

U.P. School of Statistics 2008 Annual Report

Executive Summary

The School of Statistics continued to be the only CHED Center of Excellence in Statistics in the country. As the school continues to aim towards achieving academic excellence, it gradually gains recognition from the international statistical community on certain areas of the statistical science specifically, on computational statistics, nonparametric approaches, and econometrics.

As of September 1, 2008, there was a change in administration in the school. After serving for 8 years, Dr. Lisa Grace S. Bersales was succeeded by Dr. Erniel B. Barrios as Dean of the School. Dr. Barrios has been with the School for over 21 years, serving at some point as the Director for Research and Extension and Director for Graduate Studies.

Research outputs among the faculty and students are increasing and are getting the recognition it truly deserves, this is evidenced in some faculty and students gaining recognition. Dr. Dennis S. Mapa was awarded as National Academy of Science and Technology Outstanding Young Scientist (Economics) for 2008. Dr. Mapa was cited for his work on population and poverty where he extensively used econometric methods. Dr. Erniel B. Barrios was awarded one of the UPD Centennial Professorial Chairs for his work on sampling theory and nonparametric bootstrap. Dr. Jeffrey J. Tejada (PhD, 2008), a faculty member of the school, won the 2008 Department of Science and Technology (DOST) Outstanding Dissertation (Statistics) for his work on spatial statistics. Mr. Rolando Navarro Jr (MS, 2008) on the other hand, won the Outstanding Thesis also from DOST for his work on hidden markov chains.

On the physical facilities, the school building was renovated (re-roofing and repainting). While there is still a huge work that needs to be done for an environment that stimulates learning, part of the essential infrastructure is in place. Computing and communication facilities are also improving, although this is still way behind the international standards. Given these physical and financial constraints, the School was able to produce what an academic institution is expected to. Details are given below.

Academic Programs

The School continues to offer one undergraduate program (B.S.) and three graduate programs (Master of Statistics, M.S. (Statistics), and Ph.D.(Statistics)). The undergraduate curriculum was revised to catch up with the rapid developments in statistical theory and statistical methods . While the graduate programs are undergoing curricular revisions, some graduate courses were introduced to update the students with recent development in the field (e.g., Risk Management, Response Surface Methods, etc.). The preparation for the development of a Statistics GE course has initiated.

The research interest of faculty and students of the school is becoming diverse reflecting the developments in the discipline worldwide. Research of the School's faculty and students are reflected in the papers published, thesis/dissertation written, or those presented in the conferences and these includes: nonparametric approaches, mathematical statistics, computational statistics, econometrics, market research, design of experiments, time series analysis, survival analysis, sampling theory, spatial statistics, and spatio-temporal models.

Enrolment in and Graduation from the Academic Programs

The undergraduate enrollment for AY 2007 -2008 declined following the trend observed in the entire UP System. The graduate enrollment however, has not changed significantly. There is a slight improvement in graduation rate from the graduate programs in the recent years, see Table 1 for details.

Table 1. Distribution of Enrolled Students and Graduates by Program

Academic Year	Enrolled (Average per Semester)				Number of Graduates			
	B.S.	MOS	MS	Ph.D.	B.S.	MOS	MS	Ph.D.
2002-2003	461	75	38	15	93	2	3	2
2003-2004	441	86	61	16	98	7	3	0
2004-2005	411	103	64	21	83	4	5	0
2005-2006	403	90	70	20	84	3	7	0
2006-2007	424	94	71	21	85	7	2	0
2007-2008	379	82	75	20	83	8	7	1

Faculty

The School has 25 regular faculty, a number are pursuing graduate studies. Three faculty members are pursuing PhD (Statistics), one PhD (Biostatistics), and 6 are pursuing MS (Statistics). Two just completed their PhD, and one completed an MS degree. The faculty is now composed of 32% with PhD, 56% with MS (4 are pursuing PhD), 20% with BS (currently working on their MS program).

More papers of the faculty members are presented in international conferences, for 2008, the following presented:

- W. Campano and E. Barrios: Estimation of Non-structural Time Series Model With Structural Change, Joint Meeting of the 4th World Conference of the International Association for Statistical Computing (IASC) and the 6th Conference of the Asian Regional Section of the IASC, Yokohama, Japan.
- E. Barrios: Spatial Autoregressive Stochastic Frontier Model, Far Eastern Meeting of the Econometric Society, Singapore Management University, Singapore.
- E. Barrios: Monitoring and Impact Evaluation of the Belgian Integrated Agrarian Reform Support Program, 7th East Asia PADI Consultation Meeting and Regional Policy Seminar, Kuala Lumpur, Malaysia.
- L. Bersales: Reform Efforts in Training Statistics Teachers in the Philippines: Challenges and Prospects, Joint International Commission on Mathematics Instruction and International Association for Statistics Education Study Conference, Monterrey, Mexico
- D. Mapa: Robust Determinants of Income Growth in the Philippines: A Bayesian Averaging of Classical Estimates (BACE) Approach, Far Eastern Meeting of the Econometric Society, Singapore Management University, Singapore.
- D. Mapa: Population Dynamics and Household Saving: Evidence from the Philippines, 11th International Convention of the East Asian Economic Association, Manila.
- D. Mapa, M. Sandoval, and D. Yap: Population Dynamics and Household Saving: Evidence from the Philippines, 11th International Convention of the East Asian Economic Association, Manila.
- M. Albis, K. Briones, and D. Mapa: What Really Matters for Income Growth in the Philippines: Empirical Evidence from Provincial Data, 11th International Convention of the East Asian Economic Association, Manila.

Dr. Barrios was also invited as resource person during the Expert Consultative Meeting jointly organized by the Intellectual Property Office of Singapore (IPOS) and the World Intellectual Property Office (WIPO) as the IP Academy in Singapore.

The faculty continues to publish their research outputs in various local and international venues.

The following papers were published in ISI-Indexed journals:

- R. Lansangan and E. Barrios, Principal Components Analysis of Nonstationary Time Series Data, *Statistics and Computing*, available on-line August 2, 2008.
- A. Gabriel, E. Barrios, and P. Azanza, Modeling the Thermal Death of *Salmonella Typhimurium* in Citrus Systems, *Journal of Food Process Engineering*, 31(5):640-657.
- E. Barrios, Infrastructure and Rural Development: Household Perceptions on Rural Development, *Progress in Planning*, 70(1):1-44.
- E. Barrios and G. Sarte, Monitoring Sustainable Agriculture in Southeast Asia, *International Journal of Sustainable Development and World Ecology*, 15:95-102.

The following papers were published in local journals/discussion paper series:

- A. Nalica and E. Barrios. Approaches in Forecasting Cereal Production, The Philippine Statistician, 56:85-102.
- Tejada, J. Spectral Representation of the Covariance Function of a Rotation -Scale-Reflection-Invariant Random Field, The Philippine Statistician, 56:73-84.
- N. Beronilla and D. Mapa, Range-Based Models in Estimating Value-at-Risk (VaR), The Philippine Review of Economics (forthcoming).
- R. Lavado and E. Barrios, Spatial-Temporal Dimensions of Efficiency Among Electric Cooperatives in the Philippines, Discussion Paper Series No 2008-29, Philippine Institute for Development Studies.

Three faculty members (J. Almeda, T. Capistrano, and G. Sarte) wrote a textbook entitled Introduction to Statistics to be published by The University of the Philippines Press. Once this is printed, it will be used as the main textbook for Statistics 101.

Dr. Erniel B. Barrios also served as reviewer for Journal of Statistical Computing and Simulation and Journal of Official Statistics, both are peer-reviewed international journals. Dr. Dennis S. Mapa attended the training "Applied Econometrics for Analysis of Micro Data" at the University of Hongkong last December, 8-11, 2008.

9th Faculty-Student National Conference on the Statistical Sciences

The School along with the Institute of Statistics (UPLB) and the Statistical Research and Training Center (SRTC) held the 9th Faculty-Student National Conference on the Statistical Sciences on 6 October 2008 in U.P. Diliman with CHED Chairman Emmanuel Y. Angeles giving the keynote address "Assessment of the Statistical Education. Two hundred forty four (244) participants attended with 43 papers on various topics of statistical theory and applications presented during the conference. Students and Faculty from University of the Philippines Diliman, UP Los Banos, De La Salle University, Polytechnic University of the Philippines, West Visayas State University, and University of Southeastern Philippines, participated. The following won the best paper presentation awards given to undergraduate student participants:

- First Place: Manuel F. Albis (School of Statistics, UPD): What Really Matters for Income Growth in the Philippines: Empirical Evidence from Provincial Data.
- Second Place: Aldrich O. Salen (Institute of Statistics, UPLB): Survival Analysis of Multi-Drug Resistant Tuberculosis Patients Admitted to Quezon Institute.
- Third Place: Roperto De Luna (School of Applied Economics, University of Southeastern Philippines): Anthropogenic Carbon Dioxide Emission in Asia: Effect of Population, Affluence and Energy Efficiency.

Manuel F. Albis joined the School as Instructor as of second semester, AY 2008 -2009.

Extension Services

The School continued to offer its training programs during summer and semestral break and the following were offered for 2008:

Regression Analysis	January 16-18, 2008
Time Series Analysis and Forecasting	February 6-8, 2008
Time Series Analysis and Forecasting	June 19-20, 2008
Basic Statistics, Data Analysis, Presentation and Statistical Writting	November 7-11, 2008
Basic Statistics with Exploratory Data Analysis	November 18-21, 2008

In addition to the public trainings the School offered, the faculty were also invited to be resource persons in various trainings of government and private institutions in the country and abroad.

The faculty continues to be involved (some as chairs) in committees in the Philippine Statistical System such as the Technical Committee on Seasonal Adjustment of Philippine Time Series, Technical Committee on Poverty Statistics, Technical Committee on Survey Designs, and Technical Committee on Prices.

Statistical Computing Laboratory

The School has three computing laboratories – one used for classes, one for students' research and computing needs, and one for faculty. The laboratories have licensed statistical softwares: SAS, EVIEWS, SPSS, DEMETRA, X11-ARIMA/88, MINITAB, in addition to the freeware that is easily accessible from the internet.

Library Facilities

The School library expanded online services and paperless collection : OPAC (Online Public Access Catalog); E-lib's website(combined collections of the National Library, CHED, DOST, DA and U.P.);CD-ROM from accompanying books, current index to statistics, yearbook;online subscriptionsthrough the PROQUEST Academic Research Library and the Digital Dissertation LitFinder.

College Officials for AY 2007-2008, 2008-2009

The following are the College Officials for AY 2007-2008/2008-2009:

Name	Position
Bersales, Lisa Grace S.	Dean (until August 2008)
Barrios, Erniel B.	Dean (September 2008-Present)
Almeda, Josefina V.	College Secretary
Sarte, Genelyn Ma F.	Director for Undergraduate Studies
Magadia, Joselito C.	Director for Graduate Studies
Mapa, Dennis S.	Director for Research
De los Reyes, Francisco N.	Director for Extension Services
Tejada, Jeffry J.	Director for Statistical Computing Laboratory
Campano, Wendell Q.	Faculty Asst. to the Director for Statistical Computing Laboratory