International Conference on Methodology and Statistics, Ljubljana, 15-18 September 2002

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1   The 20th International Conference on Methodology and Statistics was held in Ljubljana - the capitol city of Slovenia - on 15-18 September, 2002. The conference is organized by the Center of Methodology and Informatics (CMI), Institute of Social Sciences of the Faculty of Social Sciences, University of Ljubljana, and Statistical Society of Slovenia in cooperation with the Statistical Office and the Ministry of Science and Technology of the Republic of Slovenia.

2   The annual conferences of methodologists and statisticians were established in 1982. The first conferences were organized in Bled and then for several years in Preddvor. Since 2001, the international conference is held at the Faculty of Social Sciences in Ljubljana. The three-day scientific program consists of sections dedicated to various topics in methodology and applied statistics.

3   The conference proceedings are usually published in the series *Metodoloski zvezki* (Ferligoj and Kramberger, 1993, 1995, 1996; Ferligoj, 1998; Ferligoj and Mrvar, 2000a & b, 2002; Mrvar and Ferligoj, 2002a & b). All published papers are regularly abstracted in the ISI's STMA and are reviewed by two anonymous reviewers. Since the conference held in 1997, the proceedings are available also online (http://mrvar.fdv.uni-lj.si/pub/mz/).

4   The scientific program of the 2002 conference included topics such as: measurement quality, survey research, nonresponse, Internet surveys, sampling, new research designs in marketing research, data analysis, social network analysis, analysis of categorical data, mathematical statistics, biostatistics and applications in various fields. All together 78 papers were presented, including four invited presentations and two plenary lectures.

5   Invited speakers this year were: Patrick Doreian, John C. Gower, Robin Henderson, and Donald B. Rubin.

6 On the first day of the conference, Donald B. Rubin (Harvard University, USA) presented the use of propensity score methods in marketing research (Rubin, 2002). These methods are useful for research situations where randomized experiments are difficult or impossible to perform, and thus results must be obtained from observational (nonrandomized) data. In his talk, he showed that even though the applications in marketing are rare (the effects of many interventions - advertising, promotions, ... - are "assessed" using generally inappropriate techniques such a regression, data mining, etc.), the propensity score methods provide more standard predictive methods.

7 Following his talk, several sessions were held covering a variety of topics such as imputation methods in survey research, regression analysis, applications in economics, measurement of social networks, survey measurement via the WWW, and time series analysis.

8 The two invited lectures by Patrick Doreian and John C. Gower were presented at the begin of the second day of the conference. Patrick Doreian (University of Pittsburg, USA) emphasized the need to study negative and positive social ties since both dimensions emerge empirically. However, current research focuses predominantly on positive ties (Doreian, 2002). Doreian stressed that research interest in signed networks should be supported by substantive knowledge, valid measurement, and appropriate data analysis tools. Signed graph is an ordered pair (G, sigma); where G = (V, L) is a graph with a set of vertices V and a set of lines L, and sigma is a sign function L -> {p,n} where the lines with the sign p are positive and the lines with the sign n are negative (Doreian and Mrvar, 1996). The substantive background is provided by 'Structural balance theory'. He used signed blockmodeling tools for analyzing signed networks. However, these elements are still insufficient for establishing a general theory of balance. The central focus of structural balance theory is dynamic and change over time. Modest support for balance theory can be found by analyzing longitudinal network data sets. Other empirical studies produce more contradictory evidence and problems which were addressed by Patrick Doreian who also presented an agenda for studying the evolution of signed networks. Lively discussion followed the talk and tackled problems related to measuring signed networks with surveys.

9 John C. Gower (Open University, London, UK) in his talk, 'A Unified Approach to Biplots', discussed statistical biplots, which may be different from archetypal biplots, presenting information on variables and units in a data matrix (Gower, 2002). Namely, one can only have an approximation of the full-dimension Cartesian representation. This approximation induces non-orthogonal axes and complicates answers to questions concerning (a) positions of a point P given a case x (that is, the row of a data-matrix X), and (b) given a point P, what are the associated values of x? Also, there may be a need to represent X by metric or nonmetric multidimensional scaling, and ordered or unordered categorical variables. John Gover showed how all these needs may be handled in a unified way. Orthogonal projection is used as a key concept in the use of Cartesian axes; the more general concept of the nearest point to a set is invoked to handle the generalizations. For quantitative variables, calibrated axes are used and, for categorical variables, sets of labelled points representing the different category-levels are used. Following Gower's talk, there were sessions on network analysis methods, measurement problems, cluster analysis, data analysis, and applications of statistical methods.

10 On the third day of the conference Robin Henderson (Lancaster University, UK) talked about modeling of longitudinal and event-time data (Henderson, 2002). Methods for the

combined analysis of survival time and longitudinal data were presented. 'Joint modeling' was also discussed, which integrates methods developed to handle dropout in longitudinal trials with techniques developed for survival data analysis with intermittent time-dependent covariates, subject to measurement error. His talk covered quick and simple exploratory methods, modelling strategies and their limitations, estimation, and diagnostics.

11   Following his talk, there were two plenary presentations, starting with Tamas Rudas (Eotvos University and TARKI, Budapest, Hungary), followed by Albert Satorra (Universitat Pompeu Fabra, Barcelona, Spain).

12   Tamas Rudas talked about the ways missing data are handled in surveys (Rudas, 2002). He proposed to consider missing data as an unavoidable feature of any survey of a human population. The population is therefore seen as composed of observable and unobservable aspects. The true distribution is a mixture of both. When one wants to fit statistical models, one compares this mixture distribution to that of the so-called mixture index of fit. The proposed model can be specified for various types of missing data and forms of missing data mechanisms.

13   Albert Satorra discussed power of Chi-square goodness-of-fit tests in structural equation models in the case of non-normal data (Satora, 2002). Competing Chi-square statistics appear when a researcher is confronted with non-normal data. During his talk, asymptotic and finite sample distribution of various Chi-square goodness-of-fit test statistics were presented and discussed in a general setting where the data may be non-normal, the estimation method not necessarily (asymptotically) optimal, and model misspecification is allowed. Power of the test is then computed, distinguishing whether asymptotic robustness (AR) holds or not, and power of various test statistics is compared using asymptotic theory and Monte Carlo simulation. The asymptotic robust and the scaled version of normal theory (NT) Chi-square goodness-of-fit tests are compared. A scaled version of a NT goodness-of-fit test statistic for unweighted least squares (ULS) analysis is included among the investigated statistics. Following the last invited talk and both plenary presentations, there were several sessions covering topics such as survival analysis, social science methodology, survey methodology, and biostatistics. The last session was devoted to Internet applications.

14   On Sunday, the day preceding the conference, there was a traditional one-day tour to a selected part of beautiful Slovenian countryside. This year the excursion lead us to Karst, namely to Lipica, Dutovlje in Karst, Dobrovo castle, and vineyards and wine cellars of Brda. The social program, which also included the welcome reception given by the director of the Statistical Office, Mr. Tomaz Banovec, gave us plenty of opportunity to meet and discuss our research topics informally. At the reception, we were honored by a lively and passionate concert performed by Vlado Kreslin, one of the most famous performers of ethno-rock music in Slovenia.

15   The participants in this scientifically exciting and pleasant conference came from 16 different countries. The variety and quality of presented scientific work and the enjoyable social program again showed that this conference is well worth the participation of international researchers. This year's conference will be held in Ljubljana on 14-17 September. The home page for the conference is http://vlado.fmf.uni-lj.si/trubar/preddvor/2003/. This year, the invited lecturers are Wojtek J. Krzanowski (University of Exeter, UK), Frans N. Stokman (University of Groningen, Netherlands), and

Ronghui Xu (Harvard University, USA). The abstracts of approximately two pages should be sent to the conference address not later than 15 July 2003.

BIBLIOGRAPHY

Doreian, P. (2002): On the Evolution of Signed Social Networks. In: Mrvar, A. and Ferligoj, A. (Eds.): *International Conference on Methodology and Statistics: Program and Abstracts*, Ljubljana: FDV, 34-35.

Doreian, P. and Mrvar, A. (1996): Structural Balance and Partitioning Signed Graphs. In: Ferligoj, A. and Kramberger, A. (Eds.): *Developments in Data Analysis. Metodoloski zvezki*, 12, Ljubljana: FDV, 195-208.

Ferligoj, A. (Ed.) (1998): *Advances in Methodology, Data Analysis, and Statistics. Metodoloski zvezki*, 14, Ljubljana: FDV, ISBN 86-80227-85-4.

Ferligoj, A. and Kramberger, A. (Eds.) (1993): *Developments in Statistics and Methodology. Metodoloski zvezki*, 9, Ljubljana: FDV, ISBN 86-80227-34-X.

Ferligoj, A. and Kramberger, A. (Eds.) (1995): *Contributions to Methodology and Statistics. Metodoloski zvezki*, 10, Ljubljana: FDV, ISBN 86-80227-42-0.

Ferligoj, A. and Kramberger, A. (Eds.) (1996): *Developments in Data Analysis. Metodoloski zvezki*, 12, Ljubljana: FDV, ISBN 86-80227-55-2.

Ferligoj, A. and Mrvar, A. (Eds.) (2000a): *Developments in Survey Methodology. Metodoloski zvezki*, 15, Ljubljana: FDV, ISBN 961-235-039-6.

Ferligoj, A. and Mrvar, A. (Eds.) (2000b): *New Approaches in Applied Statistics. Metodoloski zvezki*, 16, Ljubljana: FDV, ISBN 961-235-040-X.

Ferligoj, A. and Mrvar, A. (Eds.) (2002): *Developments in Social Science Methodology. Metodoloski zvezki* , 18, Ljubljana: FDV, ISBN 961-235-091-4.

Gower, J. C. (2002): A Unified Apporach to Biplots. In: Mrvar, A. and Ferligoj, A. (Eds.): *International Conference on Methodology and Statistics: Program and Abstracts*, Ljubljana: FDV, 45.

Henderson, R. (2002): Joint Modelling of Longitudinal and Event Time Data. In: Mrvar, A. and Ferligoj, A. (Eds.): *International Conference on Methodology and Statistics: Program and Abstracts*, Ljubljana: FDV, 49.

Mrvar, A. and Ferligoj, A. (Eds.) (2002a): *Developments in Statistics. Metodoloski zvezki*, 17, Ljubljana: FDV, ISBN 961-235-090-6.

Mrvar, A. and Ferligoj, A. (Eds.) (2002b): *International Conference on Methodology and Statistics: Program and Abstracts*, Ljubljana: FDV.

Rubin, D. B. (2002): Propensity Score Methods in Marketing Applications. In: Mrvar, A. and Ferligoj, A. (Eds.): *International Conference on Methodology and Statistics: Program and Abstracts*, Ljubljana: FDV, 81.

Rudas, T. (2002): Mixture Models of Missing Data. In: Mrvar, A. and Ferligoj, A. (Eds.): *International Conference on Methodology and Statistics: Program and Abstracts*, Ljubljana: FDV, 81.

Satorra, A. (2002): Power of Chi-square Goodness-of-fit Tests in Structural Equation Models: The Case of non-Normal Data. In: Mrvar, A. and Ferligoj, A. (Eds.): *International Conference on Methodology and Statistics: Program and Abstracts*, Ljubljana: FDV, 82.

ABSTRACTS

This was the twentieth annual conference in Slovenia on methodology and statistics in the social sciences and included invited presentations by Patrick Doreian, John C. Gover, Robin Henderson and Donald B. Rubin. There were two plenary lectures, four invited presentations and a total of 78 papers presented.

Conférence internationale de méthodologie et de statistique, Ljubljana, du 15 au 16 septembre 2002: Lors de cette vingtième conférence annuelle en Slovenie sur la méthodologie et les statistiques en sciences sociales, les présentateurs invités ont été Patrick Doreian, John C. Gover, Robin Henderson et Donald B. Rubin. Il y avait deux sessions plénaires, quatre autres présentations invitées et un total de 78 papiers présentés.

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