

JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION

1108 16th St., N.W. Washington 6, D. C.

March, 1956
VOL. 51 NO. 273

Tabular Analysis of Factorial Experiments and the Use of Punch Cards
J. R. BAINBRIDGE, ALISON M. GRANT, AND U. RADOK

A Test of the Accuracy of a Production Index.....CHARLES F. CARTER AND MARY ROBSON

On Simplifications of Sampling Design Through Replication with Equal Probabilities and Without Stages
W. EDWARDS DEMING

Investigating the Properties of a Sample Mean by Employing Random Subsample Means.. HOWARD L. JONES

Table of Percentage Points of Kolmogorov Statistics..... LESLIE H. MILLER

Some Theoretical Aspects of the Lot Plot Sampling Inspection Plan..... LINCOLN E. MOSES

Estimates of Bounded Relative Error for the Ratio of Variances of Normal Distributions... STANLEY REITER

Multiple Regression With Missing Observations Among the Independent Variables..... GEORGE L. EDGETT

The Operating Characteristic Curve for Sequential Sampling by Variables When the Producer's and Consumer's Risks Are Equal..... NORMAN R. GARNER

Statistician and Policy Maker: A Partnership in the Making..... WERNER Z. HIRSCH

BOOK REVIEWS AND STATISTICAL ABSTRACTS

ASA

THE AMERICAN STATISTICAL ASSOCIATION INVITES
AS MEMBERS ALL PERSONS INTERESTED IN:

1. Development of new theory and method
2. Improvement of basic statistical data
3. Application of statistical methods to practical problems.

ESTADISTICA

Journal of the Inter American Statistical Institute

Volume XIII, No. 48-49

Contents

September-December 1955

Next Tasks in the Measurement of Production and Productivity..... IRVING H. SIEGEL

Estadísticas Migratorias Internacionales: Situación Actual, Aplicación y Futuro Desarrollo de las Recomendaciones Internacionales..... Oficina de Estadística de las Naciones Unidas

Procedimiento de Interpolación para la Construcción de una Tabla Completa de Mortalidad
ROQUE GARCÍA-FRÍAS

Procedimientos de Recopilación y Clases de Datos de las Estadísticas Industriales Continuas en Argentina
Dirección Nacional del Servicio Estadístico

Subsídios para o Estudo dos Fatores Determinantes e Consequências das Variações Demográficas no Brasil
GERMANO G. JARDIM

Las Cuentas de las Corrientes Monetarias (Estados Unidos)..... DANIEL H. BRILL

Progress in National Income Accounting of Honduras—Progreso en la Contabilidad del Ingreso Nacional de Honduras..... Banco Central de Honduras

Vital Statistics of Panama—Estadísticas Vitales de Panamá..... CARMEN A. MIRÓ

Importancia Metodológica del Censo del Canadá de 1951: Un Elogio del Informe Administrativo de la DBS
RICARDO LUNA VEGAS

Informe de la Comisión "B" sobre la Estadística del Seguro Social, Seminario Interamericano de Seguridad Social, Panamá, 1954

Institute Affairs. Statistical News. Publications.

Published quarterly *Annual subscription price \$3.00 (U. S.)*

INTER AMERICAN STATISTICAL INSTITUTE

Pan American Union
Washington 6, D.C.

ECONOMETRICA

Journal of the Econometric Society
Contents of Vol. 24, No. 1 - January, 1956

L. JURSEN.....	Long-Term Trends in Food Consumption
M. BOTTEUX.....	Sur la gestion des Monopoles Publics astreints à l'équilibre budgétaire
MURRAY KEMP.....	The Relation Between Changes in International Demand and the Terms of Trade
ROBERT L. BASMANN.....	A Theory of Demand with Consumer's Preferences Variable
TAIROKU KOSE.....	Solutions of Saddle Value Problems by Differential Equations
TAPAS MAJUMDAR.....	Preference, Choice and the Theory of Games
S.S.R.C. COMMITTEE REPORT	Report of Inter-Society Committee on the Mathematical Training of Social Scientists

BOOK REVIEWS

<i>Elements of Pure Economics</i> (Leon Walras). Review by Robert Solow
<i>Contributions of Survey Methods to Economics</i> (L. R. Klein, Ed.) Review by M. J. Farrell
<i>Operations Research for Management</i> (Joseph F. McCloskey and Florence N. Trefethen, Eds.). Review by R. Dorfman
<i>Distributed Lags and Investment Analysis</i> (L. M. Koyck). Review by Paul Boschan
<i>Price-Determining Factors in American Tobacco Markets</i> (Hendriekje Goris). Review by Elmo L. Jackson
<i>Les Fondements Comptables de la Macro-Economie, Les Equations Comptables entre Quantités Globales et leurs Applications</i> (M. Allais). Review by Walter Froehlich
<i>Probleme der statistischen Methodenlehre</i> (O. Anderson). Review by L. Schmetterer
<i>Biometrika Tables for Statisticians, Volume I</i> (E. S. Pearson and H. O. Hartley). Review by A. Hald
<i>Introduction à l'analyse macro-économique. Tome 1. Les origines</i> (Jean-Claude Antoine). Review by Pierre Maillet
<i>Die volkswirtschaftliche Gesamtrechnung</i> (Werner Hofman). Review by Hans Peter
<i>Il Monopolo nella Teoria Economica</i> (Siro Lombardini). Review by Pietro Castiglioni

Published Quarterly

The Econometric Society is an international society for the advancement of economic theory in its relation to statistics and mathematics.

Subscriptions to *Econometrica* and inquiries about the work of the Society and the procedure in applying for membership should be addressed to Richard Ruggles, Secretary, The Econometric Society, Box 1264, Yale University, New Haven, Connecticut.

Subscription rates available on request

BIOMETRIKA

Volume 42

Contents Parts 3 and 4, December 1955

CHAPMAN, D. G. Population estimation based on change of composition caused by a selective removal.
WAUGH, W. A. O'N. An age-dependent birth and death process. ANDREWS, F. C. & CHERNOFF, H. A large-sample bioassay design with random doses and uncertain concentration. HANNAN, E. J. An exact test for correlation between time series. WATSON, G. S. Serial correlation in regression analysis.
I. GANI, J. Some theorems and sufficiency conditions for the maximum-likelihood estimator of an unknown parameter in a simple markov chain. WILLIAMS, E. J. Significance tests for discriminant functions and linear functional relationships. YATES, F. A note on the application of the combination of probabilities test to a set of 2×2 tables. YATES, F. The use of transformations and maximum likelihood in the analysis of quantal experiments involving two treatments. STUART, A. A test for homogeneity of the marginal distributions in a two-way classification. HABERMAN, S. Distributions of Kendall's tau based on partially ordered systems. SIMON, H. A. On a class of skew distribution functions. GHOSH, M. N. Simultaneous tests of linear hypotheses. HUITSON, A. A method of assigning confidence limits to linear combinations of variances. TUKEY, J. W. Interpolations and approximations related to the normal range. BRADLEY, R. A. Rank analysis of incomplete block designs. III. Some large-sample results on estimation and power for a method of paired comparisons. MOHAN, C. The gambler's ruin problem with correlation. ARMSEN, P. Tables for significance tests of 2×2 contingency tables.

Miscellanea—Contributions by DAVID, H. A., COHEN, A. C., HALDANE, J. B. S., CHU, J. T., LESLIE, P. H., PAGE, E. S., STUART, A., JAMES, G. S., GOOD, I. J., HUZURBAZAR, V. S.

Reviews

Other books received

The subscription price, payable in advance, is 45s. inland, 54s. export (per volume including postage). Cheques should be drawn to Biometrika and sent to "The Secretary, Biometrika Office, Department of Statistics, University College, London, W.C. 1." All foreign cheques must be in sterling and drawn on a bank having a London agency.

MATHEMATICAL REVIEWS

A journal containing reviews of the mathematical literature of the world, with full subject and author indices

Publication of this journal is sponsored by the American Mathematical Society, Mathematical Association of America, Institute of Mathematical Statistics, London Mathematical Society, Edinburgh Mathematical Society, Union Matematica Argentina, and others.

Subscriptions accepted to cover the calendar year only.
Issues appear monthly except July. \$20.00 per year.

Send subscription order or request for sample copy to

**AMERICAN MATHEMATICAL SOCIETY
80 Waterman Street, Providence 6, Rhode Island**

JOURNAL OF THE ROYAL STATISTICAL SOCIETY

Series B (Methodological)

Vol. XVII, No. 1, 1955

The Journal of the Royal Statistical Society is published in two series: Series A (General), four issues a year, 15s. each part, annual subscription £3.1s. post free; Series B (Methodological), two issues a year, 22s.6d. each part, annual subscription 45s.6d. post free.

- Permutation Theory in the Derivation of Robust Criteria and the Study of Departures from Assumption
G. E. P. BOX AND S. L. ANDERSEN (With Discussion)
- Some Problems in the Statistical Analysis of Epidemic Data.....NORMAN T. J. BAILEY (With Discussion)
- Statistical Methods and Scientific Induction.....SIR RONALD FISHER
- Pivotal Quantities for Wishart's and Related Distributions, and a Paradox in Fiducial Theory.
J. G. MAULDON
- Confidence Intervals for the Parameter of a Distribution Admitting a Sufficient Statistic when the Range
Depends on the Parameter.....V. S. HUZURBAZAR
- Least Squares Regression Analysis for Trend-Reduced Time Series.....G. H. JOWETT
- Numerical Investigation of Least Squares Regression Involving Trend-Reduced Markoff Series.
J. F. SCOTT AND V. J. SMALL
- Sampling Experiment on the Powers of the Records Tests for Trend in Time Series
F. G. FOSTER AND D. TEICHROEW
- Moments of Negative Order and Ratio-Statistics.....H. A. DAVID
- A Rectifying Inspection Plan.....ZIVIA S. WURTELE

The Royal Statistical Society, 21, Bentinck Street, London, W. 1

SANKHYĀ

The Indian Journal of Statistics
Edited by P. C. Mahalanobis

Vol. 15, Part 3, 1955

Completeness, Similar Regions, and Unbiased Estimation—Part II.....	E. L. LEHMANN AND H. SCHEFFÉ
Certain Modified Forms of Binomial and Poisson Distributions.....	V. M. DANDEKAR
A Note on the Structure of a Stochastic Model Considered by V. M. Dandekar.....	D. BASU
Analysis of Dispersion for Multiply Classified Data with Unequal Numbers in Cells.....	C. R. RAO
Approximate Probability Values for Observed Number of "Successes" from Statistically Independent Binomial Events with Unequal Probabilities.....	JOHN E. WALSH
Tables of Two-Sided 5% and 1% Control Limits for Individual Observations of the r-th Order	MOTOSABURO MASUYAMA
Modified Mean Square Successive Difference with an Exact Distribution.....	A. R. KAMAT
Estimation and Tests of Significance of the Components of a Time-Series.....	O. SURYANARAYANA
A Note on a Form of Tchebycheff's Inequality for Two or More Variables.....	D. N. LAL
Unbiased Test for a Specified Value of the Parameter in the Non-central F Distributions	N. MARAKATHAVALLI

ANNUAL SUBSCRIPTION: 30 rupees (\$10.00), 10 rupees (\$3.50) per issue.

BACK NUMBERS: 45 rupees (\$15.00) per volume; 12/8 rupees (\$4.50) per issue.

Subscriptions and orders for back numbers should be sent to

STATISTICAL PUBLISHING SOCIETY

204/1 Barrackpore Trunk Road

Calcutta 35, India

THE INSTITUTE OF MATHEMATICAL STATISTICS

(Organized September 12, 1935)

OFFICERS FOR 1956

President:

David Blackwell, University of California, Berkeley, California

President-Elect:

Alexander M. Mood, General Analysis Corporation, 710 Wilshire Blvd.,
Santa Monica, California

Secretary:

G. E. Nicholson, University of North Carolina, Chapel Hill, North
Carolina

Treasurer:

A. H. Bowker, Stanford University, Stanford, California

Editor:

T. E. Harris, The RAND Corporation, 1700 Main Street, Santa Monica,
California

The purpose of the Institute of Mathematical Statistics is to encourage the development, dissemination, and application of mathematical statistics.

Membership dues including a subscription to the ANNALS OF MATHEMATICAL STATISTICS are \$10.00 per year for residents of the United States or Canada and \$5.00 per year for residents of other countries. There are special rates for students and for some other classes of members. Inquiries regarding membership in the Institute should be sent to the Secretary of the Institute.

MEETINGS OF THE INSTITUTE

TENTATIVE SCHEDULE

EASTERN REGIONAL MEETING—PRINCETON, N. J.

April 20-21, 1956 (With Biometric Society)

CENTRAL REGIONAL MEETING—CHICAGO, ILLINOIS

April 27-28, 1956 (With Biometric Society)

ANNUAL MEETING—SEATTLE, WASHINGTON

August 20-24, 1956 (With American Mathematical Society and others)

MIDWESTERN REGIONAL MEETING—DETROIT, MICHIGAN

September 7-10, 1956 (With American Statistical Association and others)

(See special announcement in this issue concerning submission of Abstracts.)