

Table 1. Number of completed research projects in PSRTI by type from 2016 to July 2017

Year	In-house staff research	In-house consultant-based research	Commissioned research	Total
2016	4	3	3	10
2017	4	-	8	12
Total	8	3	11	22

Source: PSRTI, 2018

- Implementation of an enhanced PSRTI statistical research program in support of the following:

- Development or improvement of existing statistical concepts and definitions;
- Development of methodologies and statistical techniques; and
- Development of relevant indicators to address current and emerging needs of a particular sector, or PSS in general.

A total of 22 researches were completed by PSRTI from 2016 to 2017, or an average of eleven (11) researches per year. Eight (8) of these researches were done by its technical staff. The number of completed research projects by type is provided in Table 1.

Meanwhile, the PSA completed six research studies with six more studies spilling over beyond 2017. Most these studies were focused on enhancement of sampling designs and development of estimation procedures.

- Development and update of research agenda
 - On a yearly basis, the PSRTI formulates a comprehensive and integrated research agenda for the PSS. The agenda is periodically updated in consultation with the Major Statistical Agencies (MSAs) and other data producers as well as data users to consider current and emerging needs.
 - The 2017 PSRTI research agenda focused in general on the following topics:
 - Local child protection indicators
 - Livestock and poultry statistics
 - Technologies for data collection

- Passenger, Concessionaires and Airport Satisfaction Surveys
- Framework in Estimating Housing Needs and Development of Data Collection Methodology in the Estimation
- Estimation of outmigration
- Data quality assessment of civil registration and vital statistics
- Sustainable Development Goals (SDGs)

- Conduct of SR&D dissemination and utilization forums

- SR&D outputs in the PSS continues to be mainly disseminated through the conduct of the triennial National Convention on Statistics (NCS) (spearheaded by the PSA) and the annual conference of the Philippine Statistical Association, Inc. (PSAI)
- The 13th NCS held on 03-04 October 2016 carried the theme, "Sustainable Development: Making Statistics Count," which highlighted the critical role of statistics in monitoring the country's progress towards the achievement of the SDGs. The Convention featured plenary sessions, invited/contributed paper sessions, panel discussions, statistics trainings as well as the Statistical Information Management Exhibit (SIMEx).
- The annual PSAI conference has started convening outside of the National Capital Region (NCR) while regional statistical congresses have been organized in Luzon, Visayas, and Mindanao bringing SR&D closer to stakeholders based in the regions. PSAI conferences in 2016 and 2017 were held in Naga City and Bacolod City, respectively.
- The annual National Student-Faculty Conference for Statistical Sciences organized by the UPSS, University of the Philippines Los Baños Institute of Statistics (UPLB INSTAT), and the PSRTI also served as a venue for students and faculty from different universities nationwide to engage in scholarly exchange of ideas about statistics through presentations of statistical research outputs.

- Quarterly symposia/fora are also conducted by the PSRTI to present completed research undertakings by its thesis/dissertation fellows, scholars, research project partners, and technical staff.
- MSAs and academe also conducted symposia/fora either for the dissemination of emerging theoretical concepts or presentation of research findings.
- The PSRTI has continued to offer the Thesis and Dissertation Fellowship Program to provide financial support to graduate students in statistics. This is in support for SR&D in the PSS and for enhancing the capacity of statistical human resources in the country.

❖ **Issues and challenges**

- Lack of monitoring mechanism for statistical innovations and research and development efforts in the PSS

There is no established mechanism to monitor the utilization, effectiveness of the results and institutionalization of SR&D outputs for the improvement of statistical processes and operations. Little is known on how the SR&D outputs are used and how effective these outputs are. By monitoring such, institutionalization of the SR&D outputs might also be facilitated.

- Need to improve the relevance of PSS research agenda

Currently, there is no formulated research agenda yet corresponding to the PSDP 2018-2023 though each PSS member agency may have its own research agenda. Clear, integrated and relevant research agenda based on PSDP is vital in the prioritization of myriad of researches identified by various sectors. The research agenda would provide concrete directions and policies to ensure that SR&D contributes to the statistical development in the PSS.

- Inadequate awareness and sharing of knowledge and technology within the PSS arising from SR&D projects

An insufficient number of personnel in the PSS has technical capability of undertaking SR&D activities. Training programs need to

be in place to capacitate personnel to perform SR&D activities.

- Inadequate statistical research and development outputs on the improvement of statistical business processes and to complement official statistics to address critical policy areas (e.g., SDGs, big data, statistics on agrarian reform)

Major statistical agencies can come up with more relevant statistical researches and policy papers, in partnership with academe and/or PSRTI, to improve the quality of statistics in a number of critical policy areas. To propel this activity, regular paper presentations on official statistics with University of the Philippines (UP) and MSAs alternating as host can be conducted.

- High acquisition and maintenance cost of licensed statistical software, e.g., Stata, EViews, SAS

The conduct of SR&D entails the use of licensed statistical software which are costly to purchase and maintain. With limited resources and proliferation of open-source statistical software these days, the PSS might be in a good position to capacitate its personnel for the use of the open-source statistical software (e.g., R, Python, Tableau).

- Need to invest more in SR&D activities

Conducting SR&D activities may require a substantial amount of finances. Agencies should be willing to invest more in SR&D activities and should explicitly indicate this in their proposed budget. Need for a strong partnership and networking with the international community on SR&D

Though there is an existing partnership and networking between PSS and the international community, there is a need to strengthen such partnership to gain country experiences on advanced techniques in addressing data gaps.

Key Statistical Development Programs and Activities

❖ **Thrusts and strategies**

The plans and programs slated for the advancement of SR&D in the PSS are consistent with the Budgetary Thrusts 2018-2020 and PSDP Planning Framework 2018-2023, as follows:

- Strengthening capacity building for improved production, dissemination and utilization of statistics;
- Improvement of data production in the PSS aimed at addressing current, new and emerging concerns such as SDGs, Philippine Development Plan (PDP) 2017-2022, data revolution, and other data requirements including age and sex disaggregation of administrative data;
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- Strengthening data ecosystems to include enhancement of administrative data and exploration of big data and citizen-generated data as possible sources of official statistics
- Advancement of statistical research to improve current methodologies for the generation of statistics and indicators to responds to the current and emerging needs and demands
- Utilization of latest information and communication technology resources to expand data dissemination and advocacy of statistics; improve current methodologies; and respond to increasing demand for statistics
- Promotion of international cooperation in statistics through sharing of experiences, practices and expertise as well as adherence to international commitments, such as the SDGs, Association of Southeast Asian Nations (ASEAN) Framework of Cooperation in Statistics, and adoption of internationally-recognized statistical principles, declarations and best practices

❖ **Major Statistical Development Programs and Activities for 2018-2023**

For the program period 2018-2023, the following major statistical programs will be implemented.

a. New Developmental Programs and Activities

On Management and Coordination of the PSS

- Inventory of SR&D outputs in the PSS.

The inventory will be undertaken by PSRTI in 2018 to document the activities of the

PSS. Implemented innovations and SR&D outputs can then be included in the Platform for Innovations in Statistics (PISTA) of the Partnership in Statistics for Development in the 21st Century (PARIS21), which can be a venue for sharing best practices of the Philippines to the rest of the world.

- Formulation and implementation of relevant research agenda based on PSDP to address emerging demands for timely, quality and disaggregated data.

The PSDP 2018-2023 enumerates several research priorities, which should be reviewed and programmed. In this regard, the research agenda will be updated by PSRTI to reflect PSDP priorities and will be revised annually to suit the needs of changing demands.

- Development of a monitoring system on SR&D activities being conducted in the PSS.

In 2018, the PSRTI will develop this monitoring system for SR&D activities to ensure that SR&D activities satisfy the demands as well as to be able to disseminate to other relevant agencies best practices and innovations implemented by an agency in the PSS.

- Evaluation of the utilization and effectiveness of SR&D outputs.

Evaluation of SR&D activities is important in order to provide guidance to agencies to maximize the benefits of SR&D outputs. This will also involve tracking whether or not SR&D outputs reach the hands of the policy-makers and if these are indeed useful to them. Evaluation will be made annually for the period 2018-2023.

- Encourage graduate students to work on identified priority areas of PSDP through provision of research grants.

The PSDP serves as the blueprint of the priority programs of the PSS in the medium-term. Given the need to research on new methodologies set as priorities in the PSDP, the role of the academe is important to evaluate the methodologies and assist in the derivation of indicators/indices that monitor social and economic development. The PSRTI will devise and implement a program for providing research grants from 2018 to 2023 to allow graduate students to work on PSDP priorities.

On Capacity Development

- Formulation and implementation of training programs to encourage and capacitate researchers on the use of open-source statistical software (e.g., R, Python, Tableau) for statistical computing and graphics.

Training programs will be slated for the period 2018-2023, which aim to train personnel involved in statistical computing to derive indicators from big data, citizen-generated data, and high-volume data.

- Formulation and implementation of training programs (based on PSDP) that will technically capacitate PSS for SR&D activities

Addressing new demands entails new tools and methods. It is in this context that PSS personnel should be equipped with skills, tools and knowledge to respond to undertake SR&D activities and respond to information needs. PSS personnel should undergo training programs to resolve the insufficiency of PSS personnel capable of doing SR&D activities.

On Resources and Financing

- Inclusion of SR&D activities in the agency proposed budget.

One major reason of not being able to conduct SR&D activities is the absence of allotted budget for the said activities. Agencies are encouraged to include in their proposed budget the SR&D activities.

On International Cooperation

- Strengthening of partnership and networking of PSS with the international community on SR&D to gain country experiences on advanced techniques in addressing data gaps especially in monitoring the SDGs, (e.g., Use of Big Data, Data Revolution, Administrative Data, Citizens' Data, and Data Integration) through participation in such conferences. This may also be done through invitation of international experts and hosting training and conferences here in the Philippines.

On Data Dissemination and Use

- Development of SR&D portal such as e-library of SR&D outputs, online catalogue of SR&D activities, e-directory of fellows/experts and institutions and links to statistical resources. The portal which will be established in 2018 will be integral in making the SR&D outputs and resources accessible to the public. Updates in the portal will be made on an annual basis.