Please address correspondence to the SECRETARY-TREASURER, Nancy B. Dearman, P. O. Box 235, Washington, D. C. 20024 (245-8053)

Washington Statistical Society

CHAPTER • AMERICAN STATISTICAL ASSOCIATION

NEWSLETTER–DECEMBER 1978
Mailed November 27, 1978

December 8: **A Total Reappraisal of the Small Sample Econometrics of Autocorrelated Disturbances–Misguided Practicing Economists**

December 12: **The UPGRADE System**

ECONOMICS

Topic: A Total Reappraisal of the Small Sample Econometrics of Autocorrelated Disturbances–Misguided Practicing Economists

Speaker: Professor Asatoshi Maeshiro, Department of Economics, University of Pittsburgh

Chair: Gregory K. Schoepfle, Office of Productivity and Technology, U. S. Bureau of Labor Statistics

Discussant: Scott E. Atkinson, Energy Information Agency, U. S. Department of Energy

Abstract: The first-order autoregressive transformation of a linear model with positively correlated disturbances tends to reduce the variation in the values of explanatory variables when the explanatory variables are trended and, thereby, induce a loss in the efficiency of an estimator. In utilizing such a transformation for the purpose of autocorrelation adjustment, one must consider this loss against the gain in efficiency obtained by the autocorrelation adjustment of the disturbances. Although this trade-off is irrelevant for asymptotic analysis, it may be too critical to be ignored in small samples. Utilizing various trended exogenous variables, this paper assesses, by both analytical and Monte Carlo methods, such a trade-off for various estimators of five linear economic models. For all the models, it is found that the relative small-sample performance of alternative estimators of the respective models is critically affected by trends in the exogenous variables when the first order autocorrelation coefficient is positive. The introduction of trended exogenous variables frequently reverses the ranking of alternative estimators prevailing when nontrended variables are used. These findings are of practical importance to economists who frequently face time series data which are trended and disturbances which are serially correlated.

Time: Friday, December 8, 1978; 12:30-2:00 p.m.

Place: Room 4454, GAO Building, 441 G Street, N.W. (Metro Red Line, Judiciary Square Stop, F Street Exit–walk one block north)

METHODOLOGY

Topic: The UPGRADE System

Speakers: Steven Fullerton, Systems Analyst, Sigma Data Computing Corporation
Lance Wallace, Environmental Scientist, Environmental Protection Agency
Charles Poole, Epidemiologist, Environmental Protection Agency

Chair: Roy E. Heatwole, Chief, Research Technology Branch, Office of Statistical Research, National Center for Health Statistics

Abstract: The President's Council on Environmental Quality has sponsored the development of the UPGRADE system to provide easier access to environmental data. It is a versatile system for analyzing data on the environment, public health, and related topics. It uses ordinary English-like instructions for step-by-step analysis, and graphical display. It has been designed for efficient use by managers and scientists without extensive training in computing. Mr. Fullerton will discuss the background and features of the UPGRADE system. Dr. Wallace and Mr. Poole will give examples of uses such as correlations of health with environmental variables and associated statistical problems.

When: 12 December 1978, 12:30-2:00 p.m., Tuesday

Where: IRS Auditorium, IRS Building, 7th Floor. (Please use entrance at 1111 Constitution Avenue, and bring a copy of this newsletter to show the building guard.)

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The session on the Employment Cost Index (ECI) scheduled for October 31, 1978 and cancelled because of the funeral of Julius Shiskin will be rescheduled.

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David A. Pierce of the Federal Reserve Board was the speaker of the second paper on November 8. Topic: A Survey of Current Problems and Recent Developments in Seasonal Adjustments. His name was inadvertently omitted in the November Newsletter. The Editor apologizes.

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For emergency inquiries, call:

Thomas Jabine (~~673-5727~~) 633-8474
Nancy Dearman (245-8053)
Anitra Rustemeyer (763-7331)

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CHAPTER • AMERICAN STATISTICAL ASSOCIATION

December Economics Program

Topic: A Total Reappraisal of the Small Sample Econometrics of Autocorrelated Disturbances--Misguided Practicing Economists

Speaker: Professor Asatoshi Maeshiro, Department of Economics, University of Pittsburgh

Chair: Gregory K. Schoepfle, Office of Productivity and Technology, U.S. Bureau of Labor Statistics

Discussant: Scott E. Atkinson, Energy Information Agency, U.S. Department of Energy

Abstract:

The first-order autoregressive transformation of a linear model with positively correlated disturbances tends to reduce the variation in the values of explanatory variables when the explanatory variables are trended and, thereby, induce a loss in the efficiency of an estimator. In utilizing such a transformation for the purpose of autocorrelation adjustment, one must consider this loss against the gain in efficiency obtained by the autocorrelation adjustment of the disturbances. Although this trade-off is irrelevant for asymptotic analysis, it may be too critical to be ignored in small samples. Utilizing various trended exogenous variables, this paper assesses, by both analytical and Monte Carlo methods, such a trade-off for various estimators of five linear economic models. For all the models, it is found that the relative small-sample performance of alternative estimators of the respective models is critically affected by trends in the exogenous variables when the first order autocorrelation coefficient is positive. The introduction of trended exogenous variables frequently reverses the ranking of alternative estimators prevailing when nontrended variables are used. These findings are of practical importance to economists who frequently face times series data which are trended and disturbances which are serially correlated.

Time: Friday, December 8, 1978; 12:30 -- 2:00 PM

Place: Room 4454, GAO Building, 441 G Street, N.W.
(Metro Red Line, Judiciary Square Stop, F Street Exit--walk one block north)

The economics program meetings of the Washington Statistical Society are open to the public without charge.

EMPLOYMENT COLUMN

Deadline for inserting notices
is the 12th of the month
preceding the publication date

Send notices and requests to:
Evelyn R. Kay
National Center for Education Statistics
400 Maryland Avenue SW
Washington, DC 20202 202/245-8340

JOB OPENINGS

Director of nonprofit organization

The Trustees of the Bureau of Social Science Research, a 30-year-old nonprofit social science research organization in Washington, DC, invite applications for Director. Desired qualifications include advanced degree in one of the behavioral sciences; a distinguished record of research contributions; familiarity with academic and nonacademic institutions and agencies involved in social research, private and public funding agencies, social science associations and policy bodies; ability to plan and promote research programs; and experience in the administration of social science research operations.

Please send applications and nominations by February 28, 1979, to Search Committee, Bureau of Social Science Research, 1990 M Street, NW, Washington, DC, 20036. EOE

Cost Systems Analysts
3 positions - USPS
$17 - 22,500
$19 - 24,000
$21 - 26,000

Requirements: Bachelor's degree in economics, business administration, or operations research. Experience in microeconomic problem-solving with multidisciplinary exposures including statistics and information systems extremely helpful. These positions are concerned with (1) the development of incremental costs and costing systems for pricing postal services, and (2) the preparation of related expositions for purposes of management and/or regulatory proceedings. Send resume to Manager, Cost Analysis Branch, Room 1922, U.S. Postal Service, 475 L'Enfant Plaza, SW, Washington, DC 20260.

Mathematical Statistician
GS-1529-9 IRS

Plans, prepares, and monitors the execution of sampling plans connected with management and research studies for the entire service. Analyzes results of surveys and prepares reports. Consults with other divisions in the Service on a large variety of statistical problems. Must have knowledge of sampling theory and regression analysis; background in multivariate analysis and/or time series analysis helpful. Send resume to Mrs. Gayle Smith, Administrative Officer, Statistics Division, Internal Revenue Service, 1111 Constitution Avenue, NW, Washington, DC 20224.

Mathematical statistician
GS-1529-7/9/11
Bureau of the Census

Some positions are available in activities regarding large-scale sample survey work, including sample design and selection, estimation of sampling and nonsampling error, and estimation procedures. Experience and/or course work in survey design and sampling theory essential. Advanced degree in statistics or mathematics with statistics concentration preferred. Send SF 171 to Sue Miskura, U.S. Bureau of the Census, Statistical Methods Division, FOB #3, Room 3087, Washington, DC 20233.

Employment Column -- continued from previous page

Statistician (General)
GS-1530-7/9/11/
Environmental Protection Agency

EPA is seeking a creative person interested in directing and performing various statistical studies on automotive emission data. The position requires the incumbent to support functions which receive national attention such as motor vehicle recalls, fuel and fuel additive waiver decisions, vehicle tampering surveys, and gasoline switching practices. Further, the statistician will be responsible for designing and modifying sampling plans for assembly line and in-use testing of automobiles, characterizing vehicle emissions from national programs, and developing new measures of vehicle surveillance.

Send SF 171 or personal resume to Dr. Barry D. Nussbaum, Mobile Source Enforcement Division (EN-340), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

Mathematical Statistician
GS-1529-16
National Highway Traffic
Safety Administration

Serves as Chief, Mathematical Analysis Division. Directs detailed mathematical and statistical analyses and followup studies of crash trauma, driver factors, vehicle performance, and environmental phenomena in the scientific research of crash and injury causation in support of national traffic and motor vehicle safety programs and standards. Responsible for directing a program of scientific research to investigate causative factors of accidents and injuries by use of practical and theoretical application of mathematical, statistical and operations research methodology. Also responsible for developing mathematical principles and techniques for application to a variety of scientific and engineering questions relating to specific programs and projects in highway and traffic safety subject areas.

Applicants should possess experience in planning, directing, and managing scientific and technical activities utilizing multidisciplinary approaches to the solution of program research problems; experience in the mathematical and statistical analysis of operational problems and the design of associated data systems; and experience in program evaluation using quantitative methods.

Send SF 171 to National Highway Traffic Safety Administration, Office of Personnel Management, Room 5306, 400 Seventh Street, SW, Washington, DC 20590. ATTN: Code 600.

Notice to job applicants --

This is a reminder that this column is intended for job applicants as well as for employers who have job openings. Anyone interested in inserting a notice should provide a brief statement covering the following topics: education, fields of competence, experience, salary level desired, and types of employment (preferences, such as location, whether public or private, etc). To protect confidentiality, applicants are assigned a code number which employers use to identify job seekers. Applicants are notified of the employer's interest and initiation of further contact is left up to the applicant.