

# **Statistical Coordination Mechanisms Towards Measuring the Information Economy: The Philippine Experience<sup>1</sup>**

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## **I. Introduction**

Statistics on Information and Communication Technology (ICT) in the Philippines is anchored on various government policy priorities that advocate the use of ICT in governance, business and education. Thus, in order to monitor and measure the extent by which ICT has been adopted by the various sectors in the Philippine society, it is imperative for the Philippine Statistical System (PSS) to address the need to generate relevant and responsive statistical information

A decentralized statistical system, the PSS is a government-wide system of providing statistical information and services to the public. It consists of the statistical organizations at all administrative levels, the personnel therein and the national statistical program. The PSS is characterized by the presence of a policy-making and coordinating body, a single general purpose statistical agency, a statistical research and training center and all the departments, bureaus, offices, agencies and instrumentalities of the national and local government and government-owned or controlled corporations and their subsidiaries that are engaged in statistical activities either as their primary functions or part of their administrative or regulatory functions.

The National Statistical Coordination Board (NSCB) as the highest policy making and coordinating body on statistical matters in the Philippines, formulates policies, delineates responsibilities, sets priorities and standards on statistics. It maintains multi-sectoral frameworks/indicator systems to keep track of the economy and the socio-economic status of the Filipino people as well as prescribes standards and classification systems to ensure international comparability of data generated from PSS statistical activities. It also provides links and fora for coordination between and among the key players in the PSS and likewise serves as the statistical clearinghouse and liaison for international statistical matters. It also manages the National Statistical Information Center (NSIC) which is a one-stop shop of statistical products and services in the Philippines. [1]

The general purpose statistical government agency is the National Statistics Office (NSO) which is in charge of conducting censuses and surveys on households and establishments. Other major government data producers include the Bureau of Agricultural Statistics (BAS), the Bureau of Labor and Employment Statistics

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<sup>1</sup> Paper Presented during the WSIS Thematic Meeting: "Measuring the Information Society," 7-9 February 2005, Palais des Nations, Geneva, Switzerland

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(BLES), the Bangko Sentral ng Pilipinas (BSP), the Department of Health (DOH) and the Department of Education (DepEd).

## II. ICT-Related Government Policies and Programs

A number of ICT-related national plans and programs were implemented in the Philippines to harness the potentials of ICT to improve access to and delivery of government services; promote transparency and accountability in government operations and transactions; and, support research and development undertakings. Some of the major ICT plans and programs are as follows:

- A. *Government Information Systems Plan (GISP) or 2000 Philippine Government Online*, envisions an electronic bureaucracy that is widely and readily accessible to the Filipino people. It is a master plan that aims to harness the potentials of information and communications technology (ICT) for good governance, and promotes transparency and accountability in government operations and transactions. It seeks to provide a "blueprint for the computerization of vital government operations and key front-line services to enhance government productivity and efficiency." [2]
- B. *National Information Technology Plan 2000 (NITP 2000)* - documents the overall strategy to spur the country to global competitiveness through Information Technology (IT) diffusion. It is designed to contribute to people empowerment and socio-economic development and to launch the Philippines as a Newly Industrializing Country (NIC). It is anchored on the belief that the country can benefit from a shared national vision of harnessing IT in the same way that businesses and nations world-wide have. It presents a strategy by which the government and the private sector will work together to optimize the use of IT. [3]
- C. *I.T. Action Agenda for the 21st Century (IT 21), 1997* - documents the vision and presents the broad strategy to spur the Philippines to global competitiveness through information technology. Its overall goal is to transform the Philippines into a Knowledge Center in Asia. It sets down specific time frames for achieving these goals: [4]
  1. By the turn of the 21st century, the Philippines will have laid the infrastructure for every business, every agency of government, every school, and every home in the Philippines to have access to information technology
  2. By the year 2005, IT use will be pervasive in daily life. Philippine companies will be producing competitive IT products for world markets.
  3. Within the first decade of the 21st Century, the Philippines will be a Knowledge Center for Asia: a leader in IT education, in IT-assisted training, and in the application of information and knowledge to business, professional services, and the arts
- D. *Medium Term Philippine Development Plan (MTPDP)*. The newly formulated 2004-2010 MTPDP sets the directions in the utilization of ICT

in every aspect of the Philippine society. Among the salient developmental activities stipulated in the MTPDP are [5]:

1. acceleration of the establishment of more community e-centers (CECs) to provide universal access to ICT services, link communities, facilitate trade and commerce, and empower rural communities socially, economically and politically
2. promotion of the use of ICT in all sectors of the society, as a tool for people empowerment
3. utilization of ICT as tool for teaching and diffusing technologies in all levels of education
4. implementation of an aggressive ICT-focused investment promotion program
5. institutionalization of the e-Government Fund to meet the requirements of major ICT projects of the government
6. development and adoption of a National Information Security Plan which shall lead to the enactment of a Network Information Security and Privacy law
7. formulation of a Cybercrime and Cyberfraud Prevention law that will provide the legal basis for enforcing security measures and protecting the general public interest

The Philippine government's thrust to become a knowledge-based economy has likewise effected various legislative measures that aim to create an information-friendly and trustworthy society by developing human resources, building information infrastructure, promoting e-commerce transactions and respecting intellectual property rights.

- A. *Executive Order (EO) 190, 1994 - Approving and Adopting the National Information Technology Plan 2000 (NITP 2000) and Establishing the National Information Technology Council (NITC).* The NITC served as the IT advisory body to the President in the implementation of the NITP 2000.
- B. *Republic Act 7925 or the Public Telecommunications Policy Act of 1995.* This Act reiterates the importance of telecommunications and the policy obligation of the government to develop the telecommunication industry. It also sets out the responsibilities of the National Telecommunications Commission (NTC) and the Department of Transportation and Communications (DOTC).
- C. *Republic Act 8293 or the Intellectual Property Rights Code of 1997.* This Act protects and secures the exclusive rights of scientists, inventors, artists and other gifted citizens to their intellectual property and creations, particularly when beneficial to the people, for such periods as provided in this Act. It imposes penalties and fines for the manufacture, distribution and use of unlicensed software. [6]
- D. *EO 468, 1998 – Providing for the Creation of a National Council for the Promotion of Electronic Commerce (NCPEC) – the NCPEC was tasked to formulate a National Program and Strategy (NPS) that is consistent with*

*the National Information Technology Plan for the 21st Century (IT21); provide the mechanisms in addressing issues and concerns affecting the electronic commerce industry; recommend policies and programs which may further enhance the development of electronic commerce in the country;*

- E. *RA 8792 or the E-Commerce Act of 2000 - An Act Providing for the Recognition and Use of Electronic Commercial and Non-Commercial Transactions, Penalties for Unlawful Use Thereof, and Other Purposes. The Act aims to facilitate domestic and international dealings, transactions, arrangements, agreements, contracts and exchanges and storage of information through the utilization of electronic, optical and similar medium, mode, instrumentality and technology to recognize the authenticity and reliability of electronic documents related to such activities and to promote the universal use of electronic transaction in the government and general public. This landmark piece of legislation, based on the United Nations Commission on International Trade Law (UNCITRAL), not only provides the appropriate environment to encourage the growth of e-commerce in the Philippines but also contains the special provision mandating all government agencies to make their services available online. [7]*
  
- F. *EO 264, 2000 - Establishing the Information Technology and Electronic Commerce Council (ITECC) from the Merger of the National Information Technology Council (NITC) and the Electronic Commerce Promotion Council (ECPC). The ITECC serves as the highest policy advisory body on ICT and electronic commerce activity with joint memberships from both the private and public sector. It is charged with executing the country's various ICT strategic plans such as IT21 and GISP as well as providing periodic updates and revising existing plans or establishing new ones as needed. It hopes to lead the Philippine ICT industry through the next millennium and beyond by providing a clearly defined direction through strong and capable leadership. Came up with a vision of an ePhilippines - an electronically enabled society where the citizens live in an environment that will promote access to technologies providing quality education, efficient government service, greater sources of livelihood, and, ultimately, a better way of life. [8]*
  
- G. *EO 269, 2003 - Creating the Commission on Information and Communications Technology (CICT). The CICT is the primary policy, planning, coordinating, implementing, regulating, and administrative entity of the executive branch of the Philippine government that promotes, develops, and regulates integrated and strategic ICT systems and reliable and cost-efficient communication facilities and services. [9]*

### III. Statistical Coordination Mechanisms

The ICT-related legal, administrative and executive measures mentioned in Section II call for a monitoring and measurement system not only to determine the extent to which the government has succeeded in the implementation of its ICT plans but also in addressing pressing ICT-related concerns that need further policy formulation.

Meanwhile, industry groups from the ICT sector have asked the government to come out with more reliable data on usage of, investments and developments in the ICT industry. Various industry sub-sectors have realized that more reliable ICT investment data are needed to better gauge the scope and value of the actual ICT market in the Philippines. [10]

These challenges were responded to by the Philippine Statistical System (PSS) by instituting several statistical coordination mechanisms that are geared towards providing statistics and other indicators on ICT development as inputs to policy setting and decision making for the ICT sector.

#### A. Policies and Standards

As the policy making and coordinating body in the PSS, the NSCB issued various Board Resolutions calling for the adoption of statistical standards and classification systems that will serve as basis in the development of a framework for ICT statistics. Among the statistical policies and resolutions issued by the NSCB are as follows:

1. *NSCB Resolution No. 3, 2002 - Approving and Adopting the Amendments to the 1994 Philippine Standard Industrial Classification (PSIC).* The salient provision of the Resolution was the reflection of the changes in various economic activities brought about by the introduction of new technologies, and the emergence and growing importance of new industries, especially in the area of ICT and related industries
2. *NSCB Resolution No. 12, 2002 - Approving the Product Coverage of Electronic Exports.* During the 2001 National Socio-Economic Summit, ICT services were identified as priority issues thus calling for the establishment of a mechanism to record and monitor the contribution of e-exports to the economy and inclusion of electronic exports in the statistical system. A government-private technical working group came up with an initial list of electronic industries and products which was later approved by the NSCB for adoption by concerned government agencies
3. *NSCB Resolution No. 16, 2002 - Approving and Adopting the Updates to the 1992 Philippine Standard Occupational Classification (PSOC).* The introduction of new occupations brought about by new technologies, and the emergence and growing importance of new industries, especially in the areas of Information and Communication Technology (ICT) and related industries called for the need to update the PSOC.
4. *NSCB Resolution No. 2, 2008 and 21, 2009 – Approving and Adopting the Concepts and Definitions for Statistical Purposes for Information and*

*Communications Technology Sector. The Board endorses for adoption of the PSS definitions of ICT indicators in censuses, surveys and administrative-based data systems. These indicators are consistent with definitions set by international organizations with modifications to suit the Philippine setting.*

5. *NSCB Resolution No. 2, 2010 – Approving and Adopting the 2009 Philippine Standard Industrial Classification (PSIC). The 2009 edition of the PSIC is aligned the ISIC Rev 4, taking into account the significant changes on the relative importance of various economic activities in the country that have taken place since 2002. The 2009 Edition now has a separate section on Information and Communication (Section J).*

## **B. Interagency Committees**

In addition to prescribing statistical standards, the NSCB implemented a number of coordinative mechanisms to address the issues on the compilation, generation and dissemination of ICT statistics with the end-result of issuing statistical policies. Some of which are as follows:

1. *Task Force on the Measurement of E-Commerce (NSCB Resolution No. 8, 2000)* Cognizant of the potentials and impact of electronic commerce on the economy and society as embodied in the various national laws and policies, the NSCB created the Task Force on the Measurement of E-Commerce primarily to develop a framework and identify the methodologies and strategies for the generation of data and other indicators on electronic commerce.

The Task Force which is composed of representatives from the government and the private sector and in consultation with resource persons from the legislative and judicial branches of the government and NGOs was tasked to:

- 1) formulate the definition of electronic commerce that will be used for measurement purposes and determine its coverage considering both local setting and practices of international organizations and other countries;
- 2) identify the current and future concerns of policy-makers on the use of electronic commerce in the country as basis for determining data requirements; and,
- 3) conduct consultations with concerned government and private sectors and other inter-agency bodies in the identification of data requirements and in seeking their cooperation in the implementation of the action plan formulated by the Task Force.

The NSCB Board approved a definition of e-commerce and a set of indicators to measure e-commerce transactions in the Philippines. The definition is a critical step in the collection of data on e-commerce in the

Philippines. In the formulation of a definition for adoption by concerned data producers, reference was made to documents that provide explanations on the scope and coverage of electronic commerce such as the Philippine E-Commerce Act of 2000 and from other countries and international organizations like the U.S. Bureau of Census, Australian Bureau of Statistics, Statistics Netherlands, European Commission, WTO, UNCTAD, OECD, among others.

Further, 88 statistical indicators have been identified of which 49 were adopted from the Information Age Partnership's (IAP) e-Commerce adoption model developed by Great Britain's National Statistics benchmarking task group. The rest were identified through consultation with the Philippine Internet Commerce Society (PICS).

2. *Interagency Committee (IAC) on Trade Statistics (NSCB Resolution No. 1, 2004)*. The IAC was tasked, among others, to conduct an in-depth assessment of available data on export of IT services and analyze possible improvements in data reporting, collection and consolidation of such data. The assessment led into the formulation of questions and identification of indicators that are now used in the Survey of IT and IT-related Services by the Bangko Sentral ng Pilipinas.
3. *Interagency Committee (IAC) on Information and Communications Technology Statistics (NSCB Resolution No. 5, 2006)*. The IAC generally serves as a forum for the discussion and resolution of issues relating to ICT statistics and to recommend statistical policies geared towards improved generation, dissemination and utilization of ICT statistics including the identification of core ICT indicators for the Philippines and data gaps.

The NSCB interagency committees are not only composed of representatives from concerned government agencies but also representatives from the private sector. As experience would show, the private sector usually have specific technical expertise of their respective industries thus allowing high level discussions and assistance to government statistical work.

Further, coordination with the private sector which entails institutional arrangements and in some cases, moral suasion, has facilitated the provision of data to government surveys and administrative questionnaires. The cooperation of the private cannot be overemphasized not only in terms of data provision but also data utilizations.

### **C. Statistical Survey Review and Clearance System (SSRCS)**

To ensure conformity with standard definitions, concepts and classifications in government surveys and censuses, the NSCB implements a survey review and clearance system. The NSCB reviews the relevance, feasibility, appropriateness of the methodology and the data gathering instruments.

The SSRCS aims to promote efficiency in government statistical operations and ensure quality survey results. It likewise aims to minimize the burden of respondents, to effect economy in data collection, and to inform respondents about the survey and to enjoin their cooperation as well.

Currently, the following are government surveys conducted by the PSS which relates to ICT. These were reviewed by the NSCB Technical Staff and granted clearance:

1. *Survey on Information and Communication Technology (SICT)*<sup>3</sup>. The SICT is a nationwide undertaking by the National Statistics Office and is a rider to the Annual Survey of Philippine Business and Industry (ASPBI). It aims to collect and generate information on the availability, distribution and access/utilization of ICT among industries and business in the country. The survey will also generate ICT indicators important for measuring its progress. The major data items to be collected are general information about the establishment, number of ICT workers, capital expenditures on ICT resources, ICT resources and its use, e-commerce transactions through the internal and other computed mediated networks, use of internet in the business processes, use of cellular phones in business transactions, and purchase and disposal of ICT equipment.

Specifically, the survey aims to measure the following:

- component of ICT resources and their utilization by establishments
- diffusion of ICT into establishments from various sources
- e-commerce transactions from data on e-commerce sales/revenue and purchases
- cellular mobile phone business transactions from data on sales/revenue
- estimate of the number of ICT workers in establishments
- methods of disposal of ICT equipment

The survey incorporated the recommendations set forth in the Manual for the Production of Statistics on the Information Economy, 2009 (Revised Edition) of the United Nations Conference on Trade and Development (UNCTAD).

The SICT was conducted by the National Statistics Office for 2002 and for 2008 and is pipelined to be conducted for 2009.

2. *Survey of I.T. and I.T.-enabled Services*<sup>4</sup>. Starting with the 2005 Benchmark Survey of IT and IT-enabled Services, this survey has been conducted on an annual basis by the Bangko Sentral ng Pilipinas. The survey aims to determine the contribution to the Philippine economy of IT-enabled services such as contact centers, medical transcription, animation, and software development, and other business process outsourcing activities. Among the indicators collected are revenues, export earnings,

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<sup>3</sup> <http://www.census.gov.ph/data/sectordata/sr09472tx.html>

<sup>4</sup> [http://www.bsp.gov.ph/downloads/Publications/2009/ICT\\_2006.pdf](http://www.bsp.gov.ph/downloads/Publications/2009/ICT_2006.pdf)



equity, foreign direct investments, employment, compensation and value-added ratio.

3. *Information and Communications Technology Resources Survey (ICTRS) in Government*<sup>5</sup>. Conducted by the National Computer Center (NCC) in 2002, the ICTRS aims to know the state of government computerization for ICT planning, policy formulation, and decision making in the Government and for the establishment of baseline ICT statistics database. It also aims to identify the hardware/computer equipment and software being used in the Government and to gauge the application of e-commerce and networking technology.

The survey covered all national government agencies including its regional offices, government-owned corporations and financial institutions in the country. The survey gathered data on the following: hardware, software, information systems, databases, network facility, security measures, data archiving, common usage of ICT resources, specialized usage of ICT resources, e-commerce/e-government adoption, Internet usage by government employees, barriers to adoption of ICT, ICT budget and expenditure, outsourced ICT services, leased ICT resources and ICT manpower and organization. The overall aim is to provide indicators on the state of computerization of NGAs.

4. *Local Government Units (LGU) e-Governance Readiness Survey*<sup>6</sup>. Conducted by the NCC in 2002 and 2006, this survey refers to the systemic use of ICT to support the function it performs for constituents of local government units in the Philippines. More specifically, the survey refers to functions which are enabled by the Internet, an expression of the government to be online or the various stages of development of LGUs to go online. Generally, the survey aims to identify ICT status and usage in the different LGUs in terms of hardware, software, network, the Internet, web presence, application systems, ICT planning and budgeting, capacity building, and manpower.

#### **D. Review and Clearance System of Administrative Reporting Forms for Statistical Purposes**

The SSRCS does not cover administrative reporting forms used by government agencies as part or by-product of their administrative or regulatory functions. Hence, the NSCB issued Resolution No. 6, 2004 “*Review and Clearance of Administrative Reporting Forms for Statistical Purposes*” extending the SSRCS to cover administrative forms used for statistical purposes in the government. These forms are known to be rich sources of data that are vital in policy formulation, planning and decision making. Data from these forms can be used to supplement results of existing surveys and are useful for the construction of sampling frames.

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<sup>5</sup> <http://www.ncc.gov.ph/files/ictresources.pdf>

<sup>6</sup> [http://elgu.ncc.gov.ph/index.php?option=com\\_remository&Itemid=116&func=fileinfo&id=28](http://elgu.ncc.gov.ph/index.php?option=com_remository&Itemid=116&func=fileinfo&id=28)

Table 1 below shows some of the ICT data generated from administrative/regulatory forms of government agencies in the PSS.

**Table 1. ICT Data Collected from Admin-based Forms**

Statistics	Agency Responsible
installed capacity and subscribed lines of fixed telephones; cellular/mobile telephone subscribers; internet service providers and subscribers; value added service providers	National Telecommunications Commission (NTC)
exports, imports of electronic commodities	National Statistics Office (NSO)
foreign direct investments on the ICT sector	Board of Investments (BOI), Philippine Economic Zone Authority (PEZA), Clark Development Corporation (CDC), Subic Bay Metropolitan Authority (SBMA)
business registration on Internet cafes, ICT business services, telecommunications	Department of Trade and Industry (DTI), Security and Exchange Commission (SEC)
enrollment and graduates of ICT courses, teachers with ICT skills, schools offering ICT courses, PCs use in schools	Department of Education (DepEd), Commission on Higher Education (CHED), Technical Education and Skills Development Authority (TESDA)
takers and passers of licensure exams on ICT courses	Professional Regulations Commission (PRC)
ICT trademarks, patents	Intellectual Property Office (IPO)

While there are advantages in using administrative reporting forms for statistical purposes, there are technical issues in the compilation of statistics using these forms, such as reliability, consistency and comparability. Thus, there is a need to resolve these issues to ensure the quality of the data to be generated and to improve the generation of data from these forms.

**E. Designation of Statistical Activities That Will Generate Critical Data for Decision-Making of the Government and the Private Sector (System of Designated Statistics).**

The System is a mechanism instituted by the NSCB that identifies and generates the most critical and essential statistics required for social and economic planning/analysis based on approved criteria. It identifies the responsible agencies, frequency of conduct, disaggregation and schedule of data dissemination. It also establishes priorities for data production and hence provides a means for more rational resource allocation among government statistical activities.

The System is a dynamic process that allows for updating to keep attuned to emerging demands of data users and data support to the implementation of government priority programs.

The present list of designated statistical activities includes a limited number of indicators on ICT (Table 2) which are generated from establishment and household surveys and censuses. It is noteworthy to mention that none of the ICT-specific surveys mentioned in Section C are designated statistical activity. The possibility of

including these surveys in the future is one of the major challenges facing the PSS at present.

**Table 2. ICT Statistics Generated from Designated Statistical Activities**

Designated Statistical Activity	Agency Responsible	ICT Statistics Generated
Census of Population and Housing (CPH)	National Statistics Office	household ownership of ICT devices; ICT-related occupation and educational status of household members
Family Income and Expenditure Surveys (FIES)	National Statistics Office	family expenditures on telephone bills (fixed and mobile), internet subscription; family ownership of radio, TV, fixed and mobile telephone, and microcomputer
Census/Survey on Philippine Business and Industry	National Statistics Office	employment, compensation, man-hours, revenue, subsidies, cost, fixed assets, inventories, capacity utilization for industries with ICT-related activities
Labor Force Survey (LFS)	National Statistics Office	labor and employment data for ICT-related industries
Functional Literacy, Education and Mass Media Survey (FLEMMS)	National Statistics Office	population with access to the Internet as a means for acquiring knowledge and information, household ownership of personal computers
Occupational Wages Survey	Bureau of Labor and Employment Statistics	average monthly wages of ICT-related occupation

#### F. Philippine Statistical Development Program (PSDP)

The Philippine Statistical Development Program (PSDP) is a mechanism for setting the directions, thrusts and priorities of the PSS for the medium term. It defines the priority statistical programs and activities in the medium term designed to provide vital information support for the Medium-Term Philippine Development Plan (MTPDP) as well as promote efficiency of statistical operations through an optimum use of available resources and adoption of cost effective measures. Also, it is a tool for integrating and coordinating the statistical activities of the government and enjoins compliance and cooperation among various agencies.

The preparation of the PSDP took into consideration the guidelines in the design of a National Strategy for the Development of Statistics (NSDS) formulated by the Partnership in Statistics for the Development in the 21st Century (PARIS21). The NSDS is a strategic approach being advocated by PARIS21 to provide the information requirements and improve the statistical base of the countries in monitoring and evaluating national development programs.

In the 2005-2010 PSDP, which is the 7<sup>th</sup> PSDP, the following statistical programs were identified in support of the compilation ICT statistics:

- Formulation and adoption of a Philippines ICT statistical framework and core indicators, including e-commerce
- Integration of the ICT statistical development plan and investment plan in agency/sectoral development plans
- Generation of ICT statistics through improved surveys and administrative data systems
- Formulation and adoption of statistical standards, definitions and classifications in the generation, reporting, dissemination and utilization of ICT statistics
- Upgrading of statistical capacities of ICT-data producing agencies and their manpower and logistical resources
- Advocacy on the generation and use of ICT statistics among stakeholders, and support to statistical activities by the data providers

However, the lack of a household-based ICT survey was noted in the 2005-2010 PSDP. It is planned that the upcoming 2011-2016 PSDP will address this concern and come up with relevant statistical activities that will generate relevant and quality household and industry-based ICT and ICT-related statistics that will fully address the data requirements of monitoring the Millennium Development Goals (Target 8.F 8.16 Internet users per 100 population) and compiling the Core ICT Indicators as prescribed by the Partnership on Measuring ICT for Development.

Meanwhile, the ongoing 2010 Census of Population and Housing (CPH) already incorporates questions on ICT as recommended in the Principles and Recommendations for Population and Housing Censuses by the United Nations such as: availability of ICT devices (radio, TV, landline telephone, cellular phones, personal computers) and access to the Internet. The 2010 CPH also includes ICT-related questions on a barangay (the lowest administrative/ geographic level in the Philippines) such as: presence of a landline telephone system or calling station, cellular phone signal, Internet café.

#### **IV. Future Developments**

1. **Extensive use of Administrative-based Statistics.** As censuses and surveys are expensive to conduct, there is a need to fully utilize the information that can be culled out from administrative-reporting forms of government offices. However, the NSCB coordinative mechanism on the review of these forms should be seriously implemented to ensure the conformity of the data generated from these forms to statistical quality standards.
2. **Institutionalization of statistical surveys on ICT.** The conduct of the SICT is a great leap in terms of generating establishment ICT data. However, to date, the government has yet to conduct an ICT-specific household-based survey that would generate data as to access to and usage of Internet, ownership of ICT devices, expenditures on ICT services, among others.

3. **ICT Classification Systems.** The cross-cutting domains of ICT result to a non-centric framework that has yet to be developed for the Philippines. The 2009 PSIC should be studied well to come up with a classification system for the Information Economy which can pave the way for the development of a satellite accounts for ICT in the Philippines. Further, other classification systems on ICT should likewise be developed: ICT-related occupation, ICT-related education courses and ICT-related commodities to have a comprehensive view of the status of ICT in the Philippines.

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- [1] Office of the President. Executive Order No. 121 – Reorganizing and Strengthening the Philippine Statistical and For Other Purposes. Manila, January 1987.
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