Seminar on "ICT Measurement and Indicators"

New Delhi, India
12-14 May 2009

Conclusions and recommendations

The joint ITU-DIT national seminar on "ICT Measurement and Indicators" was held in New Delhi, India, on 12-14 May 2009. It was hosted by the Government of India, Department of Information Technology (DIT), Ministry of Communications and Information Technology (MCIT).

The meeting was attended by more than 70 participants representing the Government (Ministries, regulator and national statistics office), the private sector, academia and other civil society organizations, and 8 representatives from international organizations (ITU, UNCTAD, OECD, UIS) as well as Norway (University of Agder), Thailand (MICT) and the Dominican Republic (Indotel).

The seminar addressed the following topics:

- Policy aspects of ICT measurement
- Measuring telecommunication infrastructure and access
- Measuring ICT access and use by households and individuals
- Measuring ICT use by businesses
- Measuring the ICT producing sector
- Benchmarking the information society
- Measuring ICT and gender
- Measuring the social and economic impact of ICTs
- Measuring e-government
- Measuring ICT in education
- Measuring security and trust
- Capacity building on ICT measurement

On each of those topics, work carried out at the international as well as national level was considered. At the international level, discussions focused on international common practices and agreed standards in the area of ICT measurement, experiences and lessons learned from countries that are advanced in collecting ICT statistics and on the

presentation of methodological tools and guidelines that can be applied at the national level for measuring different aspects of the information society. This was complemented by case studies from India illustrating relevant work carried out on the various topics under consideration, as well as pointing to the gaps and future needs in producing policy-relevant ICT statistics.

The following summarizes the main conclusions and recommendations resulting from the presentations and discussions during the meeting.

1. At the international level, considerable progress to advance ICT measurement has been made during the past five years, in particular through the global Partnership on Measuring ICT for Development. ITU plays a key role when it comes to the collection and dissemination of ICT statistics, in particular on telecommunication and ICT infrastructure and access indicators, and indicators on access and use by households and individuals.

2. As a result of the work at the international level, there are now a number of tools available to facilitate the production of ICT statistics. These include a core list of over 50 ICT indicators that have been agreed upon internationally (covering infrastructure, households, individuals, businesses, the ICT sector and education), associated definitions and standards, model questions and model questionnaires for household and business surveys, and practical manuals that describe in detail how to collect the indicators. Work on measuring eGovernment is under way and is expected to be finished by 2010.

3. The Government of India has been making sustained efforts to improve the availability of ICT data for policy making and research. While certain data are produced on a regular basis, in particular data on the telecommunication sector, the IT industry and business process outsourcing (BPO), data on the information society at large, particularly on the use of ICT by individuals, households and businesses, are not yet available. While some of these data are produced by private entities, official statistics representing the entire country are still limited. At the state level, some efforts have been made in measuring certain aspects of ICTs, for example, e-Government, ICT in households, community Internet access and use of mobile phones. These are mainly based on case studies.

4. With the rapid growth of the ICT sector in India, there is an important demand from the research community and policy makers for better data to ensure that research findings are representative for the entire country or the state in order to inform policy makers about ICT developments and its impact and have meaningful interpretations of policies. In particular, there is a real need to measure the digital divide in the country, including the urban-rural and gender divides, and the use of community Internet access centers and mobile phone applications by low-income users.

5. Therefore, there is a clear need to collect more ICT data in India. The data collection should be comprehensive and sustainable. The new Statistics Act,

which has been enacted in 2008 and which will come into force in 2009, could play an important role in improving the collection of official data, including on ICT, through surveys and from other data providers, as it makes responding to Government data requests compulsory. Major challenges in compiling nation-wide statistics remain given that the data collection is very time- and resource intensive as India is a vast country with 35 States and Union territories.

6. The internationally agreed core list of ICT indicators developed by the Partnership on Measuring ICT for Development should be used for collecting data on ICT infrastructure, ICT in households, ICT use by individuals, ICT use by businesses, the ICT sector, and ICT use in education. Important steps have been taken by the Indian National Statistical Office to include several core ICT access indicators in the upcoming consumer expenditure survey and the annual survey of industries. However, these do not include indicators on use of ICT by individuals, and the results of these data collections will only be available in 2011.

7. A significant amount of data exists on the ICT service industry (collected by NASSCOM), reflecting their members' data. Similarly, data on ICT manufacturing captured by another private body, the Communication and Manufacturing Association of India (CMAI) only reflects their membership (around 50% of total companies). In addition, data should be brought in accordance with the international definition of the ICT producing sector (both for ICT services and ICT manufacturing).

8. Measuring ICT and gender is considered of high importance in India. To this end, data on ICT use by women and girls need to be collected. This could be done through household and individual use surveys.

9. Benchmarking the level of ICT uptake at the international or national level requires reliable and comparable statistics. Benchmarking can be a useful policy tool for monitoring progress in the development of the information society and for identifying gaps that need to be addressed in future ICT policies. The ITU ICT Development Index (IDI) could be applied at the national level to identify national digital divides and help in the policy formulation.

10. Other important measurement issues that should be further explored are measuring security and trust and measuring eGovernment. In OECD countries, privacy or security concerns are one of the main reasons for not having Internet access at home. Data related to security and trust in the online environment can be measured through ICT household and ICT business surveys. While there are no internationally agreed indicators for measuring eGovernment, work is under way in the Partnership on Measuring ICT for Development. The main challenge with eGovernment indicators remains the cross-country comparability of data.

11. Measuring the impact of ICTs is critical to better understanding the role of ICT for economic and social development. In India, much work on measuring the impact of the IT industry on economic growth and employment has been carried out.

Recent research has used mobile phone subscriber data to measure the impact of mobile phones on GDP growth in some Indian states. In order to measure ICT impact at the micro level, it is a precondition that data on ICT access and use are available and collected.

12. In order to implement an effective and efficient data compilation programme on ICT and avoid duplication of efforts, it is essential that all relevant stakeholders cooperate in this process, including ICT policy makers, statisticians, and other stakeholders that may be involved in the data collection and analysis. Experience from other countries has demonstrated that important synergies can be built if stakeholders are committed to exploit these. DIT could be the nodal agency for all core statistical activities relating to IT in the country, ensuring the coordination among the different agencies involved.

13. There is a clear demand for further capacity building on ICT measurement both at the national and state level. The international community, and particularly ITU, can play an important role through sharing the experience and best practices available internationally and by ensuring that the data collected are in accordance with international standards. The international community should assist in the process of ICT measurement through technical assistance, training and other advisory services that may be requested by national stakeholders. As a follow-up to this workshop, a time-bound plan of action will be drawn up in consultation with DIT, Government of India.