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10TH WORLD TELECOMMUNICATION/ICT INDICATORS MEETING (WTIM)
25-27 September 2012
Bangkok, Thailand

High-level panel on national coordination of ICT statistics
Tuesday, 25 September 2012, 10:30-12:30 hours

Concept note

A key element in any successful national ICT strategy is an efficient and effective monitoring system and the collection of pertinent indicators to assess progress and review policies. Given the cross-cutting nature of ICTs, permeating all sectors of the society, statistical data collection and dissemination is often fragmented. At the occasion of the 10th WTIM, for the first time, an international high-level panel, comprised of representatives of ICT Ministries, telecommunications regulatory authorities, National Statistical Offices, and international and regional organizations, will discuss the topic of “National Coordination of ICT Statistics”. Coordination among statistical agencies within countries is one of the ten Fundamental Principles of Official Statistics¹, adopted by the UN Statistical Commission in 1994. The objective of the panel is to address ways and means of establishing a national coordination mechanism to ensure the efficient and timely production of ICT indicators. The outcome of the debate is expected to result in a set of recommendations on future action to enhance national coordination in the field of ICT statistics, to be adopted at the end of the WTIM.

1. Stakeholders in the production of ICT statistics

In most countries, ICT statistics are produced from a variety of sources, involving different national institutions and private organizations (see Figure 1):

National statistical offices

National statistical offices (NSOs) usually collect, process and publish ICT household data (such as households with computers and people using the Internet) and ICT business data (such as businesses delivering online services and ICT sector value added) and associated metadata. ICT data are collected through stand-alone ICT surveys or incorporated in existing household and establishment surveys (or censuses). NSOs have the capacity to carry out nation-wide, representative surveys given the fact that they have a set of generic technical statistical infrastructure and skills such as sample frames, sample design methods, data collection and estimation procedures, which are fundamental steps of the statistical process. Most NSOs are also supported by legislation designed to protect data and, in many cases, to mandate provision of data, thereby enhancing response rates. NSOs have the necessary technical experience in data collection and generally provide credibility of the official statistics they produce. Their structures and capacities (including human, technological, legal and financial resources) vary but most NSOs aim to follow international methodologies and standards for collecting data.

¹ <http://unstats.un.org/unsd/methods/statorg/FP-English.htm>

National regulatory authorities

In most countries, the national telecommunication regulatory authority (NRA) is responsible for collecting, compiling and disseminating administrative ICT data (such as operating licenses, telephone and Internet subscriptions) covering the telecommunication services sector. This typically arises out of the authority's mandate to regulate, analyse and monitor the sector. NRAs maintain a register of licenses that can be used to identify sources of telecommunication/ICT indicators (e.g. service providers).

Sector ministries

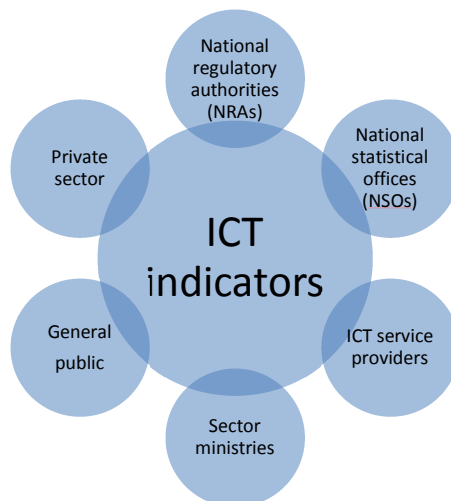
In some countries, ministries responsible for Telecommunications, Science and Technology and related matters collect administrative ICT data from provider companies. Occasionally, where the demand for ICT indicators has been high, they have carried out ad-hoc surveys on the use of ICT by businesses and households, not always in coordination with the NSO. The reason for this is that the ministry has information needs for ICT policy-making which are not satisfied and at the same time, better access to funds (including funds from international donors), skilled human resources in the domain of ICT or even the legal mandate to establish an ICT observatory.

Other line ministries also have an interest in collecting ICT-related indicators, such as the Ministry of Education (statistics on ICT in education and ICT skills), Ministry of Labour (statistics on ICT sector production and employment), Ministry of Health (statistics on ICT in health) etc. So far, data collection in those areas is limited, in particular in developing countries, while at the same time demand for more data is growing.

Other stakeholders

In addition to the official stakeholders mentioned above, private companies, Universities and other research institutions also engage in ICT data collection and often are very successful in publishing their results and receiving media attention. Furthermore, ICT service providers (e.g. telecommunication companies) collect data from their customers and publish them in annual reports, available to anyone interested in using them.

Figure 1. ICT indicators stakeholders



2. The need for national coordination in the production of ICT statistics

In view of the variety of existing ICT data sources, coordination and cooperation among data producers are fundamental to the production of high-quality official statistics. Otherwise, there is a risk that published data are inaccurate or inconsistent, leading to wrong policy decisions. Other benefits of coordination include reduction of the overall response burden for data providers, avoidance of duplication of effort and optimization of the efficient use of resources. It also helps to identify existing data gaps, to harmonize objectives and priorities between the different stakeholders, and to improve monitoring and evaluation of the ICT statistical production process.

In particular, there should be close collaboration between the sector ministries, the NRA and the NSO, for several reasons. First, the ministries and the NRA are likely to be aware which ICT indicators are important and should be collected. Second, even if the ministries and the NRA collect some data, the NSO's statistical expertise will be very valuable. Third, the NSO may collect ICT household and business data through surveys that can be complemented by – and often combined with – the ICT data from administrative sources.

Among the institutional challenges to produce ICT statistics and indicators, the most relevant is the setting up of coordination mechanisms between relevant institutions. Since survey-based ICT statistics is a rather new field in most developing countries, the initiative to produce ICT data often originates from a demand by policy makers. Traditionally, telecommunication data and statistics have been collected by national telecommunication regulators or ministries, based on administrative sources. Therefore, it is rather new for them to turn to the NSO for the collection of survey data on ICT access and use.

Coordination of statistical activities between NSOs and other agencies in the national statistical system for the production of ICT indicators should include the following:²

Technical coordination

- Establishment and coordinated use of definitions of ICT indicators and relevant classifications. These definitions should be based on international standards, but adapted to country conditions.
- Establishment of population frames for household and business surveys.
- Establishment of procedures for the preparation and dissemination of standardized data and metadata.

Legal coordination

- Establishment of an adequate institutional framework to represent the institutions that produce information.
- Legal provisions to confer official status of statistics from data collection exercises conducted by institutions that are members of the national statistical system.
- A legal framework to ensure sustainable funding from the national budget (or from donor cooperation, where relevant) for the operation of national statistical systems and for the implementation of programmes of statistical work.

Coordination in resource allocation

- Development of synergies among the different institutions' financial resources for the implementation of large-scale surveys.

² Based on UNCTAD "Manual for the production of statistics on the information economy", 2009.

- Efficient use of statistical and technical capacities of highly-qualified staff in the national statistical system, and of ICT resources available within different agencies for data collection, processing and dissemination.
- Coordination of financial resources (from external sources and between agencies involved in the project).

3. Models of national coordination mechanisms for ICT statistics

National statistical systems have varying degrees of structure and coordination. Most countries have a system structured within a legal framework, which puts in place coordination bodies (for example, inter-ministerial commissions or national statistical councils) where stakeholders are represented. Such inter-institutional structures may also work in thematic groups (for instance, related to particular topics such as ICT). The following highlights a few models that could be applied in the field of ICT statistics, based on existing national coordination mechanisms.

National statistical coordination bodies and NSOs

In most countries, NSOs take on the role of national statistical coordination. The NSO is the central point of the national statistical system and plays a coordinating role enshrined by law. Some countries have established specific national statistical coordination bodies for this purpose.

The multiplicity of actors involved in national statistical systems, particularly in relation to ICT indicators, necessitates institutional leadership, and, given their area of expertise, NSOs are usually best placed to exercise this. On the other hand, technical expertise on ICT subject matters may be more evident in ICT-related institutions, making close collaboration with sector ministries and NRAs essential.

NSOs sometimes have satellite units in line ministries (agriculture, health, education) responsible for sectoral statistics. In larger countries, regional and/or sub-regional offices may exist to facilitate data collection. However, they do not necessarily accommodate ICT statistics mainly due to the relative novelty of the subject.

A good example of a national statistical coordination body which includes ICT in its work is the National Statistical Coordination Board (NSCB) of the Philippines. Through its Inter Agency Committee on ICT Statistics created in 2006, cooperation among producers, users and other stakeholders of ICT statistics is realized. The inter agency committee serves as a forum for discussion and resolution of issues pertaining to improved generation, dissemination and utilization of ICT statistics in the country.

Another example is the Australian Bureau of Statistics (ABS) which established in early 2004 an ICT reference group involving government, industry, academic and community representatives. The reference group provides members with the opportunity to discuss and consider strategies to address ICT statistical issues. ABS also brings together key stakeholders from across the entire statistical community through the National Statistical Service (NSS) initiative, which aims to provide a unified source of statistical information that can be used to inform debate, policy making and evaluation.

Coordination bodies related to ICT Ministry or presidential office

Government policymakers responsible for ICT policy are often the most important data users and therefore have a particular interest in receiving timely data on the latest ICT developments in the

country. They would therefore be well placed to take on a coordination role among the various data producers, in particular in countries where other bodies (e.g. the NSO) have not taken on that responsibility. A new coordination body could be established, linked to the ICT Ministry or the presidential office. The latter would have the advantage to also involve other sector ministries (e.g. Education, Economy) that have an interest in producing ICT statistics.

An example of a country that has established a coordination body working closely with the Government is Brazil. Since its inception in 1995, the Brazilian Internet Steering Committee (CGI.br) coordinates projects for the development and operation of the Internet in the country. CGI also promotes the collection, compilation and sharing of information, analyses, indicators and statistics on ICT in Brazil. The CGI membership is composed of the public and private sector and representatives from the scientific and technological community, including the Ministry of Communication, the Ministry of Science and Technology and the National Telecommunication Agency.

In Egypt, the Information Center under the Ministry of ICT takes on the role of coordination of ICT statistical production and dissemination. The ICT indicators project launched in 2005 is a joint effort between the Ministry of Communications and Information Technology (MCIT) and its affiliates such as the Information Technology Industry Development Agency (ITIDA), the National Telecommunication Regulatory Authority (NTRA), and the Central Agency for Public Mobilization and Statistics (CAPMAS).

National information society observatories

Some countries have established national information society observatories with the objective to centralize all ICT indicators and disseminate them through one national portal. The observatory could be linked to the ICT Ministry or any other Government office. A close cooperation with all data producers mentioned above would be required.

As an example, Spain has established the National Observatory for Telecommunications and the Information Society (ONTSI) in the frame of the Ministry of Industry, Tourism and Trade. It is a body attached to the public corporate entity Red.es, the main objective of which is the monitoring and analysis of the telecommunications sector and the information society.

Inter-agency ICT statistical working groups or committees

Other (less institutionalized) forms of collaboration among data-producing organizations could take the form of thematic cooperation agreements or inter-institutional working groups with clearly defined responsibilities for establishing technical standards (e.g. for data collection and analysis, fieldwork and the verification and dissemination of findings).

4. Issues to be addressed by the high-level panel

Given the various models for coordination of ICT statistical production, the high-level panel is encouraged to address the following issues:

- What is the role of ICT measurement in national ICT policy making?
- How can ICT statistical production be effectively integrated into national statistical strategies?
- What are some best practice examples of national coordination on statistics in general, and on ICT statistics in particular?

- Recommendations on how to further advance the subject of national coordination on ICT statistics, both at the national and international levels.