IES 2013

Innovazione e società

Innovation and Society

Metodi statistici per la valutazione

Università degli Studi di Milano-Bicocca

9 - 10 dicembre 2013

CONTRIBUTI SPONTANEI

A cura di

Rosa Falotico, Paolo Mariani, Biancamaria Zavanella

Introduzione

L'attenzione degli statistici verso gli strumenti della valutazione dei servizi per la società è notevolmente aumentata negli ultimi anni, soprattutto per la richiesta proveniente sia del sistema produttivo sia dagli enti pubblici di tecniche idonee ad affrontare le problematiche inerenti la valutazione dell'efficacia, dell'efficienza e della qualità, con riferimento non solo alla customer satisfaction ma anche all'impatto che tale valutazione ha sull'innovazione di questi servizi.

Il Convegno "INNOVAZIONE E SOCIETÀ 2013. Metodi Statistici per la Valutazione (IES2013)", quinta edizione di un'iniziativa proposta a cadenza biennale dal Gruppo Permanente **Statistica per la Valutazione e Qualità nei Servizi** della Società Italiana di Statistica (SIS), si è posto due obiettivi principali. Da un lato questo evento ha voluto offrire l'opportunità di presentare una panoramica degli approcci e delle metodologie statistiche per la valutazione attualmente in uso nei diversi contesti dei servizi per la società. Dall'altro lato ha cercato di contribuire alla discussione delle ricadute della valutazione sull'innovazione di tali servizi, coinvolgendo i diversi attori delle politiche economiche e sociali.

Per questo motivo, il Convegno si è aperto alla partecipazione e al confronto con studiosi di altre discipline, esperti e responsabili delle politiche di sviluppo che si occupano dei collegamenti tra valutazione, innovazione e società.

I contributi spontanei presentati nel corso di questo evento sono stati raccolti sotto forma di abstract in questo lavoro, con l'auspicio che la loro diffusione stimoli ulteriori approfondimenti.

Gli abstract del Convegno ivi pubblicati vengono pubblicati così come inviati dagli autori al comitato di redazione.

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Comune di Milano

IES 2013 - INNOVAZIONE E SOCIETÀ, METODI STATISTICI PER LA VALUTAZIONE
INNOVATION AND SOCIETY, UNIVERSITY OF MILANO – BICOCCA, DECEMBER, 9 - 10 2013

PROGRAM OF THE MEETING

December, 9

09:00-10:00 U7.12 Registration

10:00-10:15 U7.12 Opening Address

10:15-11:00 U7.12 Plenary Session:
Chair/Discussant: Luigi D'Ambra
Speaker: Ron S. Kenett (Bayesian Network Applications to Customer Surveys)

11:00-11:15 Break (U7, 2nd floor, common room)

11:15-12:15 U7.12 Invited Session: "Evaluation of Teaching"
Chair/Discussant: Carla Rampichini
Speakers: Donata Marasini, Piero Quatto and Enrico Ripamonti (A measure of ordinal inter-rater agreement); Stefania Mignani and Roberto Ricci (Learning statistics at compulsory education: the achievement results based on the Invalsi tests); Bruno Bertaccini, Leonardo Grilli and Carla Rampichini (Are course ratings predictive of freshmen performances? Evidence from the University of Florence)

12:15-13:15 U7.12 Invited Session: "Effectiveness Evaluation and Career Opportunities"
Chair/Discussant: Ornella Giambalvo
Speakers: Lucio Masserini and Monica Pratesi (A small area model for analysing job placement survey data of the STELLA Consortium); Giovanna Boccuzzo and Luigi Fabbris (A model for measuring the educational effectiveness of Italian universities); Soru A. "L'esperienza Specula"

U7.17 Contributed Session: "Evaluation of Public Administration and Justice"
Chair/Discussant: Giuseppe Boari

13:15-14:15 Lunch (U7, 2nd floor, common room)

14:15-15:15 U7.12 Invited Session: "Evaluation of Research"
Chair/Discussant: Eugenio Brentari
Speakers: Sergio Scippacercola (The contradictions of the evaluations ANVUR, GEV13, SIS, VQR of scientific journals in statistics); Daniela Cocchi, Giuseppe Cavaliere, Marzia Freo, Simone Giannerini, Mario Mazzocchi, Carlo Trivisano and Cinzia Viroli (A support for classifying the scientific papers in a University Department); Roberta Paroli (Journals Classification: the Università Cattolica del Sacro Cuore experience)

15:15-16-30 U7.12 Invited Session: "Assessment of the Italian University System: the Role of Statistics and Statisticians"
Chair/Discussant: Bruno Chiandotto
Speakers: Massimo Attanasio, Vincenza Capursi, and Giulio Ghellini (Statistical tools to understand teaching activities and students paths in the Italian Universities); Maurizio Carpita and Donata Marasini (Statisticians and quality assurance in the University)

16:30-16:45 Break (U7, 2nd floor, common room)

16:45-17:45 U7.17 Contributed Session: "Evaluation of Teaching, Research and Career Opportunities A"
Chair/Discussant: Carla Rampichini

U7 De Lillo Contributed Session: "Evaluation of Teaching, Research and Career Opportunities B"
Chair/Discussant: Marisa Civardi

U7.12 Contributed Session: "Evaluation of Public and Private Sector A"
Chair/Discussant: Bruno Chiandotto

December, 10

09:00-10:00 U7.17 Contributed Session: "Statistical Methods for Evaluation A"
Chair/Discussant: Gianna Monti

U7.12 Contributed Session: "Evaluation of Public and Private Sector B"
Chair/Discussant: Eugenio Brentari

10:00-11:00 U7.12 Invited Session: "Evaluation in Public Administration and Policy"
Chair/Discussant: Mario Bolzan
Speakers: Giovanni Urbani (Evaluation policy and performance management in the current crisis); Lodovico Conzimu (The evaluation of active labour policies: the case of Employment Service Centres); Michele Benedetti (eGovernment under certain conditions: the needs of the PA who wants to renew); Anna Giraldo (Impact evaluation of public policy)

U7.17 Contributed Session: "Statistical Methods for Evaluation B"
Chair/Discussant: Giovanna Nicolini

11:00-11:30 Break (U7, 2nd floor, common room)

11:30-12:30 U7.17 Invited Session: "Evaluation of Justice"
Chair/Discussant: Francesco D'Ovidio
Speakers: Fabio Bartolomeo (The performance of the Italian Civil Justice and comparison with other European judicial systems); Marilene Lorizio and Antonia Rosa Gurrieri (Efficiency of Justice and Economic Systems); Laura Antonucci, Corrado Crocetta and Francesco d'Ovidio (Evaluation of Italian Judicial System)

U7.12 Round Table: "Evaluation of Public and Private Managers"
Chair/Discussant: Michele Gallo / Paolo Mariani
Speakers: Donato Limone, Pietro Traverso, Angela Paladino and Federico Neri, Nicoletta Magnetti and Mario Bolzan

12:30-13:45 U7.12 Plenary Session: "Statistical methods for developing, testing and analyzing the customer satisfaction questionnaire"
Chair/Discussant: Luigi D'Ambra
Speakers: Pasquale Sarnacchiaro, Michele Gallo and Luigi D'Ambra (Three-way decomposition of weighted log-odds ratio for customer satisfaction analysis); Maurizio Carpita and Enrico Ciavolino (MEM and SEM in the GME framework: Modelling Perception and Satisfaction); Alper Basaran (Multiple correspondence analysis for the student perception in quality in higher education)

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Multivariate analysis for the ex post evaluation of the environmental fiscal reform: a methodological proposal	Arbolino , Romano
Evaluation indices of the judicial system and ITC developments in civil procedure	Cusatelli, Giacalone
THE EFFECT OF RETIREMENT ON ITALIAN COUPLES' LABOUR DIVISION: A SIMULTANEOUS EQUATION APPROACH	Di Pino Incognito, Caltabiano, Campolo
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Some Indicators for Tracking University Student Progression	Boari, Cantaluppi, Torriero
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Assessing the quality of universities: a value addedapproach	Ghiselli, Ferrante
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Examination of collaborations between universities and companies	Kovacs, Marton Vilmanyi
Job opportunities and academic drop-out: the case of the University of Trieste	Pauli, Chies, Graziosi
Longitudinal Analysis of Post-diploma Orientation among Young People of Bari	Basile, d'Ovidio
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Outsourcing services in the Italian National Health Service: the satisfaction of private and public operators.	Falotico, Mariani, Zavanella
A multivariate analysis of the quality of public transport services	d'Ovidio, Leogrande, Mancarella, Schinzano, Viola
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Evaluating the current evolution of GDP towards quality	Frenda, Piana, Scippacercola

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A comparing among the different approaches for DIF analysis.

T. Menini[1], I. Camminatiello[2], M. Gallo[3]

Our study focuses on measurement instrument for teaching evaluating (Carpita; 2008). One of the most proper statistic methodology is Item Response Theory - IRT (Baker, Kim; 2004), that collects several models, the simplest is Rasch Model - RM (1960).
The RM makes several assumptions. In some cases, it can happen it is not possible to identify any set of items consistent with the hypothesis of the RM: this can be caused by a ill calibrated questionnaire or a mixture of individuals apparently belonging to the same population, but in reality related to different populations (Camminatiello, Gallo, Menini; 2010).
The latter case can be a symptom of a different functioning of the items corresponding to distinct groups of individuals: this phenomenon is called Differential Item Functioning or DIF. In literature there are several DIF diagnostics (Glas & Verhelst, 1995), but the most used and implemented in the most commonly used software (Wu, Adams, Wilson; 1998) is based on the residual analysis among the subgroups identified by one or more aggregation variables. Other authors (Wang; 1998) treat the DIF as a parameter to be estimated rather simply a sign to be detected. In this study we are going to compare the different approaches for analysing the DIF.

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5. Wang, W.C.: An ANOVA-like Rasch analysis of differenzial item functioning. Report (1998).
6. Wu, M., Adams, R., Wilson M.: Acer Conquest. Generalised item response modelling software, Acer Press (1998).

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