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Advances in Economics, Risk Management, Political & Law Science

- ***Proceedings of the 1st WSEAS International Conference on Economics, Political and Law Science (EPLS '12)***
- ***Proceedings of the 1st WSEAS International Conference on Risk Management, Assessment and Mitigation (RIMA '12)***



Tomas Bata University in Zlín
Faculty of Management and Economics

Tomas Bata University in Zlin, Czech Republic
September 20-22, 2012



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Business and Economics Series | 2

Published by WSEAS Press
www.wseas.org

ISSN: 2227-460X
ISBN: 978-1-61804-123-4

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All papers of the present volume were peer reviewed by no less than two independent reviewers. Acceptance was granted when both reviewers' recommendations were positive.

ISSN: 2227-460X
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Preface

This year the 1st WSEAS International Conference on Economics, Political and Law Science (EPLS '12) and the 1st WSEAS International Conference on Risk Management, Assessment and Mitigation (RIMA '12) were held at the Tomas Bata University in Zlin, Czech Republic, in September 20-22, 2012. The conferences provided a platform to discuss organisational behaviour, financial management, project management, human resources, manufacturing and logistics, risk management, assessment evaluation, mitigation contributions etc with participants from all over the world, both from academia and from industry.

Their success is reflected in the papers received, with participants coming from several countries, allowing a real multinational multicultural exchange of experiences and ideas.

The accepted papers of these conferences are published in this Book that will be sent to international indexes. They will be also available in the E-Library of the WSEAS. Extended versions of the best papers will be promoted to many Journals for further evaluation.

Conferences such as these can only succeed as a team effort, so the Editors want to thank the International Scientific Committee and the Reviewers for their excellent work in reviewing the papers as well as their invaluable input and advice.

The Editors

Table of Contents

Plenary Lecture 1: Second Order Decision Analysis	14
<i>Love Ekenberg</i>	
Plenary Lecture 2: Multiple Criteria Decision Making: Analysis of the Selection Process of the Regions with State Support	15
<i>Helena Brozova</i>	
Plenary Lecture 3: Mathematical Models for the Creation of Legal Values	16
<i>Massimiliano Ferrara</i>	
The Belgian Civil Remedy in Case of an Unfair Commercial Practice Towards a Consumer: An Effective, Proportionate and Dissuasive Sanction?	17
<i>Reinhard Steennot</i>	
Analysis of the EU Cohesion in Terms of Selected Macroeconomic Indicators	24
<i>Pavla Kořátková Stránská, Tomáš Lelek, Veronika Linhartová</i>	
Managerial Knowledge Sharing Issues	30
<i>Petra Kressova</i>	
Institutional Quality: Criteria, Determinants and Benefits	36
<i>Ioan Popescu</i>	
Institutional-Economic Framework of Transformation in the Czech Republic	41
<i>Jan Suchacek</i>	
Assessment of the Visegrad Countries Performance by Application of the DEA Based Malmquist Productivity Index	47
<i>Jana Hančlová, Michaela Staničková</i>	
Change of Selected Attitudes of Bank Employees in Slovakia	53
<i>Jaroslav Belás, Eva Cipovová, Petr Klímek</i>	
Creative Economy – Are We Going to Have Enough Creative Workers?	59
<i>Jena Švarcová, Lenka Harantová</i>	
Model of Immunity and Its Usage for Measuring of the Adaptability	65
<i>Karel Slinták, Martina Polčáková, Aleš Skopalík</i>	
The Application of Creative Economics to Selected Regions of the Czech Republic	71
<i>Kloudová Jitka, Chwaszcz Ondřej</i>	
Analysis of Slovak Crown using the Carry Trade with Box-Jenkins Methodology and SPC Methods	77
<i>Martin Kovářík, Miloš Král</i>	
Research on the Use of Statistical Methods in Quality Control in Selected Czech Manufacturing Companies	84
<i>Martin Kovářík, Petr Klímek</i>	

HRM will be Increasingly Difficult - The Professional Aspirations of Future Personnel Managers	90
<i>Jena Švarcová, Iva Stavjaničková</i>	
Spatial Distribution of Operational Program Rural Development and Multi-functional Agriculture Resources	96
<i>Lenka Smékalová</i>	
Regional Policy, Enterprise and Innovation: Some Spatial Relations	102
<i>Jiří Novosák, Oldřich Hájek</i>	
Modelling the Cost-Benefits of Corporate Social Responsibility (CSR) for Decision Making in the Aviation Industry	108
<i>Roman Asatryan</i>	
Administrative and Criminal Liability of Legal Persons for Offences against Environment in the Czech Republic	114
<i>Jiri Zicha</i>	
Emotional Intelligence and Academic Performances of High School Students: A Case Study	119
<i>L. N. A. Chandana Jayawardena, Ales Gregar</i>	
Motives for Barter in Developing, Transition, and Developed Economies	125
<i>Frantisek Sudzina</i>	
Corporate Social Responsibility in Bata a.s. from 1894 to 1945 and its Heritage for the Current Business Environment	130
<i>Koncitikova Gabriela, Gregar Ales</i>	
Key Performance Indicators as a Business Strategy Tool during the Global Crisis Period	136
<i>Marek Sedláček</i>	
Selected Aspects Relating to the Status of Natural Persons, Legal Representation and Guardianship in the Czech Republic from the Perspective of Current and Future Legislation	142
<i>Lenka Hanáková, Jiří Zicha</i>	
Law as a Form of Justice	148
<i>Miloš Večeřa</i>	
Initiation Process of the Virtual Enterprise Emergence	153
<i>Kateřina Huspeninová</i>	
The Assessment of Knowledge Bases in the Regions	159
<i>Karel Skokan</i>	
Possibilities of using of the Cost-Effectiveness Analysis for the Evaluation of the EU Cohesion Policy Aimed at Support of the Tourism Infrastructure at the Regional Level in the Czech Republic	165
<i>Pavel Grebeníček</i>	
Stalking – The New Phenomenon of the Czech Criminal Law	171
<i>Monika Horakova</i>	

Emerging Creative Cities: Mapping Regional Capitals in the Czech Republic and Slovakia <i>Pavel Bednar, Pavel Grebenicek</i>	178
Forecasting Differentiated Demand in Manufacturing Plant <i>Filip Exnar, Otakar Machač</i>	184
Application of CSR in Construction Industry <i>Martina Kornfeldová, Renáta Myšková</i>	189
Promotional Forecasting Based on Promotional Indexes in Yoghurt Production <i>Michal Patak, Vladimira Vlckova</i>	195
The Accomplishment of the European Social Fund Added Value in Romania in the Context of the 201 Economic Crisis <i>Ioana Speteanu</i>	201
Value Preferences of Higher Education Students <i>Vendula Teturová, Zdeněk Brodský</i>	207
Economic Inter-Municipal Disparities in the Hradec Kralove Region of the Czech Republic <i>Kala Tomas</i>	213
Selected Problems of European Union Subsidies Drawing in Agriculture at Regional Level <i>Jan Mandys, Simona Pichová</i>	219
Approaches to Organic Produce Market Segmentation <i>Nenad Djokic, Suzana Salai, Ines Mesaros</i>	224
Game Theory Application on Terrorism <i>Jan Fuka, Ilona Obršálová, Petr Langášek</i>	229
Corporate Governance and Company Performance: Evidence from the Czech Republic <i>Ondřej Nowak, Aleš Kubiček</i>	235
Social Return on Investment Analysis in the Context of Corporate Social Responsibility <i>Jiri Kratky, Libena Tetreva</i>	241
Exploring the Impact of Consumer Ethnocentrism on Impulsive Buying Decisions: With Evidence from Sri Lanka <i>W. M. C. Bandara Wanninayake, Miloslava Chovancová</i>	247
Institutions and Economic Growth Theory <i>Ioan Popescu</i>	253
International Organizations and Global Economic Governance – An Assessment <i>Sterian Maria Gabriela</i>	257
Analysis of the Selection Process of the Regions with State Support <i>Andrea Hornicka, Helena Brozova</i>	263

Evaluation of Regional Competitiveness in Case of the Czech and Slovak Republic using Analytic Hierarchy Process	269
<i>Jan Nevima, Zuzana Kiszová</i>	
Marketing Mix in Multilevel Marketing Companies	275
<i>Zita Košnarová</i>	
Transportation System, Economics and Quality of Life	281
<i>Zdeněk Říha, Marek Honců, Veronika Faifrová</i>	
The Role of Foresight on National Economy	285
<i>Ciprian I. Turturean</i>	
Sectoral and Regional Dimensions of Industrialisation in East Central Europe	290
<i>Dániel Kuttor, Ágnes Hegyi-Kéri</i>	
Axiological Feedback and the Creation Cycle of Legal Values	300
<i>Massimiliano Ferrara, Angelo Roberto Gaglioti</i>	
Experimental Verification of the Quality and Accuracy of Internal Rating Model of the Commercial Bank	305
<i>Jaroslav Belás, Eva Cipovová</i>	
Science of Big Data: Background and Requirements	311
<i>Radek Benda</i>	
Efficiency of Financial Weather Contracts in Czech Agriculture	317
<i>Jindřich Špička, Jiří Hnilica</i>	
The Methodology for Optimization of Assembly Workplaces with Respect to Environmental Aspects	323
<i>Dlabač Jaroslav, Šišková Veronika</i>	
An Empirical Investigation of Supply Chain Flexibility and Performance in the Present Dynamic Environment	329
<i>Fabian Lehnert, Joachim Zentes, Hanna Schramm-Klein</i>	
Risk Management as Methodology of Continual Quality Improvement in Enterprise	335
<i>Mária Hudáková, Mária Lusková</i>	
Risk Management as a Tool for Successful Innovations Realization in Enterprise	341
<i>Katarína Bugarová, Mária Lusková</i>	
Forecasting Price Changes Under TFP Based Incentive Regulation	347
<i>Ondřej Nowak, Ondřej Machek</i>	
The Impact of the Economic Crisis on the Marketing Management of Czech Service-Providing Companies	353
<i>Martina Juříková, Olga Jurášková, Josef Kocourek</i>	
Risk Assessment of New Terrorist Threats Life Cycles	359
<i>Jiří F. Urbánek</i>	

The Perspectives and Possibilities of Infrastructure Protection <i>Jiri Barta</i>	365
Coping with Construction Project Uncertainties: Empirical Evidences From Chinese Construction Firms <i>Muhammad Fiaz, Yang Naiding</i>	370
Generalised Risk Constraints in Decision Trees with Second-Order Probabilities <i>Mats Danielson, Love Ekenberg, Aron Larsson</i>	376
A Systems Thinking in Natural Disaster Management: Evacuation Preparedness <i>Airin Fariza Abu Samah Khyrina, Abd Samad Burairah, Hasan Basari Hussin</i>	384
Authors Index	390

Plenary Lecture 1

Second Order Decision Analysis



Professor Love Ekenberg

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Abstract: I will discuss some aspects of risk analysis and decision making in practice. In such, the probabilities and utilities of consequences are often vague and imprecise. Furthermore, the support methods must allow for decision modelling with respect to different preferences and views, which further can be adjusted in an interactive fashion when considering calculated decision outcomes. There are several models for handling the natural impreciseness in such situations, e.g., based on intervals probabilities or more elaborated approaches. I will discuss how second-order calculations add information, in a computational meaningful way, when handling imprecise representations, as is the case of decision trees or probabilistic networks. If time permits, I will also discuss some real life cases, when such methods significantly would have enhanced the analyses and why.

Brief Biography of the Speaker: Love Ekenberg is head of Department of Computer and Systems Sciences, Stockholm University. He has a PhD in Computer and Systems Sciences as well as a PhD in Mathematics from Stockholm University. He is currently professor in Computer and Systems Sciences at Stockholm University and visiting professor at KTH Royal Institute of Technology, Stockholm. He has been working with various aspects of risk and decision analysis for a number of years and is former adviser to the Swedish Ministry of Foreign Affairs, Centre International de Déminage Humanitaire Genève, member of the Swedish advisory group to the UN ICT Task Force, WHO, World Bank and others. He has published well over 150 articles, books, etc, on formal methods, risk, decision analysis and eGovernment and has been member of numerous journal editorial boards and program committees.

Plenary Lecture 2

Multiple Criteria Decision Making: Analysis of the Selection Process of the Regions with State Support



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Abstract: Multiple criteria decision-making models are an important type of operations research models that explicitly consider multiple criteria in decision-making process. In personal or professional live there are present conflicting criteria that need to be evaluated in making decisions. It is necessary to explicitly evaluate multiple criteria as well as to properly structure the problem. In making the decision of e.g. whether to build a nuclear power plant or not, and where to build it, there are not only very complex issues involving multiple criteria, but there are also multiple parties who are deeply affected from the consequences. In government policy, support and satisfaction of different social group, and the cost of providing of proper social policy are two conflicting criteria that should be considered.

The aim of the regional policy is to reduce disparities among regions and to ensure their development. There are two main concepts of regional policy. The first concept is a policy of creating conditions for overall economic growth. The second concept is based on helping directly the economically weak regions. Therefore the Government and the Ministry for Regional Development and the Ministry of Industry and Trade of the Czech Republic select regions with concentrated state support (structurally challenged regions, economically weak regions and regions with high unemployment) which are less developed in many socioeconomic indicators.

Region evaluation process includes criteria (indicators) as unemployment rate, number of applicants per one job place, income tax rate, number of private entrepreneurs and purchasing power. The set of criteria and their relative preferences during the years 1991 – 2010 were changing.. Thus we examine trend of the criteria weights. Two approaches are discussed for evaluation of criteria weights. The first approach is based on the method of multiple attributes analysis – the Analytic Network Process. Results of this method show the continuity of the whole process of selection of supported regions. The second approach is based on the Data Envelopment Analysis. This model allows analyzing practical efficiency of the regions also in the time series. The analysis of the criteria weights can be made using input and output weights calculated for individual regions. The selection of regions with state support is also multiple criteria process and analysis of used method of selection of the best one is very important problem. The problem is also the efficiency of state support of selected regions, which can be evaluated using the Data Envelopment Analysis.

Brief Biography of the Speaker: Helena Brožová, Assoc. Prof. She obtained her Master Degree in Operations Research and Management Theory at the Faculty of Mathematics and Physics, Charles University in Prague, Ph.D. Degree in Economics at the Faculty of Economics and Management, Czech University of Life Sciences (DSE FEM CULS). She is the Associate professor in Systems Engineering. She works at the DSE FEM CULS (former University of Agriculture). She teaches many subjects as Mathematical Methods in Economics, Supply Chains Management, Multiple Criteria Decision-making, System Theory and Applied System Science, and Decision Support Systems. Her research area consists of practical implementation of Operations Research and System Sciences, and especially concerns of processes of Multiple Criteria Decision Making and Decision-Making models. She is a member of Czech Society of Operation Research and International Society of Multiple Criteria Decision Making. She is a member of the project team for the scientific project “Information and Knowledge Support of Strategic Management”.

Plenary Lecture 3

Mathematical Models for the Creation of Legal Values



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Abstract: This paper focuses on some aspects of a mathematical model for the creation of legal values, still in progress. The cycle of axiological genesis is to be analyzed as composed of two phases: the pretention of the subject towards an object; the feedback of acknowledgment, qualifying and vesting the pretention. The synthesis of those two moments gives birth to a legal entitlement, associated with a certain axiological potential. Such entitlement can be challenged by another person, hence triggering an adjudication process. The engineering of the legitimacy to emit the feedback signal leads the way to social and political issues. As a conclusion for this paper, we call upon a new approach for the Economic Analysis of Law, applying economic methods, tools and criteria directly to legal values, and not just on economic values affected by law.

Brief Biography of the Speaker: Massimiliano Ferrara is Professor of Mathematical Economics at "Mediterranea" University of Reggio Calabria where he was also Dean of the degree in Economics. Actually he is the Director of Culture, Education, Research and University Department at Regione Calabria. He was the Founder and Director of MEDAlics and Vice Rector at "Dante Alighieri" University of Reggio Calabria. He was also Visiting Professor at Harvard University, Cambridge (USA), Morgan State University in Baltimore (USA), Western Michigan University (USA), New Jersey Institute of Technology in Newark (NJ) (USA). He was a speaker at several WSEAS international conferences. He is editor of several international journals: Advances in Management and Applied Economics (AMAE), African Journal of Science, Technology, Innovation and Development Applied Sciences (APPS), International Journal of Functional Analysis, Operator Theory and Applications (IJFAOTA), Far East Journal of Mathematical Sciences (FJMS), Journal of Indian Academy of Mathematics (Jiam), Journal of the Calcutta Mathematical Society and Universal Journal of Mathematics and Mathematical Sciences. His main research interests are: dynamical systems, patterns of growth and sustainable development, mathematical economics, game theory, optimization theory, applied Economics.

Authors Index

Ales, G.	130	Jaroslav, D.	323	Pichová, S.	219
Asatryan, R.	108	Jayawardena, L. N. A. C.	119	Polčáková, M.	65
Barta, J.	365	Jitka, K.	71	Popescu, I.	36, 253
Bednar, P.	178	Jurášková, O.	353	Říha, Z.	281
Belás, J.	53, 305	Juříková, M.	353	Salai, S.	224
Benda, R.	311	Kiszová, Z.	269	Samah Khyrina, A. F. A.	384
Brodský, Z.	207	Klímek, P.	53, 84	Schramm-Klein, H.	329
Brozova, H.	263	Kocourek, J.	353	Sedláček, M.	136
Buganová, K.	341	Koncitikova, G.	130	Skokan, K.	159
Burairah, A. S.	384	Kornfeldová, M.	189	Skopalík, A.	65
Chovancová, M.	247	Košnarová, Z.	275	Slinták, K.	65
Cipovová, E.	53, 305	Kovářík, M.	77, 84	Smékalová, L.	96
Danielson, M.	376	Král, M.	77	Speteanu, I.	201
Djokic, N.	224	Kratky, J.	241	Špička, J.	317
Ekenberg, L.	376	Kressova, P.	30	Staníčková, M.	47
Exnar, F.	184	Kubíček, A.	235	Stavjaničková, I.	90
Faifrová, V.	281	Kuttor, D.	290	Steennot, R.	17
Ferrara, M.	300	Langášek, P.	229	Sterian, M. G.	257
Fiaz, M.	370	Larsson, A.	376	Stránská, P. K.	24
Fuka, J.	229	Lehnert, F.	329	Suchacek, J.	41
Gaglioti, A. R.	300	Lelek, T.	24	Sudzina, F.	125
Grebeníček, P.	165, 178	Linhartová, V.	24	Švarcová, J.	59, 90
Gregar, A.	119	Lusková, M.	335, 341	Tetrevova, L.	241
Hájek, O.	102	Machač, O.	184	Teturová, V.	207
Hanáková, L.	59, 142	Machek, O.	347	Tomas, K.	213
Hančlová, J.	47	Mandys, J.	219	Turturean, C. I.	285
Hegyi-Kéri, A.	290	Mesaros, I.	224	Urbánek, J. F.	359
Hnilica, J.	317	Myšková, R.	189	Večeřa, M.	148
Honců, M.	281	Nevima, J.	269	Veronika, S.	323
Horakova, M.	171	Novosák, J.	102	Vlckova, V.	195
Hornicka, A.	263	Nowak, O.	235, 347	Wanninayake, W. M. C. B.	247
Hudáková, M.	335	Obršálová, I.	229	Yang, N.	370
Huspeninová, K.	153	Ondřej, C.	71	Zentes, J.	329
Hussin, H. B.	384	Patak, M.	195	Zicha, J.	114, 142