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**National Statistical Offices/NSO's/  
Capabilities to Collect ICT Indicators and Statistics**

Information Communication Technologies (ICTs) play a key role in the economic and social developments of each country by improving the efficiency and effectiveness of public administration, business and other activities. This is because, ICTs such as telecommunication /telephones, internet, facsimile, websites...etc/, broadcasting, computer hardware and software and related technologies are strategically important factors for social and economic changes. These ICTs and digital infrastructures are a tool to provide people with more convenient access to information and services.

Provision of timely, relevant and reliable statistics on the infrastructure and ICTs usage statistics at government, community and private sector levels are the basis for monitoring and evaluation of ICTs sectoral progress. Initiatives for the development and promotion of statistics should come from a recognized government organization mandated with overall coordination and harmonization of statistical activities in each country. In this respect, the NSO's are each governments exclusive or at least major agencies for statistical affairs.

National Statistical Offices /NSO's/ are responsible almost in every country to provide statistical data and indicators on all economic, social and demographic situations by applying professional standards, scientific principles and methods for

collecting, processing and presentation of statistical information. Furthermore, NSO's could also play a pivotal role in coordinating among data producers within countries to achieve consistency and efficiency in the statistical system by using internationally recognized concepts, classifications and methods. Hence, it can be said that, it is natural for statistical agencies of each country to initiate and introduce methodologies through the interaction of users and producers on the infrastructure and application of ICTs.

As it is well known generally statistical information could be generated from various sources such as sample surveys, censuses and registration systems or compiled from administrative records. NSO's have rich experiences in applying those data generating methods.

Most developing countries are by now having a national ICT policy document and strategies. That indicates the political will to develop and apply ICTs for social and economic development and growth. The National Statistical Offices /NSO's/ of these countries can play a proactive role in generating data required for improving the application of ICTs of each country.

Statistical data are important on ICTs for evaluating:

- ?? Types of ICTs available,
- ?? ICTs usage in various sectors (such as e-commerce, education, health...etc)
- ?? Availability of skilled manpower in applying ICTs,
- ?? ICTs infrastructure developments,
- ?? ICT facilities,
- ?? Information exchange conditions between the public and the private sector using ICTs,
- ?? The status in identifying and applying appropriate ICTs,
- ?? Access to information at community level using ICTs,
- ?? Broadcasting services,
- ?? The development and usage of hardware and software computers, and,
- ?? Human resources engaged, revenue generated and expenditure on ICTs.

The sources of these data can be either from administrative records or from surveys. The data from administrative records could be easily compiled by NSO's. For instance the Central Statistical Authority /CSA/ of Ethiopia annually compiles data on:

- ?? Local telephone networks,
- ?? Main telephone lines,
- ?? Capacity and capacity utilization,
- ?? Waiting list for telephone lines,
- ?? Public telephones,
- ?? Digital lines,
- ?? Residential lines,
- ?? Distribution by urban centers and rural areas,
- ?? Cellular, Internet and facsimile subscribers,
- ?? Broadcasting services, and,
- ?? Human resources engaged, revenue generated and expenditure on telecommunications and broadcasting services.

However, primary data generation on the ICTs usage statistics could be a new area of expertise for many statistical systems in developing economies like that of Ethiopia. This development may bring a challenge for statistical methodology units that may design the measurement and monitoring of ICTs. The methodology that could be employed for generating data on ICTs usage statistics should enable countries to collect, store, analyze and disseminate information on effective application of ICTs in business and other sectors of each country. The results from the surveys on ICTs that could be conducted should enable NSO's to establish a system of indicators for measuring progress in the use and application of ICTs for economic growth.

NSO's are not only expected to generate data on the application of ICTs in the overall economic and social development, but in order to be able to compile, analyze, publish and disseminate reports on the ICTs, usage statistics; they have to apply ICTs for their own statistical operations. They have to use Scan-ICT for data processing and documentation. NSO's have to be one of the major users of new hardware and software computer and other data processing machines. Survey and census results by NSO's should be accessible through the Internet and via Website and they have to be

able to update the results on regular basis. Furthermore, the results of the surveys should also be supplied on soft copies using diskettes, CD-ROM ...etc.

From Ethiopia's Central Statistical Authority's /CSA's/ experience, application of these ICTs could be a challenge for many developing economies, especially in respect of obtaining equipment and other resources. On the other hand, the development of ICTs has created good opportunities to change the way data is collected, transferred and disseminated by NSO's. NSO's in big countries in terms of population and area, like that of Ethiopia have regional statistical branch offices for their statistical operations. Apart from the increased use of local area networks /LAN/ in statistical operations, there is currently a great need to expand such networks to enable remote regional statistical offices access huge data sets using data warehouses that have harmonized data from various data sources. Thus, the NSO's in these countries need to use wide area networks /WAN/ that enable remote regional offices to transfer data to head offices and they have to be able to access data for local level planning and dissemination activities.

That in other words means, in order to reorganize the National Statistical Offices /NSO's/ to position them to play a leadership role on the supply of statistics needed on ICTs usage like that of data on other sectors, technical assistance and training on methodology issues and to some extent assistance on availing equipment such as scanning machines, hardware and software computers and other data processing machines are essential. To this end, UNCTAD and other international and regional agencies could assist NSO's in developing economies for enabling them to use by themselves ICTs to advance their work on collecting, analyzing and disseminating ICT indicators.