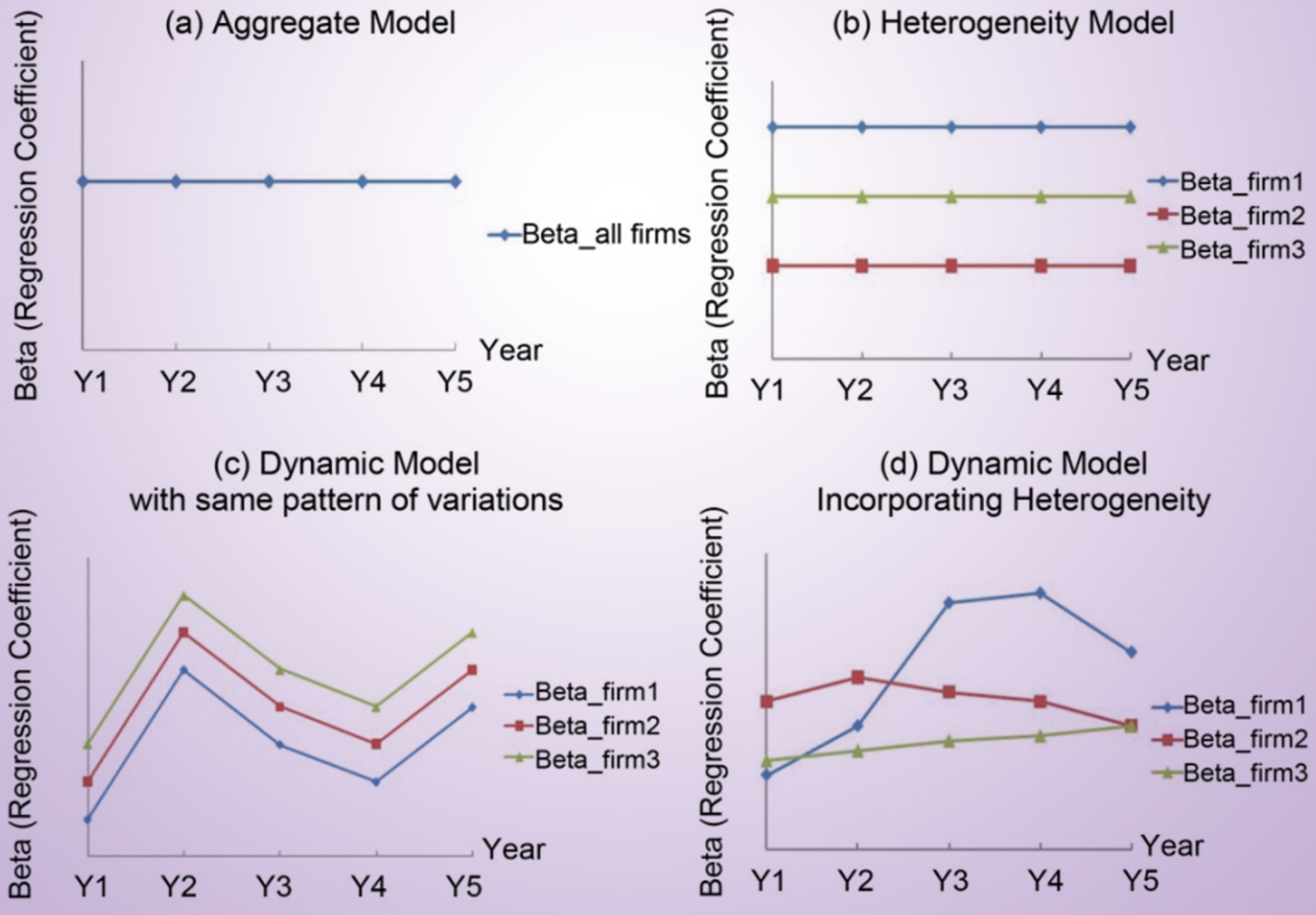
ISSN: 2161-718X Volume 7, Number 1, February 2017

Scientific Research Publishing

Open Journal of Statistics



ISSN: 2161-718X
9 772161 718001 01

www.scirp.org/journal/ojs

Journal Editorial Board

ISSN 2161-718X (Print) ISSN 2161-7198 (Online)
http://www.scirp.org/journal/ojs

Editor-in-Chief

Prof. Qihua Wang Chinese Academy of Sciences, China

Editorial Board

Prof. Ana M. Aguilera University of Granada, Spain
Prof. Essam K. Al-Hussaini Alexandria University, Egypt
Prof. Erniel B. Barrios University of the Philippines, Philippines
Prof. Alexander V. Bulinski Lomonosov Moscow State University, Russia
Prof. Junsoo Lee University of Alabama, USA
Prof. Tae-Hwy Lee University of California, Riverside, USA
Dr. Qizhai Li Chinese Academy of Sciences, China
Dr. Xuewen Lu University of Calgary, Canada
Prof. Claudio Morana University of Milano-Bicocca, Italy
Prof. Thu Pham-Gia University of Moncton, Canada
Prof. Gengsheng Qin Georgia State University, USA
Prof. Kalyan Raman Northwestern University, USA
Prof. Mohammad Z. Raqab University of Jordan, Jordan
Dr. Jose Antonio Roldán-Nofuentes University of Granada, Spain
Prof. Sunil K. Sapra California State University, Los Angeles, USA
Prof. Raghu Nandan Sengupta Indian Institute of Technology Kanpur, India
Prof. Siva Sivaganesan University of Cincinnati, USA
Prof. Jianguo Sun University of Missouri, USA
Prof. Aida Toma Academy of Economic Studies, Romania
Dr. Florin Vaida University of California, San Diego, USA
Dr. Haiyan Wang Kansas State University, USA
Prof. Augustine Chi Mou Wong York University, Canada
Dr. Peng Zeng Auburn University, USA
Dr. Jin-Ting Zhang National University of Singapore, Singapore
Prof. Yichuan Zhao Georgia State University, USA
Dr. Wang Zhou National University of Singapore, Singapore

Scientific Research Publishing

Open Journal of Statistics, 2017, 7, 1-172
http://www.scirp.org/journal/ojs
ISSN Online: 2161-7198
ISSN Print: 2161-718X

Table of Contents

Volume 7 Number 1 February 2017

Inferences on the Difference of Two Proportions: A Bayesian Approach

T. Pham-Gia, N. V. Thin, P. P. Doan.....1

The Conditional Poisson Process and the Erlang and Negative Binomial Distributions

A. Agarwal, P. Bajorski, D. L. Farnsworth, J. E. Marengo, W. Qian.....16

RobCoP: A Matlab Package for Robust CoPlot Analysis

Y. K. Atilgan, E. L. Atilgan.....23

An Application of Heterogeneous Bayesian Regression Models with Time Varying Coefficients to Explore the Relationship between Customer Satisfaction and Shareholder Value

D. K. H. Fong, Q. Chen, Z. Chen, R. Wang.....36

Microarray Analysis Using Rank Order Statistics for ARCH Residual Empirical Process

H. K. Solvang, M. Taniguchi.....54

Measuring the Intraday Jump Tail Risk of Financial Asset Price with Noisy High Frequency Data

C. Yu, X. J. Zhao, F. Zhang.....72

A New Generalized Weibull-Exponential Frailty Model

A. Shanubhogue, A. R. Sinojiya.....84

Marginal Distribution Plots for Proportional Hazards Models with Time-Dependent Covariates or Time-Varying Regression Coefficients

Q. Q. Yu, J. Y. Dong, G. Wong.....92

Application of *SARIMA* Model on Money Supply

S. C. Shen, S. Chen.....112

Forecasting Foreign Direct Investment to Zambia: A Time Series Analysis

S. Jere, B. Kasense, O. Chilyabanyama.....122

Scientific Research Publishing

Open Journal of Statistics, 2017, 7, 1-172
http://www.scirp.org/journal/ojs
ISSN Online: 2161-7198
ISSN Print: 2161-718X

An Approximation Method for a Maximum Likelihood Equation System and Application to the Analysis of Accidents Data

A. N'Guessan, I. C. Geraldo, B. Hafidi.....132

Use of BayesSim and Smoothing to Enhance Simulation Studies

J. D. Hart.....153

The figure on the front cover is from the article published in Open Journal of Statistics, 2017, Vol. 7, No. 1, pp. 36-53 by Duncan K. H. Fong, Qian Chen, Zhe Chen and Rui Wang.

Open Journal of Statistics (OJS)
Journal Information

SUBSCRIPTIONS

The *Open Journal of Statistics* (Online at Scientific Research Publishing, www.SciRP.org) is published bimonthly by Scientific Research Publishing, Inc., USA.

Subscription rates:
Print: $69 per issue.
To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements
Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)
Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.
E-mail: sub@scirp.org

COPYRIGHT

Copyright and reuse rights for the front matter of the journal:
Copyright © 2017 by Scientific Research Publishing Inc.
This work is licensed under the Creative Commons Attribution International License (CC BY).
http://creativecommons.org/licenses/by/4.0/

Copyright for individual papers of the journal:
Copyright © 2017 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:
Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

Disclaimer of liability
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:
E-mail: ojs@scirp.org

Call for Papers

Open Journal of Statistics

ISSN 2161-718X (Print) ISSN 2161-7198 (Online)
http://www.scirp.org/journal/ojs

Open Journal of Statistics (OJS) is an international journal dedicated to the latest advancement of statistics. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of statistics.

Editor-in-Chief

Prof. Qihua Wang Chinese Academy of Sciences, China

Editorial Board

Prof. Ana M. Aguilera
Prof. Essam K. Al-Hussaini
Prof. Erniel B. Barrios
Prof. Alexander V. Bulinski
Prof. Junsoo Lee
Prof. Tae-Hwy Lee
Dr. Qizhai Li
Dr. Xuewen Lu
Prof. Claudio Morana
Prof. Thu Pham-Gia
Prof. Gengsheng Qin
Prof. Kalyan Raman
Prof. Mohammad Z. Raqab
Dr. Jose Antonio Roldán-Nofuentes
Prof. Sunil K. Sapra
Prof. Raghu Nandan Sengupta
Prof. Siva Sivaganesan
Prof. Jianguo Sun
Prof. Aida Toma
Dr. Florin Vaida
Dr. Haiyan Wang
Prof. Augustine Chi Mou Wong
Dr. Peng Zeng
Dr. Jin-Ting Zhang
Prof. Yichuan Zhao
Dr. Wang Zhou

Subject Coverage

This journal invites original research and review papers that address the following issues in statistics. Topics of interest include, but are not limited to:

- Actuarial science
- Applied information economics
- Asymptotic statistics
- Bayesian statistics
- Biostatistics
- Business statistics
- Causal inference
- Chemometrics
- Computational statistics
- Data mining
- Decision theory
- Demography
- Descriptive statistics
- Design of experiments
- Econometrics
- Energy statistics
- Engineering statistics
- Epidemiology
- Estimation theory
- Geographic information systems
- Graphic models and related theory
- High dimensional data analysis
- Image processing
- Multivariate analysis
- Non-parametric statistics
- Parametric statistics
- Psychological statistics
- Regression analysis
- Reliability
- Reliability engineering
- Sample survey
- Sampling theory
- Semiparametric statistics
- Social statistics
- Statistical analysis with complex data
- Statistical computing
- Statistical inference
- Statistical methods
- Survival analysis
- Theoretic methods
- Time series analysis

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the OJS.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

http://www.scirp.org/journal/ojs Email: ojs@scirp.org

What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience

Scientific Research Publishing

Website: http://www.scirp.org

Subscription: sub@scirp.org

Advertisement: service@scirp.org