

ESTADISTICA

Journal of the Inter American Statistical Institute

Vol. XI, No. 40

September 1953

** Contents*

Las Estadísticas del Turismo: Problemas Básicos y Situación en los Países Americanos ALBERTO VESPRÉMY BANGHA		
A National Identity Registration System to Synthesize Social Statistics HALBERT L. DUNN		
M. todos y Problemas del Primer Censo de Comercio e Industrias de Costa Rica, 1950-1951.....	WILBURG JIMÉNEZ CASTRO	
El Índice Canadiense de Precios al Consumidor (Traducción) DOMINION BUREAU OF STATISTICS		
Special Vegetable Surveys in the New York City Market Area.....	IRVIN HOLMES	
Nuevos Procedimientos Censales en el Canadá (Traducción).....	NATHAN KEYFITZ	
La Estadística como una Carrera.....	HOWARD L. JONES Y HARRY V. ROBERTS	
Los Censos Industriales en la Naciones Americanas.....	ROSE W. BURTON	
Computing Charts for Social Security Benefits—Esquemas de Computación para los Beneficios de la Seguridad Social.....	EUGENE A. RASOR	
Center of Population of the United States, 1950—Centro de Población de los Estados Unidos, 1950.....	U. S. BUREAU OF THE CENSUS	
Institute Affairs	Statistical News	Publications

Published quarterly; annual subscription price \$3.00 (U.S.); single copies \$1.00 (U.S.)
Inter American Statistical Institute, % Pan American Union, Washington 6, D.C., U. S. A.

JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION

1108 16th St., N.W.

Washington 6, D. C.

September, 1953

VOL. 48 NO. 263

Statistics in Chemical Experimentation.....	G. DANIEL
Procedures for the Rejection of Suspected Data.....	EDGAR P. KING
The Distribution of the Product of Ranges in Samples from a Rectangular Population PAUL R. RIDER	
A Statistically Precise and Relatively Simple Method of Estimating the Bio-assay with Quantal Response, Based on the Logistic Function.....	JOSEPH BERKSON
Confidence and Tolerance Intervals for the Normal Distribution.....	FRANK PROSCHAN
Improving Marriage and Divorce Statistics.....	HUGH CARTER
Sampling the Federal Old-Age and Survivors Insurance Records.....	BENJAMIN J. MANDEL
Calculating Longevity from Sample Composition.....	LEO A. GOODMAN
On the Use of Ranges, Cross Ranges, and Extremes in Comparing Small Samples HANNES HYRENIUS	
Critical Values of the Log-Normal Distribution.....	JACK MOSHMAN
How Marketing Problems of the Apple Industry Were Attacked and the Research Results Applied.....	MAX E. BRUNK AND WALTER T. FEDERER
A Note on the Analysis of Randomized Experiments.....	O. KEMPTHORNE AND W. D. BARCLAY
Life Testing.....	BENJAMIN EPSTEIN AND MILTON SOBEL
The Elements of an Industrial Classification Policy.....	WALT R. SIMMONS
Measuring the Accuracy and Structure of Businessmen's Expectations.....	DAVID FERBER

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.

ECONOMETRICA

Journal of the Econometric Society
Contents of Vol. 21, No. 3 - July, 1953

- R. MERCIER..... Comptabilité Nationale et Tableaux Economiques
R. H. STROTZ, J. C. McANULTY, AND J. B. NAINES, JR.... Goodwin's Nonlinear
Theory of the Business Cycle: An Electro-Analog Solution
ROBERT M. SOLOW AND PAUL A. SAMUELSON.... Balanced Growth under Constant
Returns to Scale
L. R. KLEIN AND H. W. MOONEY..... Negro-White Savings Differentials and
the Consumption Function Problem
NICHOLAS GEORGESCU-ROEGEN..... Note on Holley's "Dynamic Model"
JULIAN L. HOLLEY..... Comment on Georgescu-Roegen's Note on "A Dynamic
Model."

Report on The Chicago Meeting

Book Reviews

- Studies in Income and Wealth: Volume Fifteen.* Review by Mary Jean Bowman
Cahiers du séminaire d'économétrie (René Roy, ed.). Review by E. Malinvaud
The Process of Economic Growth (W. W. Rostow). Review by Ralph Turvey
Computing Manual (Fred Gruenberger). Review by Harry Geheen
The Economic Organization of Agriculture (Theodore W. Schultz). Review by Fred-
erick V. Waugh

Aufsätze zur ökonomischen Theorie (Joseph A. Schumpeter). Review by Fritz Machlup
Announcements and Notes

Notice of Washington Meeting

Back Numbers of *Econometrica*

News Note

Published Quarterly

Subscription rates available on request

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 Rossen L. Cardwell, Acting Secretary, The Econometric Society, The University of Chicago, Chicago 37, Illinois, U. S. A.

BIOMETRIKA

A Journal for the Statistical Study of Biological Problems

Volume 40

Contents

Parts 1 and 2, June 1953

On the range of partial sums of a finite number of independent normal variates. By ANIS, A. A. & LLOYD, E. H. The Total Size of a General Stochastic Epidemic. By BAILEY, N. T. J. Approximate confidence intervals. By BARTLETT, M. S. Estimating Parameters in Truncated Pearson Frequency Distributions without resort to Higher Moments. By COHEN, A. C. The Superposition of several strictly periodic Sequences of Events. By COX, D. R. & SMITH, W. L. On the utilization of marked specimens in estimating populations of flying insects. By CRAIG, C. C. Experimental evidence concerning contagious distributions. By EVANS, D. A. The effect of unequal group variances on the F-test for the homogeneity of group means. By HORSNELL, G. Incomplete and Absolute Moments of the Multivariate normal distribution with some applications. By KAMAT, A. R. On the Mean Successive Difference and its Ratio to the Root Mean Square. By KAMAT, A. R. Tests of Significance in a 2 x 2 contingency table: extension of Finney's table. By LATSCHA, R. The estimation of population parameters from data obtained by the capture-recapture method, Part III. By LESLIE, P. H. & CHITTY, D. Estimation of a functional relationship. By LINDLEY, D. V. A Sequential Test for Randomness. By MOORE, P. G. Note on 'The Jacobians of certain matrix transformations useful in Multivariate Analysis'. By OLKIN, I. A Method for Judging all Contrasts in the Analysis of Variance. By SCHEFFÉ, H. Tables of the Angular Transformation. By STEVENS, W. L. The Estimation and Comparison of Strengths of Association in Contingency Tables. By STUART, A. A problem of Interference between Two Queues. By TANNER, J. C. *Miscellanea*: Time Intervals between accidents, A Note on Maguire, Pearson & Wynn's paper. By BARNARD, G. A. On a method of Estimating Biological Populations in the Field. By CRAIG, C. C. Non normality in two sample t-tests. By GRONOW, D. G. C. Doolittle Method and the fitting of polynomial to weighted data. By GUEST, P. G. Note on the Poisson Index of Dispersion. By KATHIRGAMATAMBY, N. On an extension of Geary's Theorem. By LAHA, R. G. A Rapid Method of Estimating the Correlation Coefficient from the range of the deviations about the reduced major axis. By LEIGH-DUGMORE, C. H. The effect of overlapping in bacterial counts of incubated colonies. By MACK, C. Further notes on the analysis of accident data. By MAGUIRE, B. A., PEARSON, E. S. & WYNN, A. H. A. A simple method of devising best critical regions similar to the sample space in tests of an important class of composite hypotheses. By RAO, K. S.

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)

Contents of Volume 14, No. 1, 1952

P. ARMITAGE.....	The Statistical Theory of Bacterial Populations Subject to Mutation (with Discussion)
DAVID G. KENDALL	On the Choice of a Mathematical Model to Represent Normal Bacterial Growth
K. D. TOCHER....	The Design and Analysis of Block Experiments (with Discussion)
S. C. PEARCE.....	Some New Designs of Latin Square Type
I. J. GOOD.....	Rational Decisions
MARTIN SANDELIUS	A Confidence Interval for the Smallest Proportion of a Binomial Population
A. M. WALKER.....	Some Properties of the Asymptotic Power Function of Goodness-of-Fit Tests for Linear Autoregressive Schemes
A. GARDNER.....	Greenwood's "Problem of Intervals": An Exact Solution for $N = 3$

The Royal Statistical Society, 4, Portugal Street, London, W.C.2.

SKANDINAVISK AKTUARIETIDSKRIFT

1952 - Parts 1 - 2

Contents

- ERLING SVERDRUP.....Basic Concepts in Life Assurance Mathematics
J. WOLFOWITZ.....Consistent Estimators of the Parameters of a Linear Structural
Relation
PER OTTESTAD.....On the Analysis of Variance of Percentage Fractions
J. LEFÈVRE.....Application de la Théorie Collective du Risque à la Réassurance
"Excess-Loss."
KAI LAI CHUNG.....On the Renewal Theorem in Higher Dimensions
ARNE JENSEN....A Short Remark on the Theory of Random Sampling and the
Theory of Variance
N. BLOMQUIST.....On an Exhaustion Process
P. WHITTLE....Certain Nonlinear Models of Population and Epidemic Theory
P. WHITTLE.....On Principal Components and Least Square Methods of
Factor Analysis

Annual subscription: 10 Swedish Crowns (Approx. \$2.00).

Inquiries and orders may be addressed to the Editor.

SKÄRVIKSVÄGEN 7, DJURSHOLM (SWEDEN)

SANKHYĀ

The Indian Journal of Statistics

Edited by P. C. Mahalanobis

Vol. 12, Parts 1 and 2, 1952

By P. C. MAHALANOBIS. Some aspects of the design of sample surveys. By
M. N. GHOSH. An extension of Wald's decision theory to unbounded weight
functions. By C. RADHAKRISHNA RAO. Some theorems on minimum vari-
ance estimation. By D. BASU. An example of non-existence of a minimum
variance estimator. By D. BASU. On symmetric estimators in point estima-
tion with convex weight functions. By C. RADHAKRISHNA RAO. Minimum
variance estimation in distribution admitting ancillary statistics. By D. BASU.
On a class of admissible estimators of the normal variance. By S. RUSHTON.
On sequential tests of the equality of variances of two normal populations with
known means. By R. R. BAHADUR. A property of the t-statistic. By A.
BHATTACHARYYA. On some uses of the t-distribution in multivariate
analysis. By A. K. GAYEN. The inverse hyperbolic sine transformation on
Student's t for non-normal samples. By K. NAGABHUSANAM. Some aspects
of stationary time series. By HENRY B. MANN. On the estimation of param-
eters determining the mean value function of a stochastic process. By D. J.
FINNEY. The estimation of the ED50 for a logistic response curve. By E. J.
F. PRIMROSE. Resolvable balanced incomplete block designs. By C. CHAN-
DRA SEKAR and P. N. CHAKRABORTY. On the concept and use of orthogonal
semi-polynomials. By MAHESH CHAND and ASOKE KUMAR BANERJI. A
statistical study of absenteeism in Indian labour. By A. MAHALANOBIS.
Statistical quality control in an Indian manufacturing concern. Report of the
sub-commission on statistical sampling.

Annual subscription: 30 rupees

Inquiries and orders may be addressed to the
Editor, Sankhyā, Presidency College, Calcutta, India.

THE INSTITUTE OF MATHEMATICAL STATISTICS

(Organized September 12, 1935)

OFFICERS FOR 1953

President:

M. H. Hansen, Bureau of the Census, Washington, D. C.

President-Elect:

E. G. Olds, Carnegie Institute of Technology, Pittsburgh, Pennsylvania

Secretary-Treasurer:

K. J. Arnold, Michigan State College, East Lansing, Michigan

Editor:

E. L. Lehmann, University of California, Berkeley, California

The purpose of the Institute of Mathematical Statistics is to stimulate research in the mathematical theory of statistics and to promote cooperation between the field of pure research and the fields of application.

Membership dues including subscription to the ANNALS OF MATHEMATICAL STATISTICS are \$10.00 per year within the United States and Canada and \$7.00 per year elsewhere. Dues and inquiries regarding membership in the Institute should be sent to the Secretary-Treasurer of the Institute.

MEETINGS OF THE INSTITUTE

ANNUAL MEETING—WASHINGTON, D. C.—

December 27-30, 1953.

To be held in conjunction with meetings of the American Statistical Association and the Econometric Society. Abstracts of contributed papers to be presented at this meeting must be in the hands of Associate Secretary, Lionel Weiss, Department of Economics, University of Virginia, Charlottesville, Virginia, by November 13, 1953.

SUMMER MEETING—MONTREAL, QUEBEC—

September 10-13, 1954.

To be held in conjunction with meetings of the American Statistical Association and the Econometric Society.