

# PSAI Initiatives

## Proceedings of the Focused Group Discussion on Accreditation/Certification for Professional Statisticians

### FOREWORD

The Philippine Statistical Association, Inc. (PSAI) is a professional association dedicated to the promotion of Statistics as a science and a discipline. As such, it recognizes the need to pursue the development of the discipline and the continuing professional growth of its practitioners in the academe, the government and private sectors, and in the international community.

In 2008, the PSAI through the Institutional Development Committee (IDC) chaired by Mr. Tomas P. Africa, then Vice President and Chair of the IDC pursued the crafting and ratification of the Code of Ethics for Statisticians, and notes in the Foreword that

“It has been an aspiration of the Philippine Statistical Association (PSA) to institute a system of accreditation or certification for Statistics professionals, similar to those existing in Australia, New Zealand, the United Kingdom and the United States. On at least two fronts, the label ‘statistician’ may have been misused and misappropriated by unscrupulous professionals.

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The accreditation stage will deal with what would be the qualifications: education, work experience, research record as well as the behavior or ethical standards of the statistics practitioner. This Code addresses the latter. The necessary academic background, and work experience needed to bring about the conduct and/or behavior of such professionals may be deduced from this Code.”

With the Code of Ethics for Statisticians firmly in place, the stage is set for the accreditation process. Under the same stewardship, Mr. Africa as Vice President and Chair of the Institutional Development Committee (2012-2013), concerned professionals were gathered to undertake the Focus Group Discussion (FGD), and to put into motion the work envisioned to initiate the development of a system for eventual accreditation and professional certification of practitioners in the statistics profession.

### ACKNOWLEDGMENTS

The Philippine Statistical Association, Inc., through its President Nieves L. Osorio, is indebted to the following:

- Bangko Sentral ng Pilipinas, through Ms. Iuminada T. Sicat, Managing Director, Currency Management Subsector, for hosting the FGD and for making available the BSP Auditorium and its facilities;
- Mr. Tomas P. Africa, PSAI Vice President and Chair of the Institutional Development Committee (IDC), for his resolve in conceptualizing and spearheading the holding of the FGD on Accreditation and Professional Certification for Statisticians;
- Dr. Zita VJ Albacea, Dr. Erniel B. Barrios and Deputy Director Winecito L. Tan for finding time to write the concept papers that served as the take-off point in drafting the proposed accreditation program;
- The panelists, Ms. Eva Andrews and Dr. Isidoro P. David, for graciously accepting the invitation to share their insights into the proposed accreditation program;
- Guests and participants for sharing their time and invaluable insights in the discussion;
- PSAI Board of Directors for their support in the undertaking.

## EXECUTIVE SUMMARY

The proposal to pursue the accreditation/certification program for professional statisticians has been discussed and thought about after the ratification in 2008 of the Code of Ethics for Statisticians, through Mr. Tomas P. Africa who was then PSAI Vice President and Chair, Institutional Development Committee (2008-2009). Under the same leadership and in the same capacity as PSAI Vice President and Chair of the Institutional Development Committee (2012-2013), he has once again taken the initiative to pursue this concern.

Thoughts on the proposed accreditation/certification process took off from his personal experience, internet researches, and insights obtained from several concept papers. The Schematic Diagram presents what have been done in the past few years. A look into the provisions on Membership in the Amended By-Laws of the PSAI becomes imperative in the process of identifying who the professional members are. A proposed system of accreditation to professionalize practitioners in the discipline identifies (a) who and what constitutes professional membership, (b) potential benefits that the process would bring to the individual seeking accreditation, the corporate world and the government, (c) how the process is proposed to be maintained by those who would earn the distinction of being accredited professionally, (d) who will determine those who qualified for accreditation, and (e) how the process would be sustained are looked into.

Possible options in pursuing what may be undertaken to resolve issues offered for discussion, and to address potential constraints attendant to the pursuit of the desired accreditation/certification process are presented and discussed. Insights from practitioners in the academe, the government and the private sectors are noted.

# PROCEEDINGS OF THE FOCUSED GROUP DISCUSSION ON ACCREDITATION/CERTIFICATION FOR PROFESSIONAL STATISTICIANS

*conducted July 24, 2013, at Auditorium, Building A,  
Bangko Sentral ng Pilipinas, East Avenue, Quezon City*

## 1. ABOUT THE FGD

### Background

Ms. Nieves L. Osorio, President of the Philippine Statistical Association, Inc. and Commissioner, Civil Service Commission, acknowledged that the proposal to pursue the accreditation/certification program for professional statisticians has been discussed and seriously considered after the ratification in 2008 of the Code of Ethics for Statisticians, through Mr. Tomas P. Africa who was then PSAI Vice President and Chair, Institutional Development Committee (2008-2009). Under the same leadership and in his capacity as PSAI Vice President and Chair of the Institutional Development Committee (2012-2013), he has once again taken the initiative to pursue this concern.

Mr. Africa's presentation of what may be expected in the FGD took off from the discussions undertaken at the meetings of both the Executive Committee and the Board of Directors. Thoughts on the proposed accreditation/certification process integrates insights from his personal experience, internet researches, and viewpoints obtained from several concept papers, notably those prepared by Dr. Zita VJ Albacea, Dean of the UP Los Baños College of Arts and Sciences and former Director of its Institute of Statistics; Dr. Erniel B. Barrios, Dean of the UP Diliman School of Statistics; and Mr. Winecito L. Tan, Deputy Director, Corporate Planning Office of the Bangko Sentral ng Pilipinas. In his presentation Mr. Africa underscores that what he presents is an option in the pursuit of what may be undertaken towards the fulfillment of the objective to put in place the desired accreditation/certification process, and not standards of what should be imposed.

### Questions/Issues to be Resolved

The FGD hopes to provide insights that will help resolve the following:

1. Who are the professional statisticians?
2. Should the proposed accreditation be limited to PSA life members?
3. Who will use the accreditation?
4. Who will benefit from the process?
5. How will the process benefit both the private and the government sectors?
6. Would there be a need to amend the PSA By-Laws?
7. How will the proposed accreditation/certification process be developed and maintained/sustained?

## **2. AN OPTION FOR STATISTICAL PROFESSIONAL ACCREDITATION**

**Mr. Tomas P. Africa, Vice President and Chair of Institutional Development Committee, Philippine Statistical Association, Inc.**

### **Introduction**

The PSAI Statistical Competence Certification Program (PSAI-SCCP) proposes to introduce a professional wing to enhance the professional credibility of individuals who wish to pursue a career in statistics. The professional wing is proposed to have two (2) levels of Professional Membership: Certified Statistical Professional (CSP) and Graduate Statistician (GS).

The CSP or GS after an individual's name confirms to employers that he/she possesses the experience and knowledge to meet the challenges of business intelligence or analytical needs of the corporate world. The PSAI -CSP certification should eventually achieve international recognition as a standard of achievement for Philippine survey statisticians, biostatisticians, statisticians in market research and business intelligence, teachers of statistics, and many other fields that require higher level of statistical competence. The certification is proposed to be given by level or by area of specialization.

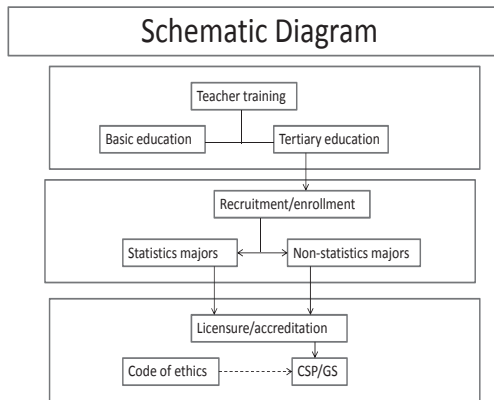
As above noted, the option being proposed is guided by insights gained from concept papers as well as information from the Accreditation and Examination System for Statistical Professionals of the Hong Kong Statistical Society (HKSS) and the Professional Membership System adopted by the Royal Statistical Society (RSS).

The professional accreditation program is envisioned to bring in the following benefits:

- Greater commitment to excellence in the profession in which the professional statisticians serve;
- Constancy in the pursuit of professional development activities to maintain a high level of current knowledge and proficiency;
- Compelling motivation to become better prepared to perform their jobs efficiently and effectively; and
- Bounden duty to observe the code of professional ethics and conduct as embodied in the Code of Ethics for Statisticians.

### **Overview**

The schematic diagram noted below presents a summarization of what have been done in the past few years.



The three stratifications noted above in the three blocks refer to the various efforts undertaken in the past few years, notably, the Teachers Training to train teachers teaching Basic Statistics in the Tertiary Education. The Statistical Education Project was conducted throughout the country with the guidance of the Commission on Higher Education.

In a related development, the Dean of the University of the Philippines Los Baños, College of Arts and Sciences and the Dean of the University of the Philippines Diliman School of Statistics clarified the possible impact or repercussions of the implementation of the DepEd’s K-12 program in the Basic Education curriculum.

On the matter of recruitment and enrolment, the Dean, through the Institute of Statistics, UP Los Baños, and the UP Diliman School of Statistics noted that both institutions are actively pursuing recruitment that would increase enrolment. It is likewise recognized that statistics also involve people coming from other disciplines who also do statistics. It was noted that in the Philippine Statistics Quiz conducted jointly by the NSO and the PSAI, the recent winner did not actually come from those who specialize in statistics but in engineering education. As such, they are also potential targets to possibly pursue career in Statistics in the Philippines.

The third block which the PSAI concerns itself now had been thought about even when Mr. Africa headed the NSO. Back then, there were already discussions on the need for a licensure exam - shall we accredit, why do not we organize ourselves as a professional discipline to pursue further development of the profession, etc.? In the previous years, we have gotten ourselves together and agreed to craft and put in place a Code of Ethics for Statisticians. Hence, from that point of view, it is now time to look at an option for professional accreditation so that the Code of Ethics could really be put into practice.

## Major Considerations

While it is acknowledged that much has been done, focus on the issue of who the professional statisticians are has not really been addressed. This points to the need to take a look at the provisions on membership in the By-Laws of the PSAI as a professional association.

### **Membership in the PSA - Article I. Membership (Amended By-Laws)**

**Classes** – The membership of the Association shall consist of Founding Members, Charter Members, Individual Members, and Institutional Members.

- a. Founding Members - shall be those who formed and organized the Association on Saturday, December 22, 1951.
- b. Charter Members - shall be those who have been admitted to membership in the Association on or before March 1, 1952.
- c. Individual Members - shall be those who are engaged in or having interest in Statistics and elected as individual members by majority vote of the Board of Directors after March 1, 1952. (as amended December 5, 1997)
- d. Institutional Members - shall be those institutions, business enterprises and other organizations interested in the objectives and willing to support the Association. They shall be admitted to institutional membership by a majority vote of the Board of Directors. Each institutional member shall designate its representative to the Association.

**Life Membership** – Any individual member of the Association may elect to become a life member by paying a single payment to commute his/her annual dues for life in accordance with the rates for life membership as established by the Board of Directors. (as amended December 8, 2004).”

PSA has been known to promote further learning, expanding knowledge through the conduct of selected/limited training and annual conferences, the professional development at the individual level is not addressed. The lack of effort to improve the profession at the individual level is recognized. Membership of the individual in a professional association is therefore looked up to in terms of improving and expanding the members’ stock knowledge.

### **Proposed Professional Membership**

To promote the personal knowledge and professional growth of individual members, the PSA, as a professional association, proposes a higher level of membership, and the following may be considered, namely,

- Certified Statistical Professional [CSP]
- Graduate Statistician [GS]

This gives rise to the question of whether the proposed accreditation should be limited to life members considering that this is a lifetime commitment. If a

member is to be given professional accreditation, it is expected that he/she is a member for a significant amount of time and for that title or accreditation to be linked to some professional academic education.

#### *Why a CSP or a GS?*

- The CSP or GS after an individual's name confirms to the employers and signals those who engage the services of the awardee that he/she -
  - o possesses the experience and knowledge to meet the challenges of business intelligence or analytical needs of the market/corporate world.
  - o meets certain standards and qualifications and it will fully be a measure of the capabilities that she/he possesses.
- The certification should eventually achieve international recognition as a standard of achievement for Philippine survey statisticians, biostatisticians, statisticians in market research and business intelligence, teachers of statistics, and many other fields that require higher level of statistical competence.
- The certification could be given by levels or by area of specialization.
- With the accreditation scheme,
  - the individual has a focus, a target, and can align his/her education to the attainment of such level of professionalism,
  - competencies are defined, and even the education could be aligned towards desired accreditation,
  - the experience and the qualifications of a person who will become an accredited statistician would need them to be conversant in management, project management, budget, finance and related fields.

#### *Benefits of having professional accreditation as a CSP or a GS*

- Having a standard and being committed to excellence in the profession in which they serve
- Constantly engaged in professional development activities to maintain a high level of current knowledge and proficiency to perform their jobs efficiently and effectively
- Being bound by a code of professional ethics and conduct.

#### *Proposed CSP qualifications*

To be considered for the qualification of CSP, at least one of the following two criteria must be met:

- A good University Degree and/or an appropriate Higher Degree in Statistics or in a subject containing a substantial coverage of statistical theory, method and practice, plus five [5] years' practical experience in applying statistics;
- Some university courses, particularly at postgraduate level, may be eligible to count towards this practical experience;

- At least ten [10] years practical experience in teaching, researching, and applying statistics at a responsible level together with acceptable evidence of knowledge, competence and contributions to the subject and its applications.

#### *Proposed GS qualifications*

Individuals who have the necessary academic requirements to qualify as CSP but who do not have the relevant practical experience may apply for the qualification of GS.

- The PSAI will actively liaise with universities and colleges to consider aligning the syllabi of statistical courses offered by these institutions and the standards achieved in their course examinations to be matched with those required for professional accreditation. This will enable students attending the relevant courses to know in advance under what circumstances they would be able to eventually join the statistical profession so this will help align his/her education in order to attain a certain level of professionalism. This will also assist those who are in a position to determine the ones who can assist in the country's statistical development and national development.
- Nevertheless, where it is not possible or practical, the PSAI would still consider applications of candidates for accreditation on individual basis with reference to information supplied by candidates in respect of the syllabi and examination results in the courses they have taken.

### **Proposed Renewal of Professional Accreditation**

#### *Maintenance of professional Membership*

- After obtaining the CSP/GS certification, credential holders need to meet certain certification requirements to maintain the distinguished title. Failure to comply with these certification requirements will result in the revocation of an individual's CSP/GS designation.

#### *Continuing education policy*

- The goal of the continuing professional education policy is to ensure that all CSPs/GSs maintain an adequate level of current knowledge and proficiency in the field of statistics, similar to the Mandatory Continuing Legal Education (MCLE) for lawyers/practitioners in the legal profession. CSPs/GSs who successfully comply with this requirement will be better equipped to manage, design, oversee and respond to an institution's statistical and analytical requirements.
- Credential holders of an accreditation or certification must continue to earn the distinction of being accredited professionally.
- Required every three (3) years. The professional member must have attended at least three (3) PSAI annual meetings and three (3) PSAI annual conventions

in the last five (5) years. Additionally, the professional member is expected to contribute to the profession:

- **Teaching/lecturing/presenting:** include the development and delivery of professional educational presentations and the development of self-study/distance education courses in statistics.
- **Publication of articles, monographs and books:** include the publication and/or review of material directly related to statistics.
- **Working on PSA Boards and Committees in the Philippine Statistical System:** include active participation in PSA Board, various committees, subcommittee, task force or active participation as an officer of a PSA chapter.
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#### *Proposed Professional Membership Committee*

- Application for professional qualification and details of the mechanics would be addressed by a Professional Membership Committee, to be composed of five (5) eminent statistical practitioners who will be elected by the PSAI members for a term of three (3) years, with reelection.

#### *Other suggestions*

- The accreditation/certification is proposed to be given by level or by area of specialization.
- The recognition should be conferred by the PSA only to life members who wish to seek accreditation.
  - Life membership in the PSA, as a professional association, should be considered a pre-condition for accreditation/certification.
  - Accreditation/certification is a distinction that should be conferred by the PSA to its Life Members. It is not a one-shot process as it is concerned with the continuing professional development of the member.
  - Caution should be exercised to avoid opportunities for unscrupulous individuals who would seek regular PSA membership only to obtain accreditation/certification for specific time, purpose, and other personal motivations, and afterwards would cease being a member.
- Imposition of a fee that could be levied which could also be a way of financing the needs for developing and maintaining the proposed accreditation/certification process.

### **3. REACTIONS FROM PANELISTS**

*Ms. Eva Andrews, Team Leader, AUSAid PFM Program, Philippines*

1. Congratulated the PSA for initiating the process of accreditation to professionalize practitioners in the discipline.
2. Noted that the move is timely and consistent with the government's current efforts to put premium on increasing the competencies of the work force of

public servants. She noted that this is the reason why she is in the country as Team Leader of AUSAid Project on Professionalizing the Workforce of the Government of the Philippines, now into Phase I - Development of the PFM Competency Framework, a framework for public financial management employees of the government.

3. Shared that a competency framework is premised on the way people with competencies are clustered and identified in every level at the workplace, and hopefully would be adopted in other sectors.
4. Urged the development of a data base of human resources in the statistical system anchored on a competency based framework, by field of expertise.
5. Cited her personal experience that she is able to work in her field in many countries around the world although she only had her first degree because she is a member of the Chartered Institute of Personnel Development (CIPD) in the United Kingdom which is recognized throughout the world. She noted that she has to report every year to keep her membership, readings and personal development enforced.

*Dr. Isidoro P. David, Former PSAI President, Former Manager, Statistics and Data Systems, Asian Development Bank*

He congratulated Ms. Osorio and Mr. Africa, and expressed appreciation for their efforts in pursuing the proposed accreditation and certification process as these had been discussed and contemplated some years ago. The following were further noted:

1. Affirmed the observation of Ms. Andrews that the move is timely and hailed the decision to initiate accreditation of practicing professionals to help elevate the status of practitioners in the discipline and promote advancement of the profession.
2. There is a need to revisit the pending legislation on the proposed Philippine Statistics Authority to find out if the accreditation of practicing statisticians has not been lodged with the proposed Philippine Statistical Research and Training Institute (PSRTI) that is proposed to absorb the current Statistical Research and Training Center (SRTC) into a much bigger, more responsive institution headed by somebody in the level of an Assistant Secretary. This was one of the concerns discussed in the review process undertaken by the Review Committee. He recalled that to enhance the quality of statistical personnel the following recommendations were then noted in the Report submitted by the Review Committee:
  - the institutionalization of a certification system as an entry requirement for an appointment to a statistical position in government,
  - the PSRTI should develop a certification system for statistical personnel which could consist of issuance of a certification of basic statistical competence,

- those who would be certified for basic statistical competence would be individuals who may meet any of the following:
    - an undergraduate or graduate of Statistics from higher institution recognized by CHED or equivalent international higher education institution,
    - completion of at least 90 hours of training on sampling, descriptive statistics and other trainings conducted by PSRTI or some other agency, or
    - passing a PSRTI examination.
    - There is a need to look into what is being proposed by the PSAI vis-à-vis what were recommended by the Special Review Committee in its Report, as these will have implications in the eventual crafting of the Implementing Rules and Regulations (IRR).
3. The title Certified Statistics Professional (CSP) is most appropriate.
  4. The need to look into what benefits the CSP or GS Certification give to a government statistician and to those in the private sector, and its implications on the Civil Service Commission was noted. What benefits are committed attached to the title that would matter to a statistician in government service should be addressed in the FGD since CSC representatives are present.
  5. For those who are in the private sector, it is not applicable to be called government statistician, and it is difficult to appreciate its effect in terms of promotion, salary increase and so on, since it is not the PRC type of certification. However, because the PSA is a private entity granting certification that might mean something very positive to the private sector, especially to companies that are institutional members of PSA. There are 60 Institutional Members and some of them are from the private sector, so, being certified by PSAI to be a CSP might mean something or should mean something good for the person as far as the company is concerned.
  6. Consider another route in the form of Fellowship. As practiced by the ASAI society (American Statistical Association, Inc.) the PSAI can also have Fellows of PSAI and that means something to those who know what the term Fellow means. Practically all professional associations have Fellows. The Fellow title is granted by the Association, although the concept of being a Fellow of PSAI may not yet be considered significant in the country.
  7. To be a CSP, individual life membership must be a requirement, a pre-requisite, and this requirement seems relaxed insofar as the GS is concerned as this is interpreted to be open to regular members.
  8. The ubiquity of statistics finds applicability of the discipline in all fields and it is both a strength and a weakness, as the term statistician is labeled to anybody who is compiling, tallying statistics. This points to the need to consider an alternative term to describe somebody doing the work done by what have been known as “Basketball” statisticians to distinguish them from

those who studied Statistics and those who come from different disciplines, e.g. chemistry, social science, economics, etc. but were trained in the field of statistics.

#### 4. COMMENTS/DISCUSSIONS

1. Board Members and other experts/guests present hailed the FGD and unanimously welcomed and endorsed the move towards the proposed Accreditation/ Professional Certification for Statisticians.
2. Ms. Osorio expressed gratitude for the reminder raised by Dr. David. She acknowledged that while this concern was pointed out in the Report, absence of explicit provisions in the proposed bill (R.A. 10625) gives the PSA Institutional Development Committee more reason to pursue the proposed accreditation program.
3. Dr. Ana Maria L. Tabunda, former Dean of the UP Statistical Center (now UP School of Statistics), and Chief Research Fellow and Treasurer of Pulse Asia, noted the following:
  - The need to accredit and professionalize practitioners in the discipline is recognized and reminded the necessity of identifying
    - who will use the accreditation
    - who will benefit from the process, and
    - how will the process benefit both the private and the government sectors.
  - The proposed scheme is somewhat biased towards those who are in the academe because it will require them to be teaching/lecturing/presenting; publishing articles, monographs and books; working on PSA Boards and Committees in the Philippine Statistical System.
  - In the private sector, there is so much emphasis on confidentiality of technique of data. Most of the alumni of the UP School of Statistics are into Business Process Outsourcing -BPOs for the health sector, in credit, foreign industry, etc. and they have no time to write and present papers, teach, lecture, and neither do they have that much time to be active in the PSAI but they are valued by their companies. They have to keep abreast of developments particularly in the software and in particular methodologies. They are using not necessarily whatever is being offered in a continuing statistical education program if the PSAI can come up with one. If you give it to the academe, they will be focusing on the more esoteric topics but they will be more on a practical side.
  - The proposed scheme may not have much attraction to the private sector especially considering that if they would qualify for a GS initially, how can they possibly renew if the scheme is heavily favorable to the academe.

- With regard to higher level statisticians in government, not everyone is in publishing. While we have a lot of people there, they are not necessarily co-authoring with the likes of Dr. Romulo A. Virola, or Dr. Jose Ramon G. Albert. If we want the proposed accreditation to be acceptable and eventually useful to those in the private sector, we have to take into account their situation also.
4. Mr. Africa underscored the need for an acceptance from both the corporate world and the government as something that must be promoted because if they do not recognize this accreditation scheme, it would just redound to what could be construed as an exercise in aggrandizement for no reason at all.
  5. Ms. Osorio shared that the CSC has started talks with the private sector about the possibility of considering Civil Service Eligibility as a requirement at least for the entry level position and the suggestion has been well received.
  6. To clarify the possible implications of the proposed accreditation to the Civil Service Commission, Ms. Osorio invited Director Azucena P. Ezleta of the CSC Human Resource Policies and Standards Office to share her insights on the relevance of the certification in government.
  7. Director Ezleta mentioned that while she is not a statistician, she used to be a member of the PSA and headed the CSC Research and Statistics Division for 7 years. At present, some of the qualification standards now being submitted to the CSC by government agencies like the Bangko Sentral ng Pilipinas, and the Government Service Insurance System include certification, like the Certified Financial Analyst and Certified Finance Auditor. These certifications are now made part of their qualification standards. Although the certification is not yet recognized as eligibility, the CSC recognizes the certification as an additional qualification requirement imposed by agencies. She further clarified that -
    - Government agencies are given discretion to formulate qualification requirements for positions in their respective offices. They are in the best position to see what competencies are desired and what are the needed preparations for somebody to be an employee in that particular agency. A certification program or a certification is now part of the requirements of these government corporations.
    - Training of an academic program goes with the certification of Financial Auditors and Financial Analysts. De La Salle University is offering a certification program. This is now a trend in defining qualification requirements in government and the Civil Service Commission is amenable to that.

- The CSC is now awaiting the competency based qualification standards as opposed to the traditional practice of just meeting the minimum requirements which translates into having a certain number of hours of relevant training, relevant experience and eligibility.
  - The CSC is now looking at competency and glad that the government is now building a competency profile for finance people in government, the public sector, which can be adopted for the pool of civil servants in the Civil Service Commission.
  - With regard to the suggestion of importing the certification/eligibility requirements for statisticians in government, there should be a provision in the law that passing in an examination, or the certification process to be given can be converted into an eligibility which will be now the eligibility requirements for statisticians in government. In the same manner that the examination being given by the National Computer Center (NCC) for the Electronic Data Processing (EDP) Specialist are being converted into eligibility so they need not take Civil Service Career Professional Examination, it will simply be converted into a Civil Service Eligibility. A special eligibility for special group of people like the statisticians is a possibility.
  - On an earlier suggestion of Dr. David to include the accreditation/certification in the crafting of the IRR, she shared a similar situation where one of the Commissioners reminded that water cannot rise above the source, the spring, so if it is not indicated in the bill, it cannot be included in the IRR. So what could be done is to establish a market influence from agencies with statisticians in their structure, especially those agencies really dealing with statistics, to include in their qualification requirements the certification for this special pool.
  - There is a need to study the job descriptions, the job that will be the kind of work statisticians in government are really doing. She cautioned that the aspirants might be subjected to a one type fits all qualification requirements, when in reality they are doing different types of jobs. She reminded that in a lot of professions covered by the PRC, special eligibility is required but when controversies arise in the process of using the eligibility and appointing people, exemptions are requested because they do not use the tools learned and required in passing the certification or eligibility process, and that the same tools are not used in their particular work in government.
8. Dr. Dalisay Maligalig made the following interventions:
- She supports the accreditation process if it is designed and implemented correctly because it will help upgrade the statistics profession.

- The criteria for accreditation should be defined after intensive study on who will use the accreditation process and what will be the uses of the process.
  - The mechanism for accreditation should be consistent with the intended purposes. For example, there are many fields of statistics. An employer may want to hire a survey statistician consultant, instead of a general statistician practitioner. This implies that the accreditation process should be able to distinguish an expert in a particular area from a generalist. How will this be done? Will it be similar to medical doctors that use different nomenclatures after their names to indicate their areas of expertise? Do we follow the same astringent procedures in which doctors have to take exams given by the medical boards and/or medical society to achieve further and specific accreditation?
  - Statistics as a profession should also be distinguished from that of a data scientist, which is considered to be an emerging profession in this age of big data and high speed computers. Professional statisticians can undertake methodological research to improve the application of statistical methods, do in-depth statistical analysis and provide objective conclusions to inferential analysis.
  - There are also other types of statisticians. For example, those who compile statistics of professional sports games. There are also those who program statistical software, compile official statistics, teach in the academe, etc. These areas should be studied further. It could be the case that different criteria or gradation should be applied on different areas of statistics and the statistics profession.
  - There is a need to study the proposal very well, to consult with the employer/s and those who will use the accreditation, and with other stakeholders.
  - Those who are studying Statistics and getting into a graduate program in Statistics are dwindling. There are many at the ADB who do statistics and they are economists simply because there are no statisticians.
  - Once a good accreditation program is in place, this will help separate the true statisticians from those who are not.
9. With regard to the observation that enrolment in the course is dwindling and those expressing interest in the discipline are getting fewer, Dr. David shared the following observations:
- Of the more than 200 Higher Education Institutions (HEIs), only a few universities offer degree programs in Statistics.
  - The situation has been posing problems even in the United States. Decline in enrolment is observed not only in Statistics but in the Science,

Engineering and Mathematics (SEM) programs as well and the crisis could be due to the following:

- The subject matter is difficult and the career path is very limited. In the corporate world graduates of the Social Sciences, those who have MBAs, etc. climb the corporate ladder and become CEOs, Heads of organizations.
- Potential students of the discipline end up pursuing the social sciences instead of Statistics. They would opt for a course that is not difficult for them, could look up to higher level positions, and would usually end up as the Boss of the Statisticians.
- Academic pursuits like research and publications are more compatible with the academe and the National Institute of Science and Technology (NIST) where there are Scientists I, II, III which comes with monetary award of P150,000/year for 3 years, in addition to their salaries. In the case of UP, the University reviews their performance and if they remain compliant, a higher Scientist level is awarded; otherwise, the recognition as Scientist is withdrawn. Thus, the monetary award and the recognition enhance the desirability of the accreditation as Scientist. It was acknowledged that this type of accreditation is suitable to the academe, and a different scheme should be considered for statisticians coming from the government and the private sector.
- He fully supports the move to accredit/certify if the contemplated certification process could help raise the class ceiling for Statisticians. The need to create enough tracks for Statisticians to move up whether they are in government or private sector should be considered in order to attract more people to go into Statistics.

10. Ms. Maxie V. Garin, Country Operations Director of SAS Institute (Philippines) mentioned that the SAS Institute (Philippines) is a software company based in the USA, and they have been using statistics, and support the move which she considers very timely. She shared the following observations:

- Based on feedbacks, the corporate world, the private sector majority of which are the top banks and telecommunications companies are clamoring for this type of accreditation that will allow them to really identify the key resources that is right for them in the area of their needs, largely in the area of business analytics.
- In the SAS, they see a lot of US company customers moving their analytics competency center in the Philippines and making it the BPO center already. The SAS officials are very much aware of this demand because these companies approach SAS to convey their need, say for 200 people familiar with analytics, familiar with statistics, because Australia and New Zealand banks have just set up their analytics competency

center in the Philippines. Over the next three or four years, they would be needing 200-300 people because these people will be servicing the entire region and service all this credit scoring or application scoring, result scoring by the Filipinos. Recently also, we learned that one of the biggest Pharmaceutical company in the US, also SAS customer, set up their analytics competency center in the Philippines doing clinical trials, so all of the research findings of testing clinical products that is going out to the market has been set up in the Philippines and now being processed by a lot of the Filipinos.

- The accreditation will be very helpful because they go to the SAS asking where they can find this talent, these resources. If we have this type of accreditation, they can easily link up with the association or to the source, provide those needs and over time we foresee these demands to go to the Filipino talents sooner than we expect. They do not look at statistics simply as the counting of the data or number, and as noted in earlier meetings, those who are doing Data Analytics are now called Data Scientist so maybe that is another title that could be considered, and the more popularly known name now which she endorses and promotes.
- She affirmed her observation that the PSA is on the right track, and hopes to fast track the accreditation while the demand is very high.
- On the matter of continuing education policy, Ms. Garin mentioned that even the Philippine Institute of Certified Public Accountants (PICPA) require certain number of training hours and continuing education in order to maintain their membership and their CPA professional license. In this regard, she mentioned the need to strike a balance between really getting some sort of commitment from the member when they become certified, and recognizing the need to flourish the PSA as a professional association that confers the accreditation. Further, deciding the balance between the need to get some level of commitment from the awardees in the form of lecturing or sharing, and, according due recognition to the burden or the workload of the private sector and the individuals willing to go after the accreditation should also be considered. She noted that this is also practiced in Harvard University, where graduates are required to give lectures, share information or experiences in a certain degree.

11. Dr. Maligalig expressed disagreement over the title/nomenclature suggested by Ms. Garin because she believed data scientists only process the data but no interpretation, no analysis. She maintains that professional statisticians have the ability to undertake methodological research to improve or extend existing methods.

12. Mr. Africa shared that since the first meeting of the Board in January 2013 when talks about data science were mentioned, he googled the term and learned that the term has been used for almost 10 years already and it combines operations in Statistics and technology, and it is more of the analytics, so those are nomenclatures that must really be looked into.

13. Mr. Gervacio G. Selda, Jr., Executive Director of the SRTC, supports the move towards accreditation/certification. With the anticipated passage of R.A. 10625 and eventual merger of major statistical agencies (Bureau of Agricultural Statistics, Bureau of Labor and Employment Statistics, National Statistics Office, and National Statistical Coordination Board) into what would be known as the Philippine Statistics Authority, preparations for the crafting of the IRR would be undertaken. A new set of classification of statistical positions should be included in the proposed IRR as there is a need to come up with appropriate classification for IT people in the new set-up. He expressed concerns over IT people who are part of the statistical organization and who contribute a lot in coming up with quality information used by the Statistical System. The proposed new set of classification of statistical positions under the merger should be done as soon as possible as this will help enhance the establishment of the proposed system of accreditation/certification.

With respect to the reorganization of the SRTC into what is proposed to be known as the PSRTI, he noted that the agency is expected to be operating under practically the same set up but with expansion of the organizational structure to include new positions.

14. Ms. Iuminada T. Sicat, Managing Director of the Currency Management Subsector, Bangko Sentral ng Pilipinas, supports the idea of accrediting Statisticians as professionals, and would like to invite attention to the following:

- Candidates for Accreditation/Certification in other fields like Information Technology (IT), Quality Management System, etc. have to take examination. This should also be considered so that practitioners in Statistics can be certified as a CSP. This is necessary to be able to attract other professionals who are already doing statistical work but are not necessarily graduates of Statistics.
- The certification exam should be specific to the area for which certification is being sought consistent with the suggestion of Dr. Dalisay Maligalig, e.g. Certified Survey Statistician.
- There is now a trend towards integration of Statistics with other fields. In her case, she is a graduate of BS Statistics and pursued a Master's degree in Economics to complement her analytical skills. Integration of

the Statistics Profession with those working in the Treasury Department, researchers in the medical sciences, and the like, should be considered.

- Consistent with the observation of Dr. David, there should be something for the awardees to gain and what is more important is for them to feel that thru monetary gains. There is a need to sell the concept not only in the government in terms of making sure that it is part of the promotion system, but also to the private sector. Once a certain certification is obtained, there should be additional incentives in terms of promotion or additional monetary rewards. For the private sector that can support the initiatives, that particular requirement would be part of their hiring/eligibility requirements.

15. Ms. Christine P. Dizon, Principal Consultant, Information Management and Analytics, SAS Institute (Philippines), underscored the need to develop individual skills and at the same time create big awareness in order to promote the statistics profession. She shared the following:

- The gap between supply and demand for statisticians is expected to increase to 66% by 2018, as cited in a study conducted in the US in the past year.
- The SAS Chief Analytics Officer from Australia visited the country in March 2013 to meet with some SAS Executives and noted that because of this gap, the BPO industry in the US is getting talents from Australia. Now, Australia is also lacking Statisticians and has resorted to hiring from Singapore and India, which in turn are now hiring from the Philippines. This highlights a chain of demand for the expertise.
- The term Data Scientist is now being used in the private sector notably banks and telecommunications industry. Emerging developments in the private sector show preference for individuals with Statistics background/degrees for positions such as Chief Risk Officer, Chief Operations Officer, Chief Marketing Officer, and Chief Analytics Officer.
- Data Scientist, according to the Harvard Business School, is somebody who, aside from knowing the techniques, the methodologies or having the background in Statistics, has the ability to create stories or get insights from the data, create business strategies, and propose it to the owners of the company.
- As one of the Statisticians who would like to be certified, she agreed with Dr. Tabunda that having a paper published is going to be difficult. To be able to submit a technical paper for compliance with accreditation requirements would require permission from the owners of the projects that would show Statistics methodologies were applied. Since this would involve sharing of information among clients of SAS, the China wall between competitors in the industry will have to be considered due to

confidentiality of data and business strategies. In her case, to obtain approval for the paper would need –

- permission to be able to share the paper to a limited audience
- commitment that the paper will not be published
- assurance that the paper would be strictly for review of the committee, and
- committee members should not include representative/s from the competitor/s

16. The need to elevate and make distinct the status of statisticians is recognized just as it was acknowledged that the title is commonly associated with “basketball” statisticians, measurements of vital statistics, and the like, which also remain within the dictionary definition of statistics.

17. Director Raymundo J. Talento inquired whether the proposed accreditation/certification process is contemplated in preparation for the eventual merger of major statistical agencies with the expected passage of R.A. 10625. Ms. Osorio commented that it is not and the idea is to be prudent and to move cautiously so that the proposal in its entirety could be carefully looked into.

## **5. RECOMMENDATIONS**

1. Mr. Africa recognized the need to –
  - update the concept paper with inputs from the FGD.
  - present and discuss the updated version of the paper with various stakeholders from both the private and the government sectors.
  - expand the concept paper to include inputs from the proceedings, bring in competencies into the picture, and put more flesh in the private sector side of the accreditation.
2. Wait for the proceedings and mount another FGD to discuss the recommendations as may be considered necessary.
3. Engage the services of a possible full-time facilitator to undertake the proposed consultation process.
4. Adopt an inter-disciplinary approach to promote the profession.

## **6. CONCLUSION**

- Ms. Osorio thanked the BSP, through Ms. Iuminada T. Sicat, for hosting the FGD, and the PSA Board of Directors, participants and guests for the very fruitful discussion and useful inputs to consider for the establishment of the proposed accreditation/certification processes. There were many points raised and three things stood above the rest. Firstly, the move is timely; secondly,

apart from those who will be hiring Statisticians who would be certified, of what use will the certification be for these individuals; and thirdly, there is a need to think of many other operatives to include for the qualifications. She reiterated the move now for the Civil Service Eligibility to be used by the private sector in their entry-level process so they will be saved from the expense of having to come up with exams. Some private firms are receptive to the suggestion and discussions with some firms are progressing already. The challenge now is for the Commission to be more strict, and she noted that now the passing is only 10-11% of those who take the examinations.

- Mr. Tomas P. Africa thanked everyone for a good start. He noted that while listening to everybody, he believed that the process of certification should be brought over as a program, as an approach and the basic concern is knowing what is immediate, and where is the immediate need coming from.

From the viewpoint of the government, the IDC is guided by the studies on this as noted in the report of the NSCB Special Committee to Review the Statistical System and similar references - and this is like more than half of the problem solved in the government sector; however, much help is needed with regard to the private sector, as Statisticians are now being recruited and a reverse brain drain - coming in to drain your brain- is observed here in the country. He mentioned encounter with a friend who began in the US, then to Singapore, and now prefers Statistics graduates here to do the research, or conduct analytics here in the Philippines. Based on emerging developments and the productive discussion undertaken, clearly Statistics is not a sunset industry.

With statistics education as a target or as a focus, either for recruitment or enrolment, the proposed certification process would have a direction. The move will be institutionalized, and a structure or career path would be clearly spelled out. He reminded that this is not just a project of the present set of officers but all officers who would take the initiatives.

As a professional association that has been around for the past 60 years, the PSAI is looked upon to actively pursue the professionalization of practitioners in the field of Statistics at the individual level and at the same time promote the development of the profession.

## 7. ATTENDANCE

### **Board of Directors**

Nieves L. Osorio - President

Tomas P. Africa - Vice President and Chair, Institutional Development  
Committee

Zita V J Albacea - Secretary

Gervacio G. Selda, Jr. - Treasurer

Maxima V. Garin - Board Member

Iluminada T. Sicat - Board Member

Ana Maria L. Tabunda - Board Member

Raymundo J. Talento - representing NSCB, Board Member

Josefina V. Almeda - representing Erniel B. Barrios of UP School of  
Statistics, Board Member

Joel Ocampo - representing Severina L. Resurreccion of GSIS, Board Member

### **Panelists**

Eva Andrews - Team Leader, AUSAid PFM Program, Philippines

Isidoro P. David - Former PSAI President, Former Manager, Statistics and Data  
Systems, Asian Development Bank

### **Others Present**

Sarah B. Balagbis - Senior Labor and Employment Officer, BLES

Christine P. Dizon - Principal Consultant, SAS Institute (Philippines)

Azucena P. Ezleta - Director, Human Resource Policies and Standards Office,  
Civil Service Commission

Dalisay Maligalig - Principal Statistician, ADB

Ana Julia J. Macaraig - Statistician III, Statistical Research and Training Center

Novie Lyn Saladar - Statistical Researcher V, Statistical Research and Training  
Center

Jacqueline V. Furto - Bangko Sentral ng Pilipinas

Teresita G. Abad - Managing Director, PSA

Stephanie Rae C. Andres - Secretariat Assistant II, PSA

Reynaldo Belluga, Jr. - Secretariat Assistant I, PSA

## **ABBREVIATIONS**

ADB – Asian Development Bank

ASAI – American Statistical Association, Inc.

AUSAid – Australian Agency for International Development

BPO – Business Process Outsourcing

BLES – Bureau of Labor and Employment Statistics

CHE-CIPD – Commission on Higher Education- Chartered Institute of Personnel  
Development, UK

CSP – Certified Statistics Professional

CSC – Civil Service Commission

DBM – Department of Budget and Management

GS – Graduate Statistician

HKSS – Hong Kong Statistics Society

IDC – Institutional Development Committee

IRR – Implementing Rules and Regulations

ISI-IT – International Statistical Institute - Information Technology

MCLE-NIST – Mandatory Continuing Legal Education  
- National Institute of Science and Technology

UPSS – School of Statistics, University of the Philippines Diliman

UPInStat – Institute of Statistics, University of the Philippines Los Baños

UNSD – United Nations Statistics Division

PICPA – Philippine Institute of Certified Public Accountants

PSAI – Philippine Statistical Association, Inc.

PSAI-SCCP – PSAI Statistical Competence Certification Program

PSA – Philippine Statistics Authority

RSS – Royal Statistics Society