



WASHINGTON
STATISTICAL
SOCIETY

WSS NEWS

December 1993

Join Us For Our Annual Holiday Party!

Make your plans now to attend the WSS 1993 Holiday Party scheduled for Monday, December 13, 1993. It will be held in the Rayburn House Office Building, overlooking the Capitol, and is once again being catered by Well Dunn! For more information about reservations, see the flyer in this newsletter.

WSS Founders Award Winners

The recipients of the 1993 ASA Founders Awards were honored for a variety of achievements at the ASA meeting in August 1993. Two out of the five award winners are WSS members. These members have earned the distinction of representing many of the finest qualities of professional achievement and service to their colleagues.

Rich Allen received the award "For exemplary service to the profession, the Association, and to students and other professionals in the use of statistics; for leadership in the profession, particularly in the application of survey sampling and other statistical methods for the collection of national agricultural data; for dedicated, inspired, and enthusiastic service and commitment to the Association and the profession through tireless leadership in working at all levels and in many capacities with ASA's Chapters, the Council of Chapters, the Council of Sections in its initial activities, and through work on ASA Committees."

Samuel Greenhouse received the award "For nearly fifty years of distinguished leadership in the statistical community at the local, national, and international level; for persuasive advocacy and development of rigorous statistical methods at the National Institutes of Health; for the enhancement of biostatistics through excellent research, teaching, organizational, and editorial activities; for a leadership role in advancing the interface of ASA with other scientific organizations; and for tireless service at all levels and in many capacities for the ASA and other statistical societies."

WSS Seminars		
(All events are open to any interested persons)		
December		
2	Thurs.	Modeling Income in the U.S. Consumer Expenditure Survey (Seventh Presentation in Methodology Seminar Series on Handling Missing or Bad Data)
2	Thurs.	Estimating Efficiency in the Interstate Natural Gas Transmission Industry: A Stochastic Frontier Approach
7	Tues.	Recent Results in Variance Estimation (Seventh Presentation in Methodology Seminar Series on Variance Estimation for Complex Surveys)
13	Mon.	Annual Holiday Party
February		
4	Fri.	Short Course: Nonsampling Errors in Surveys

Announcements

Fellowship Announcement

ASA/NSF/Census Research Program and the Census Research Fellow Program announce the following fellowship. Unique opportunity to make major advances in methodological or subject matter research related to Census Bureau operations or data. General areas for research are social and demographic studies, economic measurement and analysis, and statistical methodology and computing. Requirements: recognized research record in relevant field (e.g., Anthropology, Statistics, Demography, Sociology, Economics, and Geography). Salaries are commensurate with qualifications and experience; also, fringe benefits and a travel allowance are provided. Length of term and start date are flexible--usually six months to a year. Assignments may begin as early as June 1, 1994; can split term into two or more parts.

Apply by January 4, 1994. For more information on specific research topics and how to apply, contact Maxine Anderson-Brown, Program Manager, DIR, Room 2270-3, Bureau of the Census, Washington, DC 20233, (301) 763-1150.

Call for Monograph Papers: International Conference on Survey Measurement and Process Quality

As part of a continuing effort to promote quality in all kinds of surveys, an International Conference on Survey Measurement and Process Quality will be held on April 1-4, 1995, in Bristol, United Kingdom. This is the 5th in a series of the ASA conferences on survey methodology. A goal for the conference is to produce an edited monograph that provides a comprehensive and current review of methodology for survey measurement and process quality. Monograph authors will present their papers at the conference and then revise

them for publication in the edited volume. The organizing committee is now seeking papers on the following topics: design and specification; data collection; post survey processing and operations; quality assessment and control; and error effects on estimation, analyses, and interpretation.

To have a paper considered for the monograph, authors should send a 500-700 word abstract no later than February 1, 1994 to: Dr. Lars Lyberg, R&D Department, Statistics Sweden, 115 81 Stockholm, Sweden. Include name, address, telephone number, and work affiliation of the author(s) and the person to contact for communicating the organizing committee's decision. For more information, call Lars Lyberg at 46-8-783 4300 (fax 783 4288), or Lee Decker at ASA (703) 684-1221.

SIGSTAT Meetings

SIGSTAT is the Joint Special Interest Group in Statistics for the Capital PC User Group and WORMSC (Washington Operations Research/Management Science Council). SIGSTAT is sponsoring the following meetings: on December 8, 1993, "S-Plus for Windows", a revisit to the statistical programming language now running under Windows 3.1; and on January 12, 1994, "LogXact", exact inference for logistic regression using Cox's method for exact p-values and confidence intervals - no matter how small or imbalanced the sample.

All meetings are scheduled for Wednesdays from 12:30-1:30 p.m. in Room B-14, 1301 New York Avenue NW, Washington, DC. The building is located midway between Metro Center and McPherson Square Metro stops. If this is your first SIGSTAT meeting, call Charlie Hallahan, (202) 219-0507, and leave your name in order to gain entry into the building.

Program Abstracts

- Topic:** Modeling Income in the U.S. Consumer Expenditure Survey (Seventh Presentation in Methodology Seminar Series on Handling Missing or Bad Data)
- Speaker:** Geoffrey D. Paulin, Bureau of Labor Statistics
- Chair:** Michael P. Cohen, National Center for Education Statistics
- Date/Time:** Thursday, December 2, 1993, 12:30 - 2:00 PM
- Location:** BLS Cognitive Lab, Postal Square Building, Room 2990, 2 Massachusetts Avenue NE, Washington DC (Red Line--Union Station). Enter at Massachusetts Ave. and North Capitol St. Federal government employees show ID; nongovernment employees call Ed Riddick at (202) 606-7376 to add name to visitors' list.
- Sponsor:** Methodology Section
- Abstract:** The Consumer Expenditure Interview Survey collects information on family level expenditures and income, demographics, and work experience from every person 14 years and older in a Consumer Unit (CU). As is common in household surveys, some respondents do not report their incomes.

The speaker will first describe two methods of arriving at a useful model for imputing income for CU's with missing values. The first method uses predetermined groups that are inherently different (e.g., single persons and married couples), and fits a model to each of them using traditional income related variables. The second method derives results by combining tests for interactions between variables and intuitive interpretation of the data. However, there are problems with each of these methods. Using the first method, it is difficult to generalize the model for those persons outside each predefined group. The second method excludes many independent variables that traditionally have been good income predictors. A third method is used to arrive at the final model. It involves merging results from the first two methods to incorporate the best aspects of both techniques.

This talk is based on joint work with Elizabeth M. Sweet of the Bureau of the Census.

Program Abstracts (Cont'd)

- Topic:** Estimating Efficiency in the Interstate Natural Gas Transmission Industry: A Stochastic Frontier Approach
- Speakers:** Kevin F. Forbes, Science Applications International Corporation
Joan Heinkel, Department of Energy
- Discussant:** Mary L. Streitwieser
- Chair:** John H. Herbert
- Day/Time** Thursday, December 2, 1993, 12:30 - 2:00 PM
- Location:** Department of Energy, Forrestal Building, Room GJ-015, 1000 Independence Avenue SW, Washington, DC 20585 (Metro Stop: L'Enfant Plaza or Smithsonian)
- Sponsor:** Agriculture and Natural Resources
- Abstract:** In a recent study, Sickles and Streitwieser (1993) found that total factor productivity in the gas transmission industry declined in the late 1970s and early 1980s. They also report that the regulatory changes of the mid-1980s appear to have contributed to an improvement in total factor productivity. This finding, however, is not conclusive given that their sample period ends before many of the changes were implemented.

This paper addresses the issue of whether the efficiency of gas transmission has improved as a result of the regulatory changes in the industry. The paper employs data for 21 companies over the period 1983 through 1992. The paper estimates a stochastic cost frontier and analyzes it to estimate the degree of inefficiency for each of the firms in the sample. Specifically, the estimation procedure uses a panel data set in which the estimates of firm specific inefficiency are allowed to vary over time. This approach follows the research of Cornwell, Schmidt, and Sickles (1990), which examined the efficiency gains associated with airline deregulation.

* * * Note from WSS NEWS Editors * * *

Items for publication in the February 1994 WSS NEWS should be submitted no later than December 28, 1993. FAX items to:

Hattie Ramseur or Theresa Hallquist
FAX: (202) 586-0018

Program Abstracts (Cont'd)

- Topic:** Recent Results in Variance Estimation (Seventh Presentation in Methodology Seminar Series on Variance Estimation for Complex Surveys)
- Speakers:** Alan H. Dorfman, Bureau of Labor Statistics
Steven Kaufman, National Center for Education Statistics
- Chair:** Phillip S. Kott, National Agricultural Statistics Service
- Date/Time:** Tuesday, December 7, 1993, 12:30 - 2:00 PM
- Location:** BLS Cognitive Lab, Postal Square Building, Room 2990, 2 Massachusetts Avenue NE, Washington, DC (Red Line--Union Station). Enter at Massachusetts Avenue and North Capitol St. Federal government employees show ID; nongovernment employees call Ed Riddick at (202) 606-7376 to add name to visitors' list.
- Sponsor:** Methodology Section
- Abstracts:** Quantile Variance Estimators in Complex Surveys (Alan H. Dorfman)

The speaker will consider several estimators for the variance of the standard quantile variance estimator in the context of stratified cluster sampling, including the Woodruff, Francisco-Fuller, Siddiqui, and balanced half-sample estimators. Comparisons will be made with respect to confidence interval size, coverage, and computing time, in a simulation study using wage data from the Occupational Compensation Study conducted by the Bureau of Labor Statistics. Illustrations will be given of instances in which several of the procedures perform poorly. New variance estimators will be suggested that yield improved confidence bounds. This talk is based on joint work with Richard Valliant, Bureau of Labor Statistics.

A Bootstrap Variance Estimator For the Schools and Staffing Survey (SASS) (Steven Kaufman)

During the 1992 ASA meetings, the speaker demonstrated that bootstrap half-sample replication (BHR) variance estimates, under the usual BHR assumptions, can be biased when the unit of measurement is an aggregation of the sampling units. In a follow-up to this work, the speaker presents a bootstrap variance estimator that, in terms of coverage rates, performs better than half-sample replication, when: 1) the collection is done for both the aggregation unit and the sampling unit; 2) sampling is done systematically using a probability proportionate to size without replacement algorithm; and 3) the sampling rates are high. NCES's Schools and Staffing Survey sample design will be the basis for this simulation study. The bootstrap variance estimator can be computed with any BHR procedure, using a set of bootstrap replicate weights presented in this talk.

Announcements (Cont'd)

The American University Department of Mathematics and Statistics Schedule of Spring Classes

The Department of Mathematics and Statistics of The American University announces its Spring 1994 Schedule of Graduate Classes. The following courses will be offered: Introduction to Mathematical Statistics, Statistical Methods, Design of Experiment, Analysis of Frequency Data, Numerical Analysis, Introduction to Stochastic Processes, Statistical Computing, and Advanced Probability and Stochastic Processes. For additional information, please call (202) 885-3120.

Science Fairs 1994

Volunteers are now being solicited to represent the Washington Statistical Society as judges in local area science fairs next spring. Since 1986, WSS has provided special awards at these fairs to students whose projects demonstrate excellence in statistical theory or application. Those who have participated in this activity have very much enjoyed the opportunity to interact with these students and to observe the widely diverse projects which are presented. The WSS sponsors awards at fairs in Northern Virginia, suburban Maryland, and the District of Columbia. The fairs are held on a Saturday morning in mid-to-late March and early April. The only time required is that one Saturday morning, plus one weekday lunchtime meeting to discuss judging strategy and to distribute the awards to be given out at each fair.

If you would like to be a WSS science fair judge, or if you would like additional information about this activity, please contact Lee Abramson at (301) 492-3949.

Bureau of Labor Statistics Research and Evaluation Seminar Series

The Bureau of Labor Statistics will host the following lectures as part of the Research and Evaluation Seminar Series: "Who Chooses to Teach (and Why?)" ; Speaker: Eric Hanushek, University of Rochester (joint work with Richard Pace); Friday, December 10, 1993, 10:00 a.m.; and "Evidence on Minimum Wage Effects and Low Wage Labor Markets from Disequilibrium Models"; Speaker: David Neumark, University of Pennsylvania (joint work with William Wascher); Friday, December 17, 1993, 10:00 a.m. The seminars will be held in the Behavioral Sciences Lab, 2990 Postal Square Building, 2 Massachusetts Avenue NE (across from Union Station). Please direct any questions to Patricia O'Neal at (202) 606-7391.

Joint University of Maryland - University of Michigan Program in Survey Methodology

The Joint University of Maryland - University of Michigan Program in Survey Methodology (JPSM) announces three short courses to be held in the Fall, 1993 and Winter, 1994 in the Washington, D.C. area, including:

"Cognitive and Communicative Aspects of Survey Measurement," December 6-7, 1993, at the Capital Hyatt taught by Norbert Schwartz;

"Measurement Errors in Surveys," January 25-26, 1994, at the University of Maryland Conference Center taught by Paul Biemer;

"Self-Administered/Mail Surveys," February 23-24, 1994 at the Capital Hyatt taught by Don Dillman. Call the JPSM at 1-800-937-9320 for more information about the courses and registration.

Employment Column

As a service to local statisticians, *WSS News* provides notification of employment opportunities and description of those seeking employment here in the Washington, DC area. Readers are encouraged to take advantage of this feature of the newsletter. The deadline for inserting notices is five (5) weeks before the publication date. Those interested should write or call: Bill Arends, USDA-NASS, Room 4133 South Building, Washington, DC 20250-2000, (202) 720-6812.

Vacancies

Sampling Statistician

An innovative and highly respected analytical firm specializing in statistical analysis, management, and technical consulting, seeks experienced sampling statisticians for work on projects with the National Center for Health Statistics. Ph.D. preferred; experience with establishment surveys a plus. Excellent writing and verbal skills required. Send cover letter, resume, salary requirements, and possible starting date to KAG, 1785 Massachusetts Avenue NW, Suite 501, Washington, DC 20036, Attention: Ibrahim.

Assistant/Associate Professor of Biostatistics

The F. Edward Hebert School of Medicine of the Uniformed Services University of the Health Sciences (USUHS), Department of Preventive Medicine & Biometrics, Division of Biostatistics is accepting applications for the position of Assistant/Associate Professor (tenure track). The successful candidate will participate in teaching medical and graduate students, methodological and collaborative research, and statistical consulting. Statistical computing experience essential. Salary is commensurate with training and experience. Level of appointment is dependent on demonstrated research productivity and teaching ability. Interested applicants should submit a CV and three references by DOD/USUHS, CHR

(ATTN: JK/PM), Room A1022, 4301 Jones Bridge Road, Bethesda, Maryland 20814-4799. Final appointment to this position is subject to completion of a background investigation and appropriate clearance.

Job Applicant

Listed below is a brief description of the qualifications of an applicant seeking employment. Employers interested in interviewing an applicant should write or call: Bill Arends, USDA-NASS, Room 4133 South Building, Washington, DC 20250-2000; (202) 720-6812. All requests should include the code number from the applicant's ad and employer's name, organization, and telephone number. The applicant will be notified of the employer's interest and initiation of any further contact will be left to the applicant. All contacts will be kept confidential.

Applicant #94-04

Experience: Environmental consultant with 9 years experience in environmental data management, analysis, and statistics including problems in estuarine systems, climatology, hazardous waste, ground water, and air quality. Includes work within both research and regulatory frameworks, private and governmental agencies. Determined cleanup levels for an industrial facility sited on a former landfill. Analyzed stream low flow records. Investigated state thunderstorm patterns. Excellent teaching capabilities. Extensive knowledge and experience using Federal and State environmental and regulatory databases. Fluent in SAS, SYSTAT, and other PC packages; mainframe and mini experience. Network management and installation experience. Adept at managing multiple tasks and short deadlines.

Education: M.S. Environmental Science, B.S. Biology.

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Linda Atkinson (202) 219-0505
Art Kennickell (202) 452-2247

Methodology

Phillip Kott (703) 235-5211
Michael P. Cohen (202) 219-1917

Physical Sciences & Engineering

Refik Soyer (202) 994-6445
Tom Mazzuchi (202) 994-7528

Quality Assurance

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Amrut Campaneri (202) 268-2299

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Mike Horrigan (202) 606-5907
Michael Greene (202) 885-3123

Statistical Computing

Dan Carr (703) 993-1671
Franklin Winters (301) 763-8571

Short Courses

Glenn White (202) 874-1114
Jeri Mulrow (202) 874-0434

Public Health and

Biostatistics
Barry Graubard (301) 496-8547
Sally Hunsberger (301) 496-5905

Data Collection Methods

Jared Jobe (301) 436-7111
Theresa DeMaio (301) 763-7331

Employment

Bill Arends (202) 720-6812

WSS NEWS Editors

Theresa Hallquist (202) 586-2051
Hattie Ramseur (202) 586-1124

Membership

Antoinette Martin (202) 254-5409
Renee Miller (202) 254-5507
Fritz Scheuren (202) 874-0700

Videotapes

Ed Milton (202) 366-2751

Quantitative Literacy

Ron Fecso (703) 235-5213

Local Arrangement

Carolyn Shettle (202) 634-4664



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Suitland, MD 20752

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