertaken by DOSM to widen the usage and understanding of statistics as well as awareness among the public are made through media releases, press conferences, advertisements, public announcements and exhibitions. In addition to this, the involvement of media in data dissemination is to be intensified.

Moving Forward

DOSM has undertaken numerous improvements to strengthen its data dissemination strategies. Hence, the continuous enhancements in all existing communication strategies are vital and should be the key consideration for DOSM in delivering its statistical services and products. The emphasis will be given in promoting greater use and understanding of official statistics. Users demand a readily available, detailed and integrated data accessible from a single window. In response to this, DOSM will also continue to explore new data communication strategies and broaden the implementation scope of NEWSS so as to enhance its efficiency in data management.

a. Strategic human capital development agenda

The strategy to develop competent human capital with high level of professionalism was outlined in DSP 2010 – 2014. In realising this strategy, DOSM had identified programmes to be engaged in providing continuous capacity building for its personnel. One of the insightful strategies is the expansion of DOSM's Statistical Training Division with the establishment of the *Institut Latihan Statistik Malaysia* (ILSM). This institute will provide continuous and structured training programmes to enhance expertise and knowledge in technical aspects, usage of ICT as well as soft skills and professionalism of DOSM's personnel. The changing expectations of data user in an increasingly interrelated world require the personnel to build their skills which enable them to better respond to the customer's needs. Well-trained personnel are able to satisfy the customer's needs faster and more efficiently. A structured human capital development programme will enable the establishment of common work standards among personnel.

b. Smart-partnership

Facilitating closer relationship with statistical community through smart partnerships would give additional benefits to DOSM in promoting wider usage of statistics as public goods. One of the programmes identified in DSP 2010 – 2014 is to establish smart networking through exchange of expertise, ideas and technical assistance in statistical field with academia, researchers, private sectors and other statistical community at large. DOSM also actively participates in seminars and workshops on statistics.

c. Transformation from Website to Web Portal

A portal is generally a vehicle by which to gain access to a multitude of 'services' while a website is a destination in itself. A portal provides authentication or facility of Logging-In, personalisation and customisation. A website is also a web portal if it transmits information from several independent sources that can be, but not necessarily are, connected in subject; thus offering a public service function for the visitor which is not restricted to presenting the view(s) of one author. Transforming DOSM's official website www.statistics.gov.my to a web based portal by further enhancements and improvements of its features and content will be a great achievement for DOSM to further leveraged on ICT.

d. Availability of micro data for research purposes

The requests from policy makers, analyst as well as the private sectors for micro data have significantly increased. However, the confidentiality issue is the main concern in releasing the micro data to the users. The common practise by other NSO in releasing the micro data is by removing the individual identifier to the data. In the wake of these urgent needs, DOSM had developed Micro Data Policy which gives detail guidance on how to handle request on micro data as well as detailed data. This policy provides guideline to disseminate anonymised data and at the same time safeguards confidentiality of the data. The dissemination methods of statistical information outlined in this policy are the provision of data cubes or statistical tables; anonymised micro data files which is divided into two categories namely public users file and licensed file; and on-site access files through remote access facilities and data laboratories.

e. Geographical Information System (GIS) – Thematic Maps to the Web Site

GIS was developed from the merging of cartography, statistical analysis and database technology. It is a system designed to capture, store, manipulate, analyse, manage and present all types of geographically referenced data. GIS applications are tools that allow users to create interactive queries (user-created searches), analyse spatial information, edit data, maps and present the results of all these operation. One of the GIS applications developed is the Thematic Maps which provide realistic visual description of spatial data. Visualisation helps users to digest statistical information and remember the message that is being communicated. It also will be easier for users to relate data to location and identifying geographical trend. DOSM had utilised GIS technology not only

for identification of the enumeration blocks but also provides Population and Housing Census data in GIS format. Currently, there are two sets of GIS data for Population and Housing Census 1991 and 2000 which includes information on population and housing at various geographical levels such as district, *mukim* and local authorities. Thus, it will be another important breakthrough for DOSM to make Interactive GIS Thematic Map available through the website.

f. Exploring the SDMX in Communicating the Unpublished Data

The Statistical Data and Metadata Exchange (SDMX) is an international initiative to address standardisation of the exchange of statistical information globally. Through SDMX, unpublished data or "Supplementary Data" refers to a description of data not routinely disseminated but are made available to users upon request. It may include customised tabulations that can be provided to meet specific requests and also information on procedures for obtaining these supplementary data. DOSM will consider adopting the system.

Conclusion

The vision to become a leading statistical organisation internationally by 2020 requires DOSM to be able to deliver diverse quality statistical products and services that are well accepted by the statistical community. Lee Iacocca wrote that "You can have brilliant ideas, but if you can't get them across, your ideas won't get you anywhere".

To provide greater accessibility of official statistics to the users, DOSM will adopt effective data communication strategies by leveraging on ICT. Moving forward, DOSM will focus on accomplishing data communication strategies identified in the DSP 2010 – 2014 in line with the aspiration to be at par with advanced NSO. As the Producer of National Statistics, DOSM will continue to strengthen the communication platform to disseminate statistical products and services to a wider range of users in many ways and provide users with what they really need.

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