

**Abstracts of Papers
Presented at the
9th European Conference on
Innovation and Entrepreneurship
ECIE 2014**

**University of Ulster and School of Social
Enterprises Ireland
Belfast, UK**

18-19 September 2014

**Edited by
Dr Brendan Galbraith
University of Ulster
Belfast, UK**

Copyright The Authors, 2014. All Rights Reserved.

No reproduction, copy or transmission may be made without written permission from the individual authors.

Papers have been double-blind peer reviewed before final submission to the conference. Initially, paper abstracts were read and selected by the conference panel for submission as possible papers for the conference.

Many thanks to the reviewers who helped ensure the quality of the full papers.

These Conference Proceedings have been submitted to Thomson ISI for indexing. Please note that the process of indexing can take up to a year to complete.

Further copies of this book and previous year's proceedings can be purchased from <http://academic-bookshop.com>

E-Book ISBN: 978-1-910309-47-6

E-Book ISSN: 2049-1050

Book version ISBN: 978-1-910309-45-2

Book Version ISSN: 2049-1069

CD Version ISBN: 978-1-910309-46-9

CD Version ISSN: 2049-1077

The electronic version of the Conference Proceedings is available to download from DROPBOX. (<http://tinyurl.com/ECIE2014>). Select Download and then Direct Download to access the PDF file.

Published by Academic Conferences and Publishing International Limited
Reading

UK

44-118-972-4148

www.academic-publishing.org

Contents

Paper Title	Author(s)	Guide Page	Page No.
Preface		x	viii
Committee		xi	vi
Biographies		xvi	ix
Assessment of Innovation in Public Sector Organisations in Kenya	Joseph Evans Agolla and Jacobus van Lill	1	1
Supporting Innovation and Entrepreneurship: Reflections on Two Case Studies From US and UK Universities	Hamid Alalwany, Nabeel Koshak and Mohammad Ibrahim	2	9
Beyond Incubators Mechanisms: Innovation, Economic Development and Entrepreneurship	Hanadi Mubarak Al-Mubarak and Michael Busler	2	18
Bounded Entrepreneurship and Intrapreneurial Performance in Sweden	Sabina Andersson, Jelten Beekhuis, Ronak Massand, Patrick McHugh and Younghwan Shin	3	27
Collaboration for Public Private Partnerships: In Support of an Entrepreneurial Ethos?	Christos Apostolakis and Osikhuemhe Okwilagwe	4	35
Supply Process Optimization Using Hubs for Materials	Marina Arkhipova and Kirill Arkhipov	5	43
Regulating to Facilitate Innovation? Nanotechnologies and the Dilemma of EU Institutions	Claire Auplat and Sonia Ben Slimane	6	51
The Relationship Between Patents and Firms' Innovation Activity: The Case of Russia	Yulia Balycheva and Oleg Golichenko	7	61

Paper Title	Author(s)	Guide Page	Page No.
Innovation, Design and Competitiveness: A Synthesis Based on Portuguese Case Studies	José Barata and Pedro Nevado	8	69
Strategy, Innovation and Internationalization in SMEs: The Implementation Issue	Fernando Barbosa and Fernando Romero	8	77
Innovation and Sustainability in the Social Economy: A Case Study of Organizational Change of a Social Portuguese Organization	Fernando Barbosa and Fernando Romero	10	85
Disclosure and Expropriation of Business Ideas: The Case of an Open Business Ideas Contest	Julio Batle	11	93
Strategies Adopted by Male and Female Entrepreneurs in Italy to Face the Economic Crisis	Francesca Maria Cesaroni and Annalisa Sentuti	11	100
Information Governance Modularity in Open Data	Brian Cleland, Brendan Galbraith, Barry Quinn and Paul Humphreys	12	108
Innovation Risk Management – Banks’ Risky bet on Safe Innovating	Eliza Laura Coraș	13	118
Reaching Across the Pond: Extending a Regional Innovation Ecosystem Strategy	Stephen Cross, Bernard Kippelen and Yves Berthelot	14	128
Measuring Business Benefits and Performance in Smart Cities	Renata Paola Dameri and Roberto Garelli	15	137

Paper Title	Author(s)	Guide Page	Page No.
The Association Between Personality Traits, Entrepreneurial Intentions and the Promotion of Cultural Heritage in Late Adolescence	Laura Di Giunta and Giacomo Pantanella	15	145
Differentiating "Real" Entrepreneurs From "Entrepreneurs Inside"	Udo Dierk and Philip Dover	16	154
Exploring Students Learning Outcome in a Business and Entrepreneurial Flavoured University	Ting Ding Hooi and Gan Chin Chuan	17	163
The Impact of Innovative Practices on the Performance of Small and Medium Enterprises	Andreas Efstathiades	18	171
How to Facilitate the Emergence of French new Technology-Based Firms?	Emmanuel Fremiot	19	181
Future Studies and new Product Development: Scenario and the Fuzzy Front end	Karl Friðriksson and Runólfur Smári Steinþórsson	20	190
Journals and Jottings on Entrepreneurial Learning Journeys	Heather Fulford	21	198
Entering the World of Nanotechnology: Three Different Perspectives	Anna Glaser, Claire Auplat and Sonia Ben Slimane	21	207
The Analysis of Business Preferences to use Internal and External Sources of Research and Development	Oleg Golichenko and Svetlana Samovoleva	22	216
The Co-Operative Difference in Behavioural Innovativeness	Izold Guihur, André Leclerc and Gilles Marcoux	23	225

Paper Title	Author(s)	Guide Page	Page No.
The Enterprise Dynamic Indicators Matrix: Top Management Tool for Stable and Mature Process Sustainability	Danut Iorga, Cezar Scarlat and Sorin Ionescu	24	235
Crowdfunding: An Overview of Valuation Problems	Sima Jegelevičiūtė and Loreta Valančienė	25	246
Creating Value With Social Entrepreneurship	Päivi Jokela and Maria Elo	27	252
The Role of R&D Expenditures in People's Innovative Potential	Eva Jurickova	27	260
Possibilities for Peer, Online Learning in Entrepreneurship: The Case of TeleCC Platform	Alexandros Kakouris, Sofia Tampouri and Violetta Moustakali	28	268
Methodological Facilitation of Collaboration in Innovation Networks	Holger Kohl, Markus Will, Oliver Riebartsch and Jan-Patrick Cap	29	276
Creating a Framework for Collaboration: An Exploration of Knowledge Alliances	Joan Lockyer	30	287
Venture Creation Programmes: Causation or Effectuation?	Joan Lockyer and Nigel Adams	31	295
Performance and Innovation Insights: Empirical Evidence From Portuguese and Spanish Listed Companies	Ilídio Tomás Lopes	32	302
Innovation and Strategy: Linking Management Practices to Achieve Superior Performance	Lawrence Loughnane	33	311
Higher Education, Stakeholders and Collaborative Work for Entrepreneurial Learning	Ana Paula Marques, Rita Moreira and Sandra Ramos	34	320

Paper Title	Author(s)	Guide Page	Page No.
Application of the Complex Technology Assessment System for Product Development	Adam Mazurkiewicz and Beata Poteralska	34	329
Entrepreneurship in Higher Education: Nascent Entrepreneurs and Theirs Enhancers Factors	Rodrigo José das Neves Morais, Guida Mendes Coelho, Jorge Manuel Simões and António Ferreira	36	338
Innovation in the Chemical Industry: Evidences From Spanish Businesses	Maria Obeso, Maria Jesus Luengo-Valderrey and Teresa Areitio	36	346
Innovations and Entrepreneurship at a Time of Financial Crisis in Czech and Austrian Construction Industries	Pavla Odehnalová and Petr Pirožek	37	355
Can Social Outsourcing Enhance the Development Strategy of Social Enterprises?	Ruslan Pavlov	38	360
The Impact of Inbound and Outbound Open Innovations: Empirical Evidence for SMEs across Europe	Dragana Radicic and Geoff Pugh	39	368
Critical Factors for Innovation and Strategic Competitiveness in Global Companies	Felipe Rivera	41	376
The Views of University Professors of East Timor About Entrepreneurship	Cristina Rodrigues, Filipa Vieira, Tomas Xavier and Dorotea Silva	42	384
Social Enterprise and Social Capital: A Proposed Methodology for Developing Innovation and Entrepreneurship in a Deprived Cornish Peri-Urban Locality	Alan Sanderson, Mike Leyshon, Annie Ostapenko-Denton and Kevin Ostapenko-Denton	43	393

Paper Title	Author(s)	Guide Page	Page No.
Improving Absorptive Capacity Through Social Media Networks for Firms' Innovativeness	Veronica Scuotto	44	401
Regional Structure of the Country on Costs and Results of Innovative Activity: The Case of the Russian Federation	Viacheslav Sirotin and Marina Arkhipova	45	410
Knowledge Transmission Channels: A Comparative Study in Brazil and in Europe	Ana Paula Lisboa Sohn, Filipa Dionísio Vieira, Idaulo José Cunha and Nelson Casarotto Filho	46	420
Dominant Business Models of Young Firms in the Renewable Energy Sector	Cristina Sousa and Isabel Salavisa	47	428
Optoelectronics in Scotland: Network Reconfiguration in a Sectoral System of Innovation	William Sutherland	47	438
Case Study on Financing and Business Development Processes in Technopreneurship	Desislava Velikova, Jens Kohler and Rainer Gerten	48	445
Attitudes and Entrepreneurial Intention of Portuguese Secondary Students	Filipa Vieira, Cristina Rodrigues and Jose Azevedo	50	452
Participant Learning Objectives and the Potential of Extracurricular Business Plan Competitions	Kayleigh Watson, Pauric McGowan and Paul Smith	51	431
Towards an Effective Model of Technology Transfer From Polish Public Research Organisations	Urszula Wnuk, Adam Mazurkiewicz and Beata Poteralska	52	472
Model of Corporate Accounting for Sustainable Development	Jitka Zborková and Lilia Dvořáková	53	480

Paper Title	Author(s)	Guide Page	Page No.
PHD Research papers		55	490
Environmental Stimulants of Creativity for Operatives and Non-Creative Workers	Radek Blahuš	57	493
Public Value as an Indicator for Public Administration to Make Sustainable Decisions	Markus Bodemann, Marieta Olaru and Mircea Sandru	58	500
Investigating the Adoption of Sustainable Green Initiatives in Scottish Food and Drink SMEs	Karan Dakup, Heather Fulford and Bill Sutherland	59	507
Process Innovation as a Necessary Condition for Successful Implementation of a new Production Planning System	Denisa Hrušecká	60	514
Social Entrepreneurship: The new World Trend	Aigerim Kaumenova	61	522
Cultural Barriers to Open Innovation in Countries With a Transitional Economy: Case of Kazakhstan	Yelzhan Kushekbayev	62	527
Business Success by Understanding the Process of Innovation	Dorin Maier, Marieta Olaru, Gregor Weber and Andreea Maier	63	534
Factors Defining Satisfaction and Loyalty of Online Shopping Customers Within E-Commerce and Cyber Entrepreneurship	Veronika Mašínová and Zuzana Švandová	64	539
Design of Process and Organizational Innovation Application Methodology	Pavlina Pivodova, Eva Jurickova and Roman Bobak	65	547

Paper Title	Author(s)	Guide Page	Page No.
The Linkage Between Tacit Knowledge and Models of Innovation: A Theoretical Overview Towards Companies' Performance	Fernando Dias Santos and Ilídio Tomás Lopes	65	555
Evaluation of the Indirect Impact of Programs to Stimulate Innovation: Multi Case Studies	Dorotéa Silva, Fernando Romero and Filipa Vieira	66	565
Relevant Industrial Innovation Policy for the European Union	Jurgita Staniulyte	67	575
A Discussion of Community of Practice and the Construction of Organization Core Competence: A Case Study of BS Supplementary Education Group	Stephen Dun-Hou Tsai, Jack Chih-yuan Wang and Roy Chih-You Lee	68	582
Masters Research paper		69	591
Entrepreneurship in Nursing Care: Perspectives, Incentives and Barriers in the Portuguese Context	Selma Martins, Emília Fernandes and Regina Leite	71	593
Non Academic papers		73	603
New Formats of Work With Creative Entrepreneurs and Sociocultural Project Initiatives	Olga Kizina	75	605
What's the secret? An Australian Perspective on Partnerships for Change	Lucy Richardson	76	612
Work in Progress paper		77	623
The Role of Social Media for Business and Service Systems	Christian Zinke and Sandra Prätör	79	625

Paper Title	Author(s)	Guide Page	Page No.
Late Submissions		81	629
Enterprise and Entrepreneurship Education: Implications for Innovation in Delivery	Christopher J Moon	83	630
Fine-tuning Entrepreneurship Education: How do Programs Impact Entrepreneurial Characteristics in Students?	Rafael Alcaraz-Rodríguez, Marcia Villasana, Mario Moises Alvarez	83	642
Abstracts only		85	
How do Employees Learn and Innovate in Lean?	Steen Høyrup and Anne-Charlotte Teglberg	87	
Mastering the Front end of Innovation via Open Innovation	Kleman Irok and Borut Likar	87	
Measuring and Enhancing the Entrepreneurial Readiness of College Students	John Liptak	89	
Personal Vulnerability: The Pivot-Point on the Entrepreneurship Teaching Journey	Douglas MacDonald and Alex Bruton	90	

Preface

These proceedings represent the work of contributors to the 9th European Conference on Entrepreneurship and Innovation (ECIE 2014), hosted this year by University of Ulster Business School and the School of Social Enterprises Ireland, Belfast, UK, on the 18-19 September 2014. The Conference Co-Chairs are Dr Brendan Galbraith, Dr Sandra Moffett, University of Ulster, Belfast, UK, Professor Ken O'Neill and Professor Jackie McCoy, School of Social Enterprises Ireland.

ECIE continues to develop and evolve. Now in its 9th year the key aim remains the opportunity for participants to share ideas and meet the people who hold them. The scope of papers will ensure an interesting two days. The subjects covered illustrate the wide range of topics that fall into this important and growing area of research. The theme of this year's conference is 'Societal-driven Innovation and Entrepreneurship' and we are pleased with the range of research that has been submitted this year on the topic.

The opening keynote presentation is given by Micheal Pyner, Social Entrepreneur and Creative Advisor and will address the topic of "Innovating for Community Good". This is followed by Dr Stephen E. Cross, Executive Vice President of Research, Georgia Institute of Technology, USA – who will speak on the topic of "The influence of social courage on innovation ecosystems" and Fr Myles Kavanagh CP, Flax Trust, Northern Ireland, UK will give a talk entitled "A blast from the past". Our final keynote will be delivered by Mr. Roberto Santoro (Italy) President of the European Society of Concurrent Engineering Network (ESoCE Net) on the topic of "People Olympics for Healthy and Active Living: A People Driven Social Innovation Platform".

In addition to the main themes of the conference there are a number of specialist mini tracks on topics including Innovation and strategy, Entrepreneurship education in action, The theory and practice of collaboration in entrepreneurship and Challenges for entrepreneurship and innovation in the 21st Century.

With an initial submission of 178 abstracts, after the double blind, peer review process there are 56 Academic Research papers, 1 Master Research paper 2 Non Academic papers, 13 PhD Research papers and 1 work-in-progress paper published in these Conference Proceedings. These papers represent research from Australia, Brazil, Canada, Chile, Cyprus, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Iceland, Indonesia, Italy, Kazakhstan, Kuwait, Lithuania, Malaysia, Mexico, Northern Ireland, Poland, Portugal, Romania, Russia, Slovenia, South Africa, Spain, Taiwan, UK, USA.

Dr Brendan Galbraith
University of Ulster Business School, Belfast, UK
September 2014

Conference Committee

Conference Executive

Dr Brendan Galbraith, University of Ulster, Northern Ireland, UK

Professor Ken O'Neill, School of Social Enterprises Ireland,

Professor Jackie McCoy, School of Social Enterprises Ireland.

Prof Paul Humphreys, University of Ulster, Northern Ireland, UK

Dr Norry McBride, University of Ulster, Northern Ireland, UK

Dr Judith McKnight, University of Ulster, Northern Ireland, UK

Dr Sandra Moffet, University of Ulster, Northern Ireland, UK

Prof Nola Hewitt-Dundas, Queen's University Management School, Queen's University Belfast, UK

Dwi Larso, School of Business and Management, Bandung Institute of Technology, Indonesia

Professor Rodney McAdam, Ulster Business School, University of Ulster, Northern Ireland, UK

Mini track chairs

Doan Winkel, Illinois State University, USA

Dr Alexandros Kakouris, University of Athens, Greece

Dr Luisa Carvalho, Open University, Lisbon, Portugal

Dr Christos Apostolakis, Bournemouth University UK

Dr Fernando Romero, University of Minho, Portugal

Claire Auplat, Novancia Business School Paris, France

Sonia Ben Slimane, Novancia Business School Paris, France

Committee Members

The conference programme committee consists of key people in the entrepreneurship and innovation community, both from the UK and overseas. The following people have confirmed their participation:

Dr. Kamarulzaman Ab. Aziz, Multimedia University, Malaysia; Ass.Prof.Dr. Zafer Acar, Okan University, Istanbul, Turkey; Dr. Bulent Acma, Anadolu University, Turkey; Dr. Hassanali Aghajani, University of Mazandaran(UMZ), Iran, ; Jaione Aguirre, Tekniker technological centre, Spain; Prof. Ruth Alas, Estonian Business School, Estonia; Dr. Laurice Alexandre Leclair, Sorbonne Paris Cité University, France; Dr. Saleh Al-Jufout, Tafila Technical University, Jordan; Prof. Khedidja Allia, University of Science and Technology, Algiers, Algeria; Dr. Hanadi Al-Mubarak, Kuwait University, Kuwait; Dr. Morariu Alunica, "Stefan cel Mare" University of Suceava, Faculty of Economics and Public Administration, Romania; Dr. Rumen Andreev, Bulgarian Academy of Sciences, Sofia, Bulgaria; Dr. Zacharoula Andreopoulou, Aristotle University of Thessaloniki, Greece; Dr. Christos Apostolakis,

Bournemouth University, UK; Erik Arntsen, University of Agder, Kristiansand, Norway; Omid Askarzadeh, Polad Saab Shargh, Tehran, Iran; Samantha Aspinall, University of Leeds, UK; Dr. Claire Auplat, Imperial College Business School, London, UK; Prof. Miroslav Baca, University of Zagreb, Varaždin, Croatia; Prof. Alina Badulescu, University of Oradea, Romania; Susan Bagwell, London Metropolitan University, UK; Dr. Tabarak Ballal, The University of Reading, UK; Prof. Dr. Mihai Berinde, University of Oradea, Faculty of Economic Sciences, Dept. of International Business, Romania; Prof. Cristin Bigan, Ecological University of Bucharest, Romania; Prof. Dr. Ferruccio Bilich, University of Aveiro, Portugal; Prof. Dr. Dietmar Boenke, Reutlingen University, Germany; Ana Maria Bojica, University of Granada, Spain; Tina Bratkovic, University of Primorska, Slovenia; Dr. Alexander Brem, University of Erlangen-Nuremberg, , Germany; Fraser Bruce, University of Dundee, UK; Dr. Cagri Bulut, Yasar University, Izmir, Turkey; Dr. Cagri Bulut, Yasar University, Turkey; Jeffrey Burke, National Pollution Prevention Roundtable, Washington DC, USA; Kevin Burt, University of Lincoln, UK; John Kaiser Calautit, University of Leeds, UK; Prof. Luisa Carvalho, Institute Polytechnic of Setubal, Portugal, Portugal; Dr. Toly Chen, Feng Chia University, Taichung, Taiwan; Kuo-Sheng Cheng, National Cheng Kung University/Institute of Biomedical Engineering, Taiwan; Prof. Chuang-Chun Chiou, Dayeh University, Changhua, Taiwan; Dr. Nick Clifton, Cardiff Metropolitan University, UK; Prof. Costas N. Costa, Cyprus University of Technology, Lemesos, Cyprus; Prof. Teresa Costa, Instituto Polit cino de Set bal | Escola Superior de Ci ncias Empresariais, Portugal; Dr. Fengzhi Dai, Tianjin University of Science and Technology, , China; Dr. Leo-Paul Dana, University of Canterbury, Christchurch, New Zealand; Sven H. de Cleyn, University of Antwerp, Antwerp, , Belgium; Prof. Armando Carlos de Pina Filho, Federal University of Rio de Janeiro , Brazil; Maria Chiara Demartini, University of Pavia, Italy; Dr. Izabela Dembińska, University of Szczecin, Poland; Carine Desleee, University of Lille 2-IMMD, France; Charles Despres, Conservatoire des Arts et Metiers, Paris, France; Dr. Prof. Anca Dodescu, University of Oradea, Romania; Prof. Dr. Michael Doellinger, University Hospital Erlangen, Germany; Dr. Nelson Duarte, Porto Politechnic - School of Management and Technology, Portugal; Dr. Smile Dzisi, Koforidua Polytechnic, Ghana; Prof. Vasco Eiriz, University of Minho, , Portugal; Dr. Hatem El-Gohary, Birmingham City University, UK,; Dr. Scott Erickson ,Ithaca College, USA; Prof. Engin Deniz Eris, Dokuz Eylul University, Turkey; Dr. Mahtab Farshchi, London South Bank University, UK; Prof. Luis Fé De Pinho, Universidade Lusíada de Lisboa, Portugal; Prof. Paula Odete Fernandes, Polytechnic Institute of Bragança, Portugal; Prof. João Ferreira, University of Beira Interior, Covilhã, Portugal; Prof. Maria Joao Ferreira, Departamento de inovação, Ciência e Tecnologia, Portugal; Adriana Fillol Mazo, Delegation of the government of Andalusia in Brussels, Belgium; Dr. Heather Fulford, Aberdeen Business School, UK; Dr. Erdei Gábor, University of Debrecen, Hungary; Brendan Galbraith, University of Ulster, UK; Dr.

Laura Galloway, Heriott-Watt University, Edinburgh, UK; Prof. Dr. Ramaswamy Ganesan, Asia-Pacific Institute of Management, New Delhi; Ass Prof. Cephas Gbande, Nasarawa State University, Nigeria; Prof. Panagiotis Georgiadis, University of Athens, Greece; Prof. Alan Gillies, Hope Street Centre, Liverpool Science Park, UK; Ass.Prof.Dr. Andriana Giurgiu, University of Oradea, Romania; Dr. Andrew Goh, University of South Australia, Australia; Dr. Sayed Mahdi Golestan Hashemi, Iranian Research Center for Creatology, TRIZ & Innovation Management, Iran; Prof. Oleg Golichenko, Central Economics and Mathematics Institute of Russian Academy of Science, Russia; Dr. Mario Gomez Aguirre, Universidad Michoacana de San Nicolas de Hidalgo, Mexico; Dr. Elissaveta Gourouva, Sofia University "St. Kliment Ohridski", Bulgaria; Dr. Izold Guihur, Université de Moncton, Canada; Dr. Ebru Gunlu, Dokuz Eylul University Faculty of Business, Turkey; Dr. Liang Guo, Rouen Business School, Mont Saint Aignan, France; Prof. Jukka Hallikas, Lappeenranta University of Technology, Finland; Kaled Hameide, Montclair State university in New Jersey, USA; Prof. Wafa Hammedi, University of Namur (FUNDP), Belgium; Dr. Saskia Harkema, The Hague University of Applied Sciences, The Netherlands; Dr. Jennifer Harrison, Southern Cross University, Australia; Takashi Hirao, Tokyo University of Science, Suwa, Japan; John Howard, Public Health and Clinical Sciences, UK; Dr. Amy Hsiao, Memorial University of Newfoundland, St Johns, Canada; Dr. Harri Jalonen, Turku University of Applied Sciences, Finland; Paul Jones, University of Plymouth, UK; Dr. Magdalena Jurczyk-Bunkowska, Opole University of Technology, Poland; Dr. Alexandros Kakouris, University of Athens, Greece; Dr. Yusniza Kamarulzaman, University of Malaya, Kuala Lumpur, Malaysia; Dr. Mira Kartiwi, International Islamic University Malaysia, Malaysia; Prof. Stijn Kelchtermans, Hogeschool-Universiteit Brussel, Belgium; Prof. Panayiotis Ketikidis, CITY College - International Faculty of the University of Sheffield, Greece; Dr. Marko Kolakovic, Faculty of Economics & Business, Croatia; Sam Kongwa, Walter Sisulu University, Mthatha, South Africa; Prof. Kothandaraman Kumar, Indian Institute of Management Bangalore, India; Dr. Stefan Lagrosen, Linnaeus University, Sweden; Prof. Brent Lane, Kenan-Flager Business School, University of North Carolina, USA; Dr. Jonathan Lean, University of Plymouth Business School, UK; Kiefer Lee, Sheffield Hallam University, UK; Prof. Dr. Joao Leitao, University of Beira Interior, Portugal; Dr. Jun Li, University of Essex, UK; Yipeng Liu, University of Mannheim, Germany; Prof. Ilidio Lopes, Polythenic Institute of Santarém, Portugal; Dr. Angeline Low, University of Technology Sydney, Mosman, Australia; Prof. Sam Lubbe, NWU, South Africa; Dr. Fernando Lucas, Polytechnic Institute of Santarém, Portugal; María Luengo, Universidad del País Vasco/Euskal Herriko Unibertsitatea, Spain; Ass.Prof.Dr. Randa Mahasneh, The Hashemite University, Jordan; Dr. Maria Markatou, Technological Education Institute of Larissa, Greece; Prof. Carla Marques, University of Trás-os-Montes Alto Douro (UTAD), Portugal; Dr. Florinda Matos, ICAA - Intellectual Capital Association Accreditation, Portugal;

Philip McClenaghan, Augsburg University, Germany; Prof. Luis Mendes, Beira Interior University, Portugal; Prof. Hatem Mhenni, Ecole Supérieure de Commerce, Tunis, Tunisia; Zoran Mitrovic, University of Western Cape, South Africa; Ass.Prof.Dr. José Monteiro-Barata, ISEG, UTL, Lisbon, Portugal; Dr. Rabeh Morrar, An-najah national university, Palestine; Isabel Mota, Universidade do Porto, Porto, Portugal; David Mullins, BEGIN, Ireland; Maurice Mulvenna, University of Ulster, Newtownabbey, UK; Dr. Jan Nab, Utrecht University, The Netherlands; Prof. Desai Narasimhalu, Singapore Management University, Singapore; Dr. Artie Ng, Seneca College of Applied Arts and Technology, Toronto, Canada, Canada; Dr. Tomasz Norek, University of Szczeciny, Faculty of Management and Economics of Services, Poland; Prof. Alcina Nunes, Polytechnic Institute of Bragança, Portugal; Ass.Prof.Dr. Birgit Oberer, Kadir Has University, Turkey; Dr. Maria Obeso, University of Cantabria, Spain; Alex Obuh, Delta State University, Nigeria; Prof. Jukka Ojasalo, Laurea University of Applied Sciences, Espoo, Finland; Dr. Noreen O'Shea, Novancia Business school, France;; Prof. Mohand-Said Oukil, King Fahd University of Petroleum and Minerals, Dhahran,, Saudi Arabia; Dr./Prof. Hye-Kyung Pang, Hallym University, Chooncheon, Republic of Korea; Dr. Shaun Pather, e-Innovation Academy, Cape Peninsula University of Technology, Cape Town, South Africa; Ruslan Pavlov, Central Economics and Mathematics Institute, Russia; Anna Pilkova, Comenius University in Bratislava, Faculty of Management, Bratislava, Slovakia; Prof. Rui Pimenta, ESTSP- Instituto Politécnico Porto, Portugal; Prof. Dr. Ige Pirnar, Yasar University, Turkey; Dr. Nataša Pomazalová, FRDIS MENDELU in Brno, Czech Republic; DR. Malgorzata Porada-Rochon, University of Szczecin, Poland; Dr. Jean-Michel Quantier, ESC-Bretange, Brest, France; Dr. Catarina Ramalho, University of Lisbon, Portugal; Prof. Cristina Rodrigues, University of Minho, Portugal; Prof. Ricardo Rodrigues, NECE / University of Beira Interior, Portugal; Dr. Jose Carlos Rodriguez, Economic and Business Research Institute - Instituto de Investigaciones Economicas y Empresariales, Mexico; Fernando Romero, University of Minho, Portugal; Jonas Rundquist, Halmsted University, Sweden; Prof. Paulo Rupino Cunha, University of Coimbra, Portugal; Dr. S.R. Balasundaram Sadhu Ramakrishnan, National Institute of Technology, Tiruchirappalli, India; Amitrajit Sarkar, Christchurch Polytechnic Institute of Technology, New Zealand; Dr. Ousanee Sawagvudcharee, Centre for the Creation of Coherent Change and Knowledge, Liverpool John Moores University, Thailand; Simone Scagnelli, University of Turin, Torino, Italy; Prof. Dr. Cezar Scarlat, University "Politehnica" of Bucharest, Romania; Mark Schatten, University of Zagreb, Varaždin, Croatia; Prof. Jeanne Schreurs, Hasselt University, Diepenbeek, Belgium; Dr. Maria Th. Semmelrock-Picej, Alpen-Adria Universität Klagenfurt, Austria; Dr. Nima Shahidi, Islamic Azad University- Noorabad mamasani Branch, Iran; Dr. Armin Shams, National University of Ireland, University College Cork, Ireland; Dr. Namchul Shin, Pace University, New York, USA; Eric Shiu, The University of

Birmingham, UK; Prof. Sandra Silva, Faculdade de Economia da Universidade do Porto, Portugal; Carmen Sirbu, Danubius University, Romania; Prof. Aelita Skarzauskiene, Mykolas Romeris university, Lithuania; Dr. Dorotea Slimani, Innventia AB, Sweden; Prof. David Smith, Nottingham Trent University, UK; Dr. Shahryar Sorooshian, University Malaysia Pahang, Malaysia; Cristina Sousa, ISCTE-IUL, Portugal; Dr. André Spithoven, Belgian Science Policy Office, Belgium; Dr. Ludmila Striukova, University College London, UK; Jukka Surakka, Arcada university of applied sciences, Finland; Dr Dindayal Swaine, International Management Institute, India; Prof. Peter Teirlinck, Hogeschool-Universiteit Brussel, Belgium; Dr. Aurora Teixeira, Faculdade de Economia, Universidade do Porto, Portugal; Dr. Mangaleswaran Thampoe, Vauniya Campus of the University of Jaffna, Sri Lanka; Prof. Milan Todorovic, University Union Nikola Tesla, Serbia; Dr. Piotr Tomski, Czestochowa University of Technology, Poland ; Ana Trevino, ITESM, Mexico; Dr. Marios Trigkas, Technological Educational Institute of Larissa, Greece, Prof. Dr. Lorraine Uhlaner, EDHEC Business School , France; Armando Luis Vieira, Universidade de Aveiro, Portugal; Prof. Filipa Vieira, University of Minho, Portugal; Dr. Marcia Villana, Tecnológico de Monterrey, Mexico; Dr. Carla Vivas, Polytechnic Institute of Santarém, Portugal; Bernard Vollmar, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany; Dr. Catherine Wang, Royal Holloway University of London , UK; Dr. Ismail Wekke, State College of Sorong, Indonesia; Dr. Wioletta Wereda, Siedlce University of Natural Sciences and Humanities, Poland; Dr. Doan Winkel, Illinois State University, USA; Catherine Wright, Heriot Watt University, UK; Fabiola Wust Zibetti, Federal University of Santa Catarina, Brazil; Aziz Yahya, Universiti Teknikal Malaysia Melaka, Malaysia; Prof. Shaker Zahra, University of Minnesota, USA; Dr. Krzysztof Zieba, Gdansk University of Technology, Poland; Dr. Malgorzata Zieba, Gdansk University of Technology, Poland; Ph.D. Afonso Zinga, University of Coimbra, School of Economics, Portugal.

Biographies

Conference Co-Chairs

Brendan Galbraith is an innovation academic in the Department of Management and Leadership at the University of Ulster. Brendan is a member of the European Network of Living Labs, Business and Management Research Institute, and Connected Health Ulster. Brendan has led EC and national innovation and research projects that are valued at more than £4 million and has published his research in Technovation, R&D Management, International Journal of Operations and Production Management and Technology Analysis and Strategic Management. His research interests are technology transfer, innovation intermediaries and social innovation.



Professor Ken O'Neill is Professor Emeritus of Entrepreneurship and Small Business Development at the University of Ulster. He is also Chair of the School for Social Enterprise in Ireland and of the Centre for SME Development in the university's Business School. He sits on the Academic Advisory Council of the Chartered Management Institute, is a member of the Governing Body of Belfast Metropolitan College, a director of the Westminster-based, all-party SME group - The Genesis Initiative, and of the International Small Business Congress as well as a non-executive director of a number of not-for-profits and SMEs. His roles have included President of the International Council for Small Business, President of the UK Institute for Small Business Affairs, Board member of the UK's CBI SME Council, UK Vice-President of the Institute of Business Advisors, member of the BBC Broadcasting Council for NI and Chairman of Young Enterprise (N.I.) Ltd.

Jackie McCoy is Professor of Management Development at the University of Ulster. Former Director of the Business Institute and Head of the Department of Marketing, Entrepreneurship & Strategy, and Jackie is currently Director of the University of Ulster QA Business School Partnership based at the London Branch Campus. Jackie is a founder member of the School for Social Enterprises in Ireland and has been responsible for the design and delivery of a wide portfolio of business development initiatives targeted at third sector organisations with a particular focus on social enterprises. She was awarded the Distinguished Community Fellowship by the



University of Ulster in 2004 in recognition of her outstanding contribution to the development of the social economy on the island of Ireland.



Dr Sandra Moffett Senior Lecturer of Computer Science with University of Ulster’s School of Computing and Intelligent Systems, Magee Campus. Core member of Business and Management Research Institute. Expertise on Knowledge Management contributes to her being one of UK leading authors in this field. Received a number of research awards and citations for her work. External funding has enabled Dr Moffett to undertake extensive quantitative/qualitative research to benchmark KM implementation within UK companies.

Programme Chair

Paul Humphreys is the Director of the Business and Management Research Institute at the University of Ulster and is an Associate Editor at Leadership and Organization Development Journal. Paul has published extensively in a variety of top tier journals and has secured prestigious external funding in a variety European and UK funding bodies. His research interests are in the area of supply chain management and operations management.



Keynote Speakers



Roberto Santoro is the President of the European Society of Concurrent Engineering Network (ESoCE Net). Roberto is the President of the European Society of Concurrent Enterprising Network (ESoCE Net), which brings together academics, researchers and industry professionals to stimulate the exchange of theory, practice and development in the field of concurrent engineering, enterprise and collaborative innovation. He is also Managing Director of Collaborative Engineering, which supports the creation, development and commercialisation of new ICT based products and services, and Chair of the AMI@Work (AMbient Innovation AT Work) Family of Communities, a Europe-wide community of more than 5,000 members. He has contributed in a leading role to the establishment of the European Network of Living Labs (ENoLL) since 2005, chairing the Governance Task Force and being nominated ENoLL Acting Council Chair in 2009. During 2010 he launched the Living Lab Summer School and the Living Lab Prize. Roberto developed the concep-

tual and operational frameworks for Virtual Professional and User Communities, and for Living Labs in Open Innovation Functional Regions and their enabling role within the “Concurrent Innovation” paradigm. In 2011 he supported the creation of LLABS Domain Network in the areas of e-Health&Wellbeing, Energy and Media. In 2013 he launched the initiative PEOPLE OLYMPICS for Healthy Living and Social Innovation.

Micheal Pyner is an award winning entrepreneur and advisor, who works internationally. He differentiates himself by bringing a hugely successful track record in delivery to bear on policy and strategy approaches. He works to enable change, resolve differences in communities, manage conflict and generate growth through re-localising economies. Micheal offers expertise in cross sector relationship management and reconciliation. He has delivered projects valued at over £270m in the last 10 years working across sectors, brokering and managing complex relationships ensuring real and sustainable change in diverse localities.



Myles Kavanagh's early academic studies were in Dublin, his philosophy was in Scotland and he returned to Dublin for his theology. In 2004 he received an honorary Doctorate from the University of Ulster for his services to Social Enterprise. For 53 years he has lived in one of Northern Ireland's "black spots", The Ardoyne area in North Belfast, where he has experienced killing and inter-community strife. This area has

higher levels of unemployment than perhaps any other area in Northern Ireland. In 1977 he set up the Flax Trust to bring about reconciliation through economic development. Since then he has been responsible for establishing a wide variety of projects and providing help to many charities, including an incubation system which produced over 300 business' in 5 years. His battle against social deprivation and unemployment led to the development of a Housing Association which led to the development of housing and other facilities for all members of the community. His knowledge and expertise in the field of community economics means he is frequently invited as a guest speaker to conferences in Ireland (North and South), England, Scotland, North America and Canada.

Mini Track Chairs



Dr Christos Apostolakis holds an MA in Business Administration from Bournemouth University, an MA in Public Administration and Public Policy from the University of York, and a Ph.D. from De Montfort University – Leicester all of them in the UK. He currently works as lecturer in Strategy at Bournemouth University Business School whilst at the same time he holds the post of the School's Masters Programme Leader. He has published and presented extensively on social entrepreneurship as well as he has

Claire Auplat is a professor of innovation and strategy at Nancia Business School Paris and a director of Research at Dauphine University. She is a member of the French Research Council (ANR) specialist committee on eco-innovation (ECOTECH). She coordinates the LABEX research chair in Nanotechnologies, Ecodesign, Innovation and Strategy. Her areas of interest cover public policy and entrepreneurial dynamics, innovation and sustainable development. She has published widely in these areas and her most recent publications include *Nanotechnology and Sustainable Development* (Routledge), and 'The challenges of nanotechnology policy-making', *Global Policy*, 4(1):101-107 (2013)



Dr Luisa Carvalho is an Assistant Professor at the Open University, Lisbon, Portugal and a Researcher at the Centre for Advanced Studies in Management and Economics (CEFAGE), University of Évora. She received her PhD in Management from the University of Évora (Portugal). As a guest professor in international universities she teaches courses on master and PhDs programs. She is the author of several articles published in scientific journals, international conference proceedings, books and book chapters. Her current research interests are in the areas of entrepreneurship, innovation, internationalisation and the services sector.

Alex Kakouris lecturer in entrepreneurship and innovation at the University of Athens. He holds a Ph.D. in Physics and a M.Sc. in Adult Education. He has been involved in entrepreneurship research since 2006, involved mainly with educational issues. His special interest concerns fostering of entrepreneurship and innovation to science graduates and support of youth entrepreneurship through counselling. He also specialises in nascent entrepreneurship and virtual business planning.





Dr Fernando Romero holds an MA in Technology Policy and Innovation Management from the University of Maastricht (NL), and a Ph.D. in Science and Technology Studies from the University of Manchester (UK). He is at the Production and Systems Engineering Department, and at the Centre for Research in Industrial and Technology Management, in the University of Minho (PT). He lectures and publishes in the area of industrial innovation, innovation systems and innovation management.

Sonia Ben Slimane is associate professor of innovation, and holder of the LABEX Chair in Nanotechnologies, Ecodesign, Innovation and Strategy at Novancia Business school. She participated to scientific projects related to the systemic approach of innovation for ministry, institutional, and national agencies in France. Her field of expertise covers mainly innovation, sustainable development, financing innovation, and technological transfer. She published some of her research results in international journals.



Doan Winkel is an Assistant Professor of Entrepreneurship at Illinois State University. Doan promotes learning by doing in his courses (<http://teachinglean.com>), and promotes this method through his leadership roles within ISU, through USASBE (<http://www.usasbelaunch.org>), NACCE, the Coleman Fellows program and beyond.

PhD Colloquium Chair

Dr Heather Fulford is a Reader in Entrepreneurship and Academic Director of the Centre for Entrepreneurship at Aberdeen Business School, Robert Gordon University, Scotland. Her research interests include entrepreneurship education and education resources, the language of entrepreneurs, social enterprise start-up and social entrepreneurship education. She is currently supervising a number of doctoral students in aspects of entrepreneurship, entrepreneurship education and social entrepreneurship. She delivers courses at postgraduate and undergraduate level on new venture creation. Heather is a visiting Fellow at Loughborough University, a Member of the British Computer Society, and a Fellow of the Chartered Institute of Linguists.



Biographies of Presenting Authors

Joseph Evans Agolla is currently a lecturer at the Botswana College of Distance and Open Learning, and a PhD (Business Management) candidate at North-West University Mmabatho, republic of South Africa. Agolla is also a regular reviewer of *Management Decision Journal* published by Emerald Publishing Company. Agolla has published several peer and refereed articles widely in business and management journals.

Hamid Alalwany has more than twenty years of cross-disciplinary experience gained in the fields of information systems management, systems design, quality assurance as well as the applications of sustainability innovations and entrepreneurships in sustainable development. During this period, he has held positions as Director, Information Systems Consultant, Senior Engineer, Project Manager, and Principal Researcher.

Hanadi Al-Mubarak is an Assistant Professor at Kuwait University. She teaches management courses for undergraduates and graduates. She has published several scientific articles in many academic journals, and two books, and has presented her research papers in many countries. She is the recipient of several international awards. She has substantial experience in research entrepreneurship.

Marina Arkhipova Graduated from MESI in 1987 as economist-mathematician. She received her PhD in economics in 1999 and Doctor of Sciences in 2007. She is now working for the National Research University Higher School of Economics and for Trapeznikov Institute of Control Sciences of Russian Academy of Sciences. Marina is also an author of 190 papers, 8 monographs, and supervisor of four PhD students.

Yulia Balycheva PhD student, research associate, Central Economics and Mathematics Institute of Russian Academy of Sciences, Moscow, Russia. E

José Barata is an Assistant Professor of Economics, R&D Management and Industrial Organization at the School of Economics and Management of the Technical University of Lisbon, (ISEG/UTL). Professor Monteiro-Barata holds a PhD in Economics (1996) from the UTL. Former Vice-President of ISEG/UTL, he has been Coordinator of Graduate and Post-Graduate courses at the Portuguese School of Bank Management (APB).

Fernando Barbosa is an invited lecturer in the Department of Production and Systems Engineering at the Engineering School of the University of Minho. He holds a

B.Sc. in Management from Portucalense University, and an M.Sc. in Industrial Engineering from the University of Minho. He is a Business Consultant and Trainer in several organizations.

Julio Batle Lorente has an MBA from the University of Middlesex (1991) and a PhD in Economics from the University of the Balearic Islands (UIB) (1996). He has been a Researcher in UIB since 1992 and he has been Director of the Masters in Tourism Planning and Management since 2007. He is also Director of UIB Entrepreneurship Chair since 2006.

Radek Blahus, Ph.D. student at the Tomas Bata University in Zlín, Faculty of Management and Economics, is very interested in enhancing of potential of employees especially in field of creativity and innovation. He is also interested in experiential education and its possibilities for development of individual employees as well as teams.

Markus Bodemann studied Economics and Business Law in Hamburg and Kassel / Germany; since 2013 student at the Bucharest University of Economic Studies, Romania 2005 – 2011 project manager for the introduction of double-entry-bookkeeping in municipalities in Germany from 2005 – 2011; current main field is to optimize processes to cope with decisions and developments under uncertainty

Jan-Patrick Cap is a senior researcher and consultant in Innovation and Benchmarking at Fraunhofer Institute for Production Systems and Design Technology, Berlin. He holds degrees from RWTH Aachen University, Tsinghua University (Beijing) and Collège des Ingénieurs (Paris) and has long-term research and consulting expertise in China, USA, Europe and Brazil.

Brian Cleland is a PhD candidate with the Ulster Business School, University of Ulster, where he is researching "Open Innovation Practices in the European Public Sector". He has over 20 years experience of working in the IT sector, and has recently been working as a researcher in the area of e-participation.

Eliza Laura Coras My field of work is credit risk management but during my ten year experience in the banking industry I have accumulated extensive knowledge on all banking processes and risks. In am currently advancing my business risk knowledge and intrapreneuring experience by attending a PhD programme at the Bucharest University of Economic Studies. My research is focused in risks in the innovation process and my practical studies are aimed to open innovation practices.

Dorotéa Bueno da Silva is Ph.D. Student in Industrial and Systems Engineering at the Production and Systems Department, School of Engineering, University of Minho, Portugal. She obtained a Master degree in Industrial Engineering at the Production Engineering Pos-Graduate Department, Paraíba Federal University, Brazil after graduating in Psychology at the Paulistana University, Brazil. The theme of her doctoral research is evaluation of innovation programs for SME, with a special focus on the evaluation of their indirect effects.

Karan Dakup is a doctoral candidate with the Aberdeen Business School, Robert Gordon University. Her research interests include green procurement, waste management, green supply chain management, sustainable development and continuous improvement. Her current research focuses on the adoption of green initiatives in SMEs.

Laura Di Giunta's current research focuses on the continuity and change of individual differences in predicting youth (mal)adjustment, accounting for socialization and culture factors. She also investigates individual differences in youth entrepreneurships in partnership with the Regional Government of Lazio (Italy) to evaluate policy implementation to encourage youth to engage in jobs that revitalize cultural heritage.

Dr. Philip Dover has spent much of his academic career in executive education, working with multinational firms on the topics of business strategy and strategic market planning. He also worked in marketing positions for BP and Nestlé and is now Chair of the Marketing Division and Faculty Director at Babson Executive Education, Babson College. He is a co-founder of the MEL-Institute.

Dr. Andreas Efstathiades is a Full Professor at European University Cyprus. He holds a BEng (Hons) degree from the Engineering Council (UK), an MPhil and PhD degrees from Brunel University UK. His research work is concentrated in the thematic areas of Technology Management, Innovation and Entrepreneurship in the Small and Medium Size enterprises.

Emmanuel Frémot After graduating with a doctorate from the University of Paris Dauphine, Emmanuel Frémot worked in the IT sector before becoming a venture capitalist and eventually focusing on teaching and research. His research work is articulated around the funding of innovation, innovative start-ups, and policies designed to promote research.

Karl Friðriksson is Managing Director at Innovation Center Iceland. Karl is authored of books on Product Development and Future Studies i.e. Scenario Plan-

ning. He is certified international Project Manager and a professional Product Development facilitator from PDMA in the USA and certificated as Cluster Expert by EFCE.

Anna Glaser is assistant professor of business policy and strategy at Novancia Business School Paris. She is a member of the French observatory of competitiveness clusters at Mines ParisTech and the LABEX research chair on Nanotechnologies at Novancia. Her research concentrates on cluster policies, cluster governance, and factors that facilitate the genesis of inter-organizational collaborations.

Oleg Golichenko has a degree of Doctor of Economic Sciences. He is a chief research associate at the Central Economics and Mathematics Institute of the RAS. He is also a professor at the National Research University Higher School of Economics and the Moscow Physics and Technique Institute in Moscow, Russia. His research interests are related to investigation of innovation development processes on micro-macro economic levels and design of social economic and innovation policy. He is an author of more than 200 scientific publications.

Izold Guihur is professor of management at Université de Moncton, in Canada. Her fields of interest are innovation and entrepreneurship, particularly within small and medium-sized businesses. Her research includes in-depth study into the phenomenon of innovation as a dynamic capacity of an enterprise, especially when related to strategies of cooperation and growth.

Steen Hoeyrup is Associate professor in the Department of Education at the University of Aarhus. Copenhagen, Denmark. His research interests are in the areas of Workplace learning and Employee-driven Innovation. He is a Member of the EDI-network: The European network of Employee driven innovation and workplace learning. Recent publications include Høyrup, S., et al (Ed.) (2012). Employee-driven innovation: a new approach. New York: Palgrave Macmillan.

Denisa Hrusecka is a PhD candidate at Tomas Bata University in Zlín – Faculty of Management and Economics. In 2009, she received a Master's degree in Industrial Engineering. Her current research involves advanced methods for production planning and scheduling and their support in business information systems. She also deals with process innovation and logistics. She teaches several subjects at Tomas Bata University in Zlín such as Business Information Systems, Logistics, Production Management or Industrial Engineering.

Danut Iorga is a PhD student at the Doctoral School of Entrepreneurship, Business Engineering and Management, UPB, Romania. He has a bachelor's degree in Avionics. As an ASQ senior member, Danut is certified as Six Sigma Black Belt, with

more than 200 Improvement and Design Projects in companies such as NCH Group and Accenture.

Sima Jegeleviciute is a Pd. D. student at Kaunas University of Technology, Lithuania. She is also a lecturer at the Accounting department, Kaunas University of Technology. She holds a master degree in Finance Management and a bachelor degree in Economics. Her doctoral research focuses on the impact crowdfunding has on value creation.

Paivi Jokela is a Postdoctoral Researcher at Turku School of Economics, University of Turku, Finland. Her research focuses on business networks, business ethics and entrepreneurship in diaspora networks.

Eva Jurickova is a senior lecturer of innovation at Tomas Bata University in Zlín, Faculty of Management and Economics. She received her PhD in Economics and Management from the TBU in Zlín. Her major research interests include industrial engineering, innovation, creativity and patents. She has authored a number of articles and she cooperates in several innovation projects.

Aigerim Kaumenova is responsible for international cooperation, accreditations and rankings at International Academy of Business. She holds MA degree from University of Aberdeen in International Relations and Management and MSc degree from University of Exeter in International Management, Entrepreneurship and Innovation; a DBA student at International Academy of Business, the area of research is social entrepreneurship. Has experience in teaching Business Planning in English to master level students.

Olga Kazina has a Master of Arts in Cultural Management. She is Director of the Creative Industries Agency, and Deputy Head of the Project Centre «Creative Moscow». She is Curator and co-organizer of the all-Russian distance education program School for Creative Entrepreneurs and an Organizer of the Creative Business Cup competition in Russia. She is Author of publications on creative cities and cultural management.

Jens Kohler works as a PhD candidate at the Institute for Enterprise Computing at the University of Applied Sciences in Mannheim. His research focuses security architectures and their implementation in distributed Cloud Computing environments.

Yelzhan Kushekbayev is studying for a DBA at the International Academy of Business (IAB), Kazakhstan. (In progress 1st year). He holds an MSc. in Engineering Business Management from the University of Warwick, UK and a B. Eng. In Com-

puter and Communications Engineering from Dublin Institute of Technology, Ireland. He is CIO - Academy of Design and Technology “SYMBAT”.

Chih-You Lee is Business Administration PhD student, National Sun Yat-Sen University in Taiwan, is committed to research management phenomenon by narrative inquiry approach and community of practice theory. The main research areas at present focus on entrepreneurship learning, and entrepreneuring.

John Liptak is the Associate Director of Career Services at Radford University. He works with college students interested in starting a business after college. John conducts considerable research on the topic of entrepreneurial readiness and developed an assessment titled the Entrepreneurial Readiness Inventory. He also conducts workshops based on his book *Entrepreneurship Quizzes*.

Joan Lockyer Assistant Director, Institute of Applied Entrepreneurship, Coventry University. Joan is responsible for the development and delivery of the academic programmes offered by the IAE and for its research strategy. In addition, Joan also leads on or supports the delivery of a number of European projects.

Ilidio Lopes Professor and researcher at *ISCTE Business School – University Institute of Lisbon*. Graduate in Business Administration, he obtained a Master Degree in Statistics and Information Management and a PhD in Management, Specialization in Accounting (University of Coimbra, Portugal). Researcher in the fields of: Knowledge Management, Management and Financial Accounting, Management Control Systems, and Research Methodologies.

Lawrence Loughnane The University of Limerick awarded Lawrence his Ph.D. He has over twenty-five years of business experience and has taught at the Undergraduate, Master and Ph.D. levels in Ireland, Spain, Mexico and the US. He worked as a consultant to small, medium and large businesses in both technical and senior management positions.

Maria Jesus Luengo-Valderrey PhD, is Associate Professor at Department of Management Evaluation and Business Innovation, at the University of the Basque Country (Spain). She has managed some research projects and at present time, she is the coordinator to the project “Strategies to optimize innovation resources in Spanish high and medium technology Enterprises”. She has contributed to scholar area with international articles and books. Her current work focuses on knowledge management, intellectual capital and innovation

Douglas MacDonald is an Associate Professor (Entrepreneurship) with the Bissett School of Business, Mount Royal University, Calgary, Alberta, Canada. His research interests include the Knowledge Management Processes of Growth-oriented SMEs and the emerging “Lean Start-Up Movement”.

Selma Martins has a degree in Nursing from Nursing School of Coimbra, Portugal, 2007 and a Master in Management of Health Units from the University of Minho, Portugal. She has been a Generalist Nurse in Valladolid, Spain, since 2008.

Veronica Mašínová is a postgraduate student in the Faculty of Economics at the Technical University of Liberec. In 2011 she received an engineering degree from the same faculty. She is a member of the Marketing Department where she specializes in marketing research with a focus on E-commerce. In her thesis she engages in online shopping and in factors influencing e-customers’ decisions.

Ronak Massand is a recent graduate from Brown University where he earned a Master’s degree in Innovation Management and Entrepreneurship. Currently, he is the Co-Founder & CEO of Parkloco, a location-based parking spot-availability app that helps people find parking spots in real time.

Adam Mazurkiewicz Prof., CEO at the Institute for Sustainable Technologies - National Research Institute, Radom, Poland. Supervisor and expert in research projects – systems engineering, machine construction and maintenance, materials engineering, technology transfer, foresight. He is an expert in FP6, COST, Polish interdisciplinary research groups and head of a few strategic national and international programmes. He is author of 300 publications including 15 monographs.

Chris Moon is an award winning social and eco-entrepreneur with a Phd from Imperial College. He is the founder of several eco businesses and formerly Head of Sustainability at two leading companies. He has consulted to large and small business and is Senior Lecturer, Eco-entrepreneurship, Middlesex University Business School.

Rodrigo Jose das Neves Morais is Adjunct Professor at the Polytechnic Institute of Tomar (IPT), Portugal. His academic background includes a Master’s degree in Health Management Resources, from the Polytechnic Institute of Tomar (IPT), and Graduation of Management and Administration of Health Services. He is a research fellow in NECE. Expertise: Entrepreneurship, Business Creation, Knowledge Management.

Pedro Picaluga Nevado is an Assistant Professor at ISEG in Strategic Management, International Management, Strategic Marketing and Distribution. He has a PhD in

Management and is Coordinator and co-coordinator of some postgraduate courses and advanced training courses at ISEG. He is a Former Director and consultant to various companies.

Pavla Odehnalov, Ph.D. works on the position of Assistant professor on the Department of Business Economics, Faculty of Economics and Administration, Masaryk University Brno, Czech Republic. Her specialization is family business, she also teaches management and marketing. She participates on the researches of the Masaryk University as Competitiveness of Czech enterprises that took place in years 2006 - 2009 and Crossboarder- cooperation that took place in years 2012-2014.

Ruslan Pavlov is a senior researcher at the Central Economics and Mathematics Institute, and post graduated from the same institution. His research interests include the diversification of business within a context of the long waves theory; institutions of social entrepreneurship as factors of social innovations.

Pavlina Pivodova is a graduate of the Master's program at the Faculty of Management and Economics, Tomas Bata University in Zlin. Currently, she is a Ph.D. Candidate and assistant at Department of Industrial Engineering and Information Systems at this university. Her research interests cover: industrial engineering, innovation of processes and organization.

Beata Poteralska, PhD, senior researcher, Institute for Sustainable Technologies-National Research Institute, Radom, Poland. Expert in national and international research projects (e.g. FP5, COST, PHARE) – innovativeness improvement, technology transfer, foresight. Scientific secretary of the strategic national programme: "Innovative Systems of Technical Support for Sustainable Development of Country's Economy". Author of over 50 publications including 3 monographs.

Dragana Radicic is a lecturer in business economics at Bournemouth University. Her research interests include open innovation, R&D cooperation and quantitative policy evaluation, particularly R&D and innovation policy, as well as educational policy.

Lucy Richardson is General Manager for Australian environmental not-for-profit organisation, Condamine Alliance. Based in Toowoomba, Queensland, she has led the organisation's science and information management components for almost 10 years and is a strong supporter of knowledge sharing and collaborative action.

Filipe Rivera is a sociologist studying organizational innovation. He has worked in the area of management innovation challenges, and intra entrepreneurship in

manufacturing and technology companies. He is a Director in the Sociology School at the Universidad Central of Chile.

Cristina Rodrigues holds a Ph.D. in Industrial and Systems Engineering. Assistant Professor in the Department of Production and Systems, School of Engineering at the University of Minho and is responsible for disciplines of applied statistics in undergraduate and master engineering courses. She is also a researcher fellow at Algoritmi R&D Centre.

Alan Sanderson is Programme Leader of the BSc (Hons) Community, Social Enterprise and Management at Truro and Penwith College. He has a series of academic publications in the fields of public administration and the philosophy of social sciences. His current research focuses on the effective development of social enterprise in Cornwall.

Fernando Santos Lecturer at School of Management and Technology, *Polytechnic Institute of Santarém* - Portugal. Graduate in Business Administration, he obtained a Master Degree in Public Management and, presently, he is a PhD candidate in Management, Specialization in Accounting at University of Coimbra, Portugal.

Veronica Scutto is a Lecturer in Entrepreneurship and Innovation at the University of West of Scotland (UK). She has worked as a Research Assistant in Business Economics at the Second University of Naples and was a Marketing Consultant for 5 years in Italy. She was also commercial manager at GNS China in Beijing (China).

Annalisa Sentuti, PhD, is Contract Professor of Business Administration at the University of Urbino “Carlo Bo” (School of Foreign Languages and Literatures) and Research Fellow in Business Administration at the same College (Department of Economics, Society and Politics). Her main research interests include family businesses, succession, entrepreneurship and small business.

Klemen Sirok is a senior lecturer, lecturing Human resource management, Labour market and Research methodology. His research interests include evaluation studies, innovation management and research methodology within area of labour market, QAA in education policies. He has been conducting or participating in many international and national evaluation projects.

Viacheslav Sirotin is a Professor in the Department of Statistics & Data Analysis at the Higher School of Economics in Moscow, Russia. He holds a PhD from the Academy of Anti-Aircraft Defence, Kharkov, Ukraine.

Ana Paula Lisboa Sohn is a PHD student at Federal University of Santa Catarina, in Brazil, with the Sandwich at University of Minho, in Portugal. Professor of Management at University of Vale do Itajaí, in Brazil since 2000.

Cristina Sousa is a Researcher at DINÂMIA'CET-IUL and Invited Assistant Professor at ISCTE-IUL. She has a Master's degree in Economics and Management of Science and Technology and a PhD in Economics. Currently, her research is focused on innovation and knowledge networks, on entrepreneurship in knowledge-intensive sectors and on the transition to a sustainable energy system.

Jurgita Staniulyte First year PhD student of Economics at University of Leeds, Leeds UK. Has BS in Marketing from University of Illinois at Chicago and MA in Economics from Roosevelt University in Chicago, IL USA. Interested in political economy, industrial policy and innovation systems of the European Union.

Runolfi Steinthorsson is Professor of Strategy and Management at the University of Iceland. Runolfur has focused on research and teaching on Strategy, Management and Competitiveness. He was Founding-Director of the Executive MBA program at University of Iceland and now elected Dean for the School of Business. Runolfur is certificated as Cluster Expert by EFCF.

William Sutherland is a Teaching Fellow with Aberdeen Business School at Robert Gordon University. His research interests include: management of innovation; systems of innovation; clusters and business model innovation. He teaches on Innovation, International Business and Strategic Management programmes at undergraduate and postgraduate level.

Ding Hooi Ting is a Senior Lecturer at the Department of Management & Humanities, Universiti Teknologi Petronas, Malaysia. He is a PhD holder and his research interests are in education, services marketing and consumer behavior

Dun-Hou Tsai is a full-time professor of Business Administration in National Sun Yat-Sen University in Taiwan. Major teaching and research are in the field of strategic management and entrepreneurial management, and is committed to research management phenomenon by narrative inquiry approach using post-modern perspective.

Filipa Vieira holds a Ph.D. in Industrial and Systems Engineering. Assistant Professor at the Production and Systems Department, School of Engineering, University of Minho, since 2007. Lecturing activities on Innovation and Economics Engineering, at undergraduate and post-graduate courses. Researcher fellow at CGIT (Production and Systems Department Research Centre).

Marcia Villasana is a postdoctoral research fellow for the Global Research Chair in Entrepreneurship at Tecnológico de Monterrey (ITESM). Marcia holds a Ph.D. in Public Policy from the School in Government and Public Policy at ITESM, and her research interests are in academic entrepreneurship, university-industry interactions, technology transfer, and entrepreneurship and innovation policy.

Kayleigh Watson is a researcher and lecturer based within the University of Sunderland International Business School. With broader research interests in enterprise education and nascent entrepreneurship, she is currently undertaking research which explores the role of extracurricular Business Plan Competitions.

Urszula Wnuk – an assistant at the Innovation Strategies Department of the Institute for Sustainable Technologies – National Research Institute (ITeE-PIB); active in the field of technology transfer; author and co-author of several scientific publications and reports; a Deputy Head of a research project on technology transfer mechanisms and structures executed within ITeE-PIB's Strategic Programme.

Jitka Zborkova comes from The Department of Finance and Accounting, Faculty of Economics, University of West Bohemia, Czech Republic. Her research interests include financial accounting, taxes, business environment, business finance and sustainable development.

Christian Zinke is a senior researcher in the field of lifecycle management at the University of Leipzig. He obtained a master's degree in sociology in 2010. He is project leader of the "product-service lifecycle management" research project sponsored by the Saxon State Ministry. His research interests include servitization, service-oriented management approaches and product-service systems.

Assessment of Innovation in Public Sector Organisations in Kenya

Joseph Evans Agolla and Jacobus van Lill
North-West University, Mafikeng South Africa

Abstract: The purpose of the present study was to assess innovation in Kenyan public sector organisations. Qualitative and quantitative approaches to data collection and analysis were utilised. Middle managers and non-managerial employees of two public sector organisations (PSOs) participated in focus group discussions and completed self-administered questionnaires respectively. Sixteen managers (2 groups of 8 each) were interviewed in the focus groups and these data were analysed by extracting common themes. Of the 400 questionnaires distributed among employees, 230 were returned, but only 181 were usable. The measuring instrument consisted of a total of 102 5-point Likert type items and a brief biographical scale. A theoretical model of the relationships among drivers, barriers and innovation outcomes in PSOs was developed from literature, and the model was analysed by means of structural equation modelling utilising the AMOS programme. Firstly the main drivers, barriers and innovation outcomes in the public sector organisations were identified. Secondly the findings revealed that, there is little innovation in the two public sector organisations investigated. Thirdly, results of the qualitative and quantitative analyses showed contradictions between managers and employees on the factors perceived to be drivers of innovation in the public sector organisations, which were not only inconsistent within the present study, but also differed from previous studies. Despite this discrepancy, the present study contributes to the public sector innovation by developing a model that could further be refined in future studies to enhance the understanding of innovation in the public sector organisations. The present paper contributes to the body of knowledge through an extension of the literature in the field of public sector organisations and also by opening avenues for scholarly debate.

Keywords: assessment, developing countries, innovation, Kenya, public sector, private sector

Supporting Innovation and Entrepreneurship: Reflections on Two Case Studies From US and UK Universities

Hamid Alalwany¹, Nabeel Koshak² and Mohammad Ibrahim²

¹**Brunel University, Uxbridge, UK**

²**Umm Al-Qura University, Makkah, KSA**

Abstract: An important area of research is to answer the fundamental question of what can be done to support innovation and entrepreneurship in universities to fulfil the objectives of knowledge economy. In this paper, the authors report findings from two interpretive in-depth case studies from US and UK Universities in different higher education system settings. The paper is designed to address innovation and entrepreneurship activities at three levels, (Individual, Organizational, and Eco System Levels), and is intended to explore the main pillars of entrepreneurship policies, namely entrepreneurship education, venture capital support and intellectual property facilities. The findings that are extrapolated from the analysis of the two case studies are presented. The findings have addressed the key aspects of support systems for innovation and entrepreneurship, and have been outlined in the form of lessons learnt from the initiatives of exemplar US and UK universities in supporting innovation and advancing entrepreneurial practices. The paper will contribute to two discourses: (1) Addressing the relationship between support systems for innovation and entrepreneurship and the universities policies and practices (2) Lessons for University leaders to assist the development and implementation of effective entrepreneurial policies.

Keywords: knowledge economy, entrepreneurial university, entrepreneurship education, venture capital support, intellectual property facilities

Beyond Incubators Mechanisms: Innovation, Economic Development and Entrepreneurship

Hanadi Mubarak Al-Mubarak¹ and Michael Busler²

¹**Kuwait University, Kuwait**

²**Richard Stockton College, USA**

Abstract: Business incubators are proven and well known internationally as dynamic tools for fostering new ventures to support economic development and job creation, and as vital components of an entrepreneurial infrastructure. In addition, business incubators have contributed to the creation of technology-based companies, innovation acceleration, fostering an entrepreneurship climate, technology transfer, and technology commercialization. This paper critically reviews, identifies, and analyzes the literature related to incubator best practices in devel-

oped countries. The authors use three categories of indicators to assess the success of incubation programs: 1) economic development includes the number of jobs created and the survival rate of incubator companies, 2) industry growth includes incubator type and incubator services, and 3) culture growth includes entrepreneurship and innovation. This paper provides evidence based on current literature concerning entrepreneurship and innovation as an effective tool for economic developments. The study used a qualitative research methodology including three interviews of incubator programs in the United States. Also, the authors' professional experience on the topic provides the foundation for this paper. The paper's results provide guidance, suggestions, and recommendations for future implementation in developed and developing countries for practitioners such as policy makers, governments, funded organizations, and strategic institutions.

Keywords: economic development, technology transfer, entrepreneurship, innovation

Bounded Entrepreneurship and Intrapreneurial Performance in Sweden

Sabina Andersson, Jelten Beekhuis, Ronak Massand, Patrick McHugh and Younghwan Shin
Brown University, Providence RI, USA

Abstract: Sweden is viewed as one of the most innovative countries in Europe; however, the 2012 Swedish Global Entrepreneurship Monitor (GEM) indicates that in comparison to other innovative countries, Sweden is ranked very low in total entrepreneurial activity. Instead, the report suggests that entrepreneurial activity is channeled into intrapreneurship where Sweden is highly rated. The research literature identifies a strong correlation between Swedish political policies and the dis-incentive for entrepreneurship suggesting more broadly that social perception, labor law, insolvency and tax regulation, and access to capital are critical factors impacting Sweden's low entrepreneurship rate. We hypothesize that these policies are the institutionalization of collectivism embedded in the cultural framework and social structures of Sweden. We further hypothesize that these constraints on entrepreneurial activity relate to the re-direction of entrepreneurial energies into the high levels of intrapreneurship observed in the Swedish GEM study. Utilizing an exploratory case-based analysis in the consumer appliance industry we investigate how this intrapreneurial behavior may impact comparative firm behavior in large established multi-national companies (MNCs). Financial performance criteria related to innovation and anticipated to positively correlate with strong intrapreneurial behavior were compared between the Swe-

dish firm Electrolux and its U.S. competitor Whirlpool with superior return on product development observed for the Swedish firm. The cultural dimensions driving intrapreneurial behavior were also hypothesized to drive greater systematic risk for the impacted companies, supported by the higher Beta values observed for the Swedish firm. This exploratory study suggests that intrapreneurship characteristic of a firm's country-of-origin may be a convergent dimension of organizational behavior that transcends the homogenization of many organizational behavior traits across MNCs.

Keywords: intrapreneurship, entrepreneurship, Sweden, corporate culture, MNC

Collaboration for Public Private Partnerships: In Support of an Entrepreneurial Ethos?

Christos Apostolakis and Osikhuemhe Okwilagwe
Bournemouth University Business School, UK

Abstract: The purpose of this paper is to examine entrepreneurial traits, values and characteristics of public private partnerships in striving for a distinctive kind of ethos supportive to their operational efficiency. In doing so it employs the notion of collaboration as a theory vehicle for achieving policy and organisational goals. Methodology-wise it relies upon qualitative research that took place in Nigeria earlier this year. The main tool of investigation is semi-structured interviewing of key policy individuals. The paper investigates the capacity by public private partnerships to integrate entrepreneurial ethos as a way for efficient performance and management. Despite the fact that empirical evidence justifies existence of this ethos in terms of innovative interventions, partnership transformation, partnership efficiency, effective management and value creation, this comes at a cost: evidence of corruption and societal protest about increase of toll tax have been two of the most noted pieces of evidence of the public's response to partnership work outcomes.

Keywords: collaboration, public private partnerships, entrepreneurial ethos, Nigeria

Supply Process Optimization Using Hubs for Materials

Marina Arkhipova¹ and Kirill Arkhipov²

¹National Research University – Higher school of economics, Department of Statistics at Economics faculty, Moscow, Russia

²Moscow state university of economics statistics and informatics (MESI), Department of applied math, Faculty of economics and statistics, Moscow, Russia

Abstract: Globalization of world economic processes has intensified in present years, especially on FMCG markets. That makes production companies pay much attention to goods and materials standardization at their plants. Meanwhile for products with low shelf life companies search possibilities to increase freshness of their products at the shelf. That leads to complicated production and materials supply schemes (several plants), which do not operate in an optimal way. In the article, the innovation model of materials flow optimization is analyzed for a company with territory-spread structure of production capacities. Several stages of innovation development and implementation are explored: define, development, implementation, post launch analysis. Complex economic effect to the business processes was evaluated. Innovation helped to increase materials turnover, decrease purchasing price and risk of shortage of materials that are used on several plants. Hub for materials is a network of transitional warehouses between suppliers and plants of usage. To solve a problem of a great variety of places of hubs allocation, determine their quantity and transportation schemes, genetic algorithms were used. They helped to find optimal supply models. In the optimization model, following parameters were considered: Different kinds of transportation, their costs and capacities; Different places to allocate hubs for materials; Materials planning parameters (minimum order size, price levels, transportation conditions); Suppliers location; Forecast of materials consumption at each plant; Several points of loading trucks from suppliers and several point of uploading trucks from hubs to production plants. Using suggested model an optimal logistic scheme of materials supply for production company was created. The model determined number of hubs for materials and their locations, helped to increase materials turnover and truck fill rate, decrease purchasing prices and risk of materials out of stock. Suggested schemes were tested at Danone Russia (24 factories in the country) where showed significant results and benefits. Special KPIs were created to measure efficiency of innovation implementation.

Keywords: hub for materials, supply optimization, procurement management, organizational innovations

Regulating to Facilitate Innovation? Nanotechnologies and the Dilemma of EU Institutions

Claire Auplat and Sonia Ben Slimane
Novancia Business School, Paris, France

Abstract: The objective of the paper is to examine if and how EU regulation impacts the role of the EU as a facilitator of innovation. The EU vows to create an innovation-friendly environment under its Europe 2020 strategy program. At the same time, through its REACH regulatory framework that spearheaded international regulation of chemicals, it seeks to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances, and the replacement of the most dangerous chemicals currently in use. It now explores widening the scope of REACH to include nanomaterials, and many see this as a way of curbing innovation. The paper builds on recent work on the emergence of a regulatory framework for nanotechnologies to take stock of the current situation and to explore how further regulation may influence innovation and the shaping of new markets for nano-based materials. Our methodology rests mostly on archival work, completed by some focused interviews. Archival work includes the study of a comparative database of existing regulatory frameworks, both inside and outside the EU, a synthesis of public statements, reports and public inquiries intended to measure the potential impact of regulation on innovation, as well as a study of the corporate and annual reports of CAC 40 firms. The CAC 40 (Cotation Assistée en Continu) is a benchmark French stock market index, which represents a capitalization-weighted measure of the 40 most significant values among the 100 highest market capitalizations on Euronext Paris. CAC 40 firms are all operating under EU law and are illustrative of how markets could shape around the development of nanobased materials. The paper aims to shed some light on the roles and challenges of institutions as facilitators of innovation. By focusing on the impact of regulation on the strategic management of innovation it adds new perspectives to the important literature devoted to the study of the sources of innovation. It also contributes to the strategic management literature, as well as to the policy literature.

Keywords: innovation, REACH, EU regulation, business development, nanomaterials, R&D

The Relationship Between Patents and Firms' Innovation Activity: The Case of Russia

Yulia Balycheva and Oleg Golichenko

Central Economics and Mathematics Institute of Russian Academy of Sciences,
Moscow, Russia

Abstract: In many respects the paper reaffirms that innovation activity is not uniform in space and time. The paper aims to identify the most widespread types of intellectual property applications by Russian companies at regional level. Three the most widespread types of invention patents applications during 2000-2004 and during 2005-2006 are exposed and analyzed. The first is directed towards innovation creation on the basis of patents. To gain competitive advantages firms use patents to introduce new products to the market. In the second case, firms use intellectual property rights to build barriers to protect market from new competitors. This strategy belongs to entry obstacles making and the protection of already reached advantages. Finally, the third type is characterized by the absence of active intellectual property applications in core activity. The general and particular trends are determined for the exposed types of behavior. In particular, one of the general trends is the reduction of the number of firms that use patents to create innovations with the lapse of time. The reduction is the most considerable for the firms which least tend to create innovations based on patents. However, the consequences of these influences are insignificant for enterprises which have been actively involved in the innovation process and have high professional skills. In addition, one of the general trends observed in this study is the decreasing of efficiency of intellectual property creation by innovative firms over time. The commitment of enterprises to the chosen type of behavior has considerable impact on the efficiency of intellectual property creation. So, the enterprises, which follow certain type of behavior throughout the ten-year period, are more active in registration of inventions in comparison with the firms which have changed this behavior. It is shown that the types of intellectual property application are connected with sequence of innovation stages which pass the enterprises for innovation launch. Thus after periods of knowledge accumulation (the third type of behavior) and innovation creation (the first type of behavior) begins the period of large-scale innovation diffusion. During the last period the enterprises protect the returns from their innovations by means of building market entry barriers (the second type of behavior).

Keywords: IP, patent, strategy, innovation, innovation cycles, Russia

Innovation, Design and Competitiveness: A Synthesis Based on Portuguese Case Studies

José Barata¹ and Pedro Nevado²

¹Economics Department, Instituto Superior de Economia e Gestão, University of Lisbon (ISEG, UL), Lisbon, , ²Management Department, Instituto Superior de Economia e Gestão, University of Lisbon (ISEG, UL), Lisbon, Portugal

Abstract: In recent years, the case study methodology has become popular in the study of firms and their routines. It is what is meant by the "method of cases" that will be used to analyse the following two business cases (lighting business and footwear business). The emphasis will be placed in design management. Contextually, we are facing cases of innovation and entrepreneurship (business initiative and enterprise development) based on a design-driven approach. Design thinking is indisputably a catalyst for innovation. Then, the design is assumed as the enhancer of the customer's "experience", aligned with general management, R&D, marketing and sales and operations. The paper will focus on two case studies (lighting business and footwear business), highlighting: a historical, economic and strategic background; the design management function; and the impacts of design. From these case studies one may conclude that the sustained growth and the level of competitiveness attained were favoured by the use of design at the generation of ideas stage, during the production process and even in the marketing and customer service. Further in-depth integration of design in the company's global structure and sustained investment in design "people" (competencies), for instance, are the necessary conditions for building the future of this Portuguese SME. Design is a core competency, allowing to reach the *design driven innovation* perspective.

Keywords: design, innovation, entrepreneurship, case study

Strategy, Innovation and Internationalization in SMEs: The Implementation Issue

Fernando Barbosa and Fernando Romero

Department of Production and Systems Engineering, University of Minho, Guimarães, Portugal

Abstract: Innovation and internationalization, along with strategy formulation, due to their relationship of mutual interdependence, are widely referred to as decisive factors for the sustainable growth of SMEs. In this article we aim to study the relationships between strategy, innovation and internationalization and its effects on business competitiveness, filling a gap in terms of the knowledge con-

cerning these interactions, which is diffuse or inconclusive. Failure rates related to strategy, innovation and internationalization are high, with correspondingly high costs for companies, and we postulate that they are linked to aspects of implementation. As companies enter or consider each one of these dimensions of the business, they will incur in increasing costs if there is a poor implementation of strategy, innovation and internationalization. However, despite their importance, many SMEs do not have structured processes of strategy, innovation and internationalization. This may be particularly true in micro, entrepreneurial enterprises, which are the subject of this study. The determination of the causes and determinants, as well as the tools that companies use in designing their processes of formulation and implementation of strategy, innovation and internationalization, are extremely important in order to identify the factors and determinants that have major impacts on business performance, and explain how these effects occur or act. The importance of this issue is increasing, namely at the European level, because the market in each country is generally too small to allow the return on the investment made in developing a new product, so internationalization comes as a natural path to follow, once the innovation process is properly consolidated, based on a coherent, visionary and sustainable strategy. Many new firms initiate their activity with an explicit eye on internationalization and products designed for foreign markets should be prepared to compete at a global scale, supported by a clear differentiation strategy. This article is a case study of fifteen Portuguese micro enterprises (less than ten employees). The share of micro enterprises in the total business sector in Portugal is approximately 95,59%. Entrepreneurship has been encouraged by several policies, and new firms, with new approaches and skills, have surged. Our sample includes new firms and firms that were created several years ago, and spans several sectors of activity. We will examine, in the light of the main literature about the issue and in a critical way, the strategy, innovation and internationalization processes of these firms, and interpret them under the assumption that implementation aspects are critical to their performance and hence to their survival in a hyper competitive global industry. The results of the study provide the ground for the proposal of a diagnostic assessment tool, which aims at performing an enquiry into the firm's existing methodologies and practices related to strategy, innovation and internationalization, and thus allowing a more rigorous and systematic interpretation of the interactions of those processes. The diagnostic tool provides the basis for the proposal of adequate tools that can be implemented to better coordinate those processes. This assessment tool may be applicable to more mature SMEs as well, helping organizations improving their strategy processes.

Keywords: strategy, innovation and internationalization management, entrepreneurship, diagnostic assessment, scoring model, organizational change

Innovation and Sustainability in the Social Economy: A Case Study of Organizational Change of a Social Portuguese Organization

Fernando Barbosa and Fernando Romero

Department of Production and Systems Engineering, University of Minho, Guimarães, Portugal

Abstract: In Europe, the Social Economy is responsible for about 10% of the European business sector, with a share of about 6% in total employment (about 11 million people), revealing an industry that will be called to give a greater contribution to the current problems of unemployment and social cohesion in Europe due to the ongoing social and economic transformation. However, research on the phenomena of the Social Economy still lacks in many respects, concerning, for example, its role in the development of local, regional and national competitiveness. There is a lack of methodologies, tools and indicators appropriate to the social economy. This could be caused by the complexity and diversity of the organizations, on one hand, which is a barrier to their comparability, and on the other hand, to its late and recent recognition on the production of public services. Changes on public policies, the economic and financial crisis, the spread of unemployment and poverty, brings to the light the importance of these organizations, which are ceasing to be residual in economic terms, and are becoming, alongside the State and the Market, a mainstay of the economy. This article is a case study of a Social Economic Organization, where we will examine, in the light of the literature on strategic management, and innovation, its organizational change, which was critical to ensure its survival. Through this case study we intend to increase the understanding and the knowledge on the main motivations, barriers and facilitating factors leading to the improvement of the quality of the services, and the efficiency of the management of the Social Economy Organizations, which contribute to its competitiveness and sustainability. The case study highlights a number of best practices in the design of structured innovation processes, which were supported by the Portuguese Program Q3-Qualifying the Third Sector, which may help similar organizations to improve their innovation and organizational processes, which are essential to increase their competitiveness and sustainability.

Keywords: innovation, strategy, social economy, nonprofit sector, alternative economy, organizational change

Disclosure and Expropriation of Business Ideas: The Case of an Open Business Ideas Contest

Julio Batle

University of the Balearic Islands- UIB, Spain

Abstract: The emergence of business pioneers in the online knowledge market of business ideas challenges the traditional view on disclosure mechanisms in the design of business ideas. The present addresses alternative approaches to leverage disclosure and access to capital market and, by doing so, it examines the value of business ideas *per se* in the open innovation age. The research consists in a survey about disclosure mechanisms in the context of an experimental online business ideas contest organized in the Balearic Islands. Entrepreneurs sharing online their ideas were surveyed and in-depth interviewed to ascertain the extent to which the risk of expropriation was a concern and also, to explore the actual realm of business idea property according to the subjective perception of entrepreneurs. The results indicate that the elements that were regarded by respondents as non-shareable variables differ in each case, but most answers relates to a complex array of information asymmetries regarding specific business knowledge, implementation strategy and business model evolution over time. The paper aims at identifying relevant variables and interrelations in this needed construct of protection of business ideas in what could be regarded an early stage in the age of open entrepreneurship.

Keywords: disclosure, business ideas marketplaces, appropriation, absorptive capacity, business model, perceptive knowledge

Strategies Adopted by Male and Female Entrepreneurs in Italy to Face the Economic Crisis

Francesca Maria Cesaroni and Annalisa Sentuti

Department of Economics, Society and Politics, University of Urbino Carlo Bo, Urbino (PU), Italy

Abstract: The current economic and financial crisis has had a profound impact on the Italian economy, and has put Italian companies into great difficulty; however statistical data shows that businesses owned by women seem to have resisted the economic crisis more effectively than those owned by men. This paper seeks to describe the ways in which Italian businesses have responded to the economic crisis and adopted strategies to deal with it. The study also compares the attitudes and behaviours of male and female entrepreneurs, in order to gain insight into their respective ways of dealing with the recession. The literature review

shows that firms have faced the economic crisis by adopting either an offensive or defensive approach, and by externally- or internally- directed action. Four main types of strategy were identified: restructuring, resizing, reorganization and innovation/development. Drawing from a questionnaire survey given to a sample of 300 (150 male and 150 female) owners of micro-enterprises located in the Marche region of Central Italy, the findings suggest that firms adopted mainly a defensive approach characterized by both restructuring and resizing strategies aimed to improve efficiency and refocus the core business. An offensive approach – involving innovation, development or reorganization strategies – was less common. A comparison between men and women shows that female entrepreneurs showed a lower propensity towards investment, innovation, development and growth. Consequently, they were significantly less oriented toward innovation/development strategies than men. Results suggest that under the same external conditions, gender may influence the strategies adopted by entrepreneurs in responding to the economic crisis. The defensive approach adopted by women entrepreneurs may be considered positive in the short-term, as it aims at guaranteeing the survival of the business. However, in the long-term it could undermine the ability of a business to seize new opportunities and to innovate, and consequently weaken competitiveness.

Keywords: economic crisis, entrepreneurship, strategies, gender

Information Governance Modularity in Open Data

Brian Cleland, Brendan Galbraith, Barry Quinn and Paul Humphreys
Department of Management and Leadership, University of Ulster, UK

Abstract: The growing global interest in enabling more accountable government through the use of the internet is reflected in international initiatives such as the Open Government Partnership (Noveck, 2009; Robinson et al., 2008; Yu and Robinson, 2012). The primary vehicle for the open government agenda has been the online publication of public sector information – or open data. It has been suggested that open data can improve government transparency, enhance citizen engagement in democratic processes and support increased efficiency and effectiveness in public services. It is also proposed that open data can also enable the creation of value in the private sector by providing entrepreneurial opportunities, ensuring better investor information and accelerating product and service innovation (Guerin, 2013). In both industry and in government there is an on-going debate about how the principles of openness should be applied and how conflicting needs can be reconciled. In a survey of policy-makers and experts to identify drivers and barriers to implementing open data policy, six of the top seven issues were related to what might be termed “information governance”, including: pri-

vacy, quality, usability, standardisation, security and charging models (Huijboom and Van den Broek, 2011). One possible approach to addressing this problem is through the concept of IP Modularity (Henkel et al., 2012), which applies a modular systems perspective to show how intellectual property can be partitioned so that external innovation is supported while value appropriation is simultaneously protected. We examine how a similar approach can be applied to open data by generalising the model to include a wider range of rights and obligations. Information governance (IG) modularity is developed as a theoretical framework, drawing on concepts from configuration design and Fixson's process perspective (Fixson, 2003).

Keywords: open data, modularity, governance, innovation

Innovation Risk Management – Banks' Risky bet on Safe Innovating

Eliza Laura Coraș

Bucharest University of Economic Studies, Bucharest, Romania

Abstract: This paper draws on the classical risk management framework, so fully employed in the current banking post-crisis landscape, by seeking its balance with the utterly needed innovation in the financial world. We are building the argument for a significant urge for a strong innovation culture while the whole banking system is extremely risk-averse, thus seeking to define the oxymoronic relationship between risk management and innovation. The purpose of this paper is to discuss the risks associated with innovation, while exploring the field of risk management in relation with the innovation process. The study introduces a conceptual framework, called innovation risk management that attempts to explain the leeway of boosting the innovation potential while applying a sound risk management practice in the same time. Even if the common knowledge is innovation being fostered by a risky behaviour, we seek to prove that an effective risk management is positively linked to enhancing innovation. Using risk management processes to improve the innovative capability creates a field of study yet unexplored in the specific literature. We have tested our proposed framework in the Romanian banking sector characterized by poor innovative strategies, deficient knowledge sharing and high barriers to technological advances. The purpose was to understand the various risks associated with innovation, identify existing risk management practices and their impact on creating an innovation culture, and derive recommendations that could help overcome this key barrier. This is done by a conceptualisation of risk and innovation by introducing this new framework, and insights gained from key risk and innovation managers from three large banks, invited at the expert group meetings. The research carried out was explor-

atory and the cases were chosen because of their relevance for the current innovation landscape in the banking sector in Romania. The results were indicative for three variables to be positively associated with the development of a viable innovation risk management framework: people, technology and resources. Our findings further show which factors are highly expected to influence the efficiency of the model: investment in new knowledge and intangible assets, a corporate culture focused on innovation spirit and risk knowledge sharing are found to be key drivers for an effective yet safe innovation. Our study is suggestive of the risk-averse culture of the banking system which could benefit from employing a business model focused on innovation risk management to heighten its performance and shift its goals from playing safe to safely innovating.

Keywords: innovation risk management, risk knowledge sharing, innovation strategies, risk adversity, financial innovation

Reaching Across the Pond: Extending a Regional Innovation Ecosystem Strategy

Stephen Cross, Bernard Kippelen and Yves Berthelot

Georgia Institute of Technology, Atlanta, Georgia, United States of America and Metz, France

Abstract: The Georgia Institute of Technology has been a catalyst for economic growth in the Southeast United States since its founding in 1885. Over the past 30 years, it has become known as one of the top technological universities in the world. As part of a strategic planning effort in mid-2009, it sought to strengthen its thought leadership and impact through the implementation of a global innovation ecosystem strategy. The Institute serves as the integrating focus within its region to promote disruptive thought, use-inspired research, experimentation, and accelerated implementation through novel educational, research, and industry partnership programmes. Since 2009, there has been a marked increase in economic development impact. This paper describes an implementation of a system-focused strategy for a regional innovation ecosystem in the Southeast United States, a research methodology for its continuous improvement and assessment with results and analysis over a multi-year period, and lessons learned. It postulates necessary ecologic, economic, and societal attributes for an innovation ecosystem, illustrates how these attributes are the basis for success within the region, and describes how this is a basis for extension to its affiliated programmes in France.

Keywords: innovation, ecosystem, leadership, collaboration, partnerships, strategy

Measuring Business Benefits and Performance in Smart Cities

Renata Paola Dameri and Roberto Garelli

Department of Economics, University of Genova, Italy

Abstract. Smart City is an urban strategy aiming at improving the quality of life in urban space. It is a comprehensive strategy, addressing all the aspects of wellbeing, that is, economic, social and environmental aspects. The distinctive component of smart city is the large use of technology: indeed, a smart city strategy is largely based on innovative technological solutions to improve the quality of life and to solve the more frequent urban problems. The smart city implementation requires a joint effort from several different actors: local governments, businesses, universities and research centres, citizens by themselves or by not-for-profit organizations. Companies have a pivotal role in the smart city implementation. This paper aims to verify if company members of a smart city body can really realize value from this business; it suggests a comprehensive framework to individuate and measure direct and indirect benefits for companies deriving from the smart city implementation. To empirically observe these benefits and performance, the Genova Smart City Association (GSCA) has been studied.

Keywords: Smart cities; business performance; information technology; smart city benefits; smart city stakeholders

The Association Between Personality Traits, Entrepreneurial Intentions and the Promotion of Cultural Heritage in Late Adolescence

Laura Di Giunta and Giacomo Pantanella

Psychology Department, Sapienza University of Rome, Italy

Abstract: The first goal of the present study was to examine the determinants of the entrepreneurial intentions toward the promotion of cultural heritage in a sample of Italian late adolescents. The second goal was to examine the relationships between personality traits (measured with Big Five Questionnaire, Caprara Barbaranelli and Borgogni 1993), entrepreneurial intention toward the promotion of cultural heritage and its determinants (i.e., attitude, subjective norm and perceived behavioral control; Ajzen 1991). The third goal was to examine the indirect effect of personality traits on entrepreneurial intention toward the promotion of cultural heritage, through its determinants. Participants were 381 students (57% were females; 18 year-old on average, $SD=1.9$) attending the last two years of four high schools from Lepini mountains, an area in the center of Italy that aims to develop an integrated tourism system, promoting initiatives of general interest to create the necessary conditions to enhance and safeguard tangible and intangible local cultural heritage (UNESCO 2003). It emerged that the five personality traits

were positively associated between each other. Attitudes, Subjective norms and perceived behavioral control were all moderately and positively related with entrepreneurial intention toward the promotion of cultural heritage. In addition, conscientiousness emerged as the most important trait involved in the explanation of entrepreneurial intention toward the promotion of cultural heritage. In particular, conscientiousness was significantly and positively related to subjective norms and perceived behavioral control. In addition, via path analysis, significant indirect effect emerged for conscientiousness on entrepreneurial intention toward the promotion of cultural heritage, through both subjective norms and perceived behavioral control. Such paths emerged controlling for the inter-relations between personality traits, on the one side and the determinants of entrepreneurial intention toward the promotion of cultural heritage, on the other side.

Keywords: personality traits, entrepreneurial intentions, cultural heritage, late adolescence

Differentiating "Real" Entrepreneurs From "Entrepreneurs Inside"

Udo Dierk¹ and Philip Dover²

¹MEL-Institute, Paderborn, Germany

²Babson College, Babson Park, USA

Abstract: The two authors have developed and tested the MEL-Index, an assessment tool that measures both individual executive and collective organizational capabilities within a commercial setting. The MEL-Index is predicated on the premise that there are three main archetypes of executives: the manager, the entrepreneur and the leader. In recent studies (e.g., Dover& Dierk, 2010) we have examined the impact and influence of these archetypes on innovation and sustainability within established corporations. This current paper presents research that was conducted with seven "real" German entrepreneurs, owners who remain active in running their own company. All of these companies would fit into the SME (revenues of – in some cases, considerably -- less than €150m) classification and operate in industries as diverse as IT and laundry services. The principle question driving this research was "Is there a difference in capabilities and characteristics of "real" entrepreneurs compared to those personnel tasked with entrepreneurial functions in the larger, often public corporations?" The *a priori* assumption was that differences found across these organizational types would mainly be in the entrepreneur archetype. We interviewed this small group of entrepreneurs in an in-depth, one-hour face-to-face session. The findings were both interesting and – at first blush – surprising. First, we found very different motivations as to why these subjects became entrepreneurs. No one claimed as their driving goal to

have an idea they wished to pursue with persistence, creativity and passion. That is – to use the present entrepreneurial vernacular – they were not “opportunity obsessed.” Some had become an entrepreneur to demonstrate to family, friends, business associates, etc. that they were capable of being successful even though others may not believe this possible. A linked but rather more positive motivation was “what this entrepreneur can do, I can do better.” Both approaches stemmed from a strong case of self-belief in their entrepreneurial talents, one stimulated reactively by doubt from associates, the other coming more from a proactive sense of challenge. A second key finding was that each entrepreneur felt a very strong personal responsibility for their employees and was willing to sacrifice parts of the company profit for their well-being and long-term employment. A third finding relating to the MEL-Index measures was that these entrepreneurs were very balanced in the strength of their entrepreneur and leader capabilities. That is, they tended to have plenty of both! Previous work suggests a major difference with the profiles of executives in larger corporations where a balance of competencies between leaders and entrepreneurs is far less frequent. This is partially explained by the ability in a corporate setting to compensate for weaknesses in one of the archetypes (e.g., a strong leader with limited entrepreneurial abilities) by selecting other personnel who have the strength that is missing. Our tentative conclusion from this small sample of German entrepreneurs is that the need to balance entrepreneur strength and leader strength within the company founder is a prerequisite for a successful and sustainable company.

Keywords: managers, leaders, entrepreneurs, innovation, ambidexterity, archetypes

Exploring Students Learning Outcome in a Business and Entrepreneurial Flavoured University

Ting Ding Hooi¹ and Gan Chin Chuan²

¹**Universiti Teknologi Petronas, Malaysia**

²**Sunway University, Malaysia**

Abstract: The purpose of this study is to examine the mushrooming universities in Malaysia with business and entrepreneurial flavours which are getting more attention from parents and students. These universities aim to reach out to students with the intention of establishing a business and entrepreneurial mind-set and to allow for educational transformation through an experiential education. It also enables a new view on the affect in entrepreneurial education as a landscape that has indirectly surfaces and enables an entrepreneurial mind-set among students in a desiring ontology. Within the field of experiential education research, there has been insufficient attention given to understanding learners and learn-

ing. This research is intended to provide an initial understanding of group socialization theory on whether the education system of these universities to cultivate creative entrepreneurial students through the use of business and entrepreneurial experiential pedagogy are operative or not. Field note, observations and in-depth interviews were conducted to explore students' socialization behaviour. The paper concludes with a challenge to provide greater scrutiny in experiential education in cultivating desired behaviour.

Keywords: business, education, entrepreneur, experiential learning, group socialization, learning

The Impact of Innovative Practices on the Performance of Small and Medium Enterprises

Andreas Efstathiades

Management/Marketing Department, School of Business, European University Cyprus, Nicosia, Cyprus

Abstract: The ability of companies to identify customer requirements, appropriately organize and develop products that satisfy these requirements in the most efficient way, is the key to obtaining competitive advantage. This is highly associated with the ability of the company to monitor the environment and adjust with the environmental changes by developing innovative practices. The Food and Beverage industry in Cyprus is a leading manufacturing sector and is under investigation in our study. Results presented in this study are based on a large project carried out aiming at the investigation of the innovative behaviour of the sector and the development of a model illustrating possible relationship of innovative behaviour and practices with the achievement of a competitive advantage. A nation wide survey has been carried out with an aim to identify and further develop the managerial practices that foster the innovative ability of the companies. The study examines the success or failure of those innovative initiatives in the sense of the achievement or not of a competitive advantage and investigates its relationship with the application of innovative practices. All five prefectures (Nicosia, Famagusta, Limassol, Larnaca and Paphos) were covered and a sample of 5% of the whole sector is surveyed. A closed questionnaire, made of five sections has been used in order to collect relevant information. The results of the factor analysis and the subsequent regression models developed highlight the relationship between strategic planning competencies and the ability of companies to innovate. It is shown that the successful implementation of innovative practices depends highly on the adoption of a successful Human Resource mainframe. Staff development approaches and the degree of customer involvement in the decision

making process is found to be a factor that generated also a high impact on both the growth of innovative activities as well as on the organizational performance.

Keywords: innovation practices, innovation growth, organizational performance

How to Facilitate the Emergence of French new Technology-Based Firms?

Emmanuel Fremiot

Novancia Business School Paris, Paris, France

Abstract: Global competitiveness is marked by the economic growth of countries with highly intensive industrial R & D and a system of training and research oriented towards innovation. France, for its part continues to uphold its model of low R & D intensive domestic firms, instead of turning to more active and sustainable support of innovative organizations such as New Technology-Based Firms (NTBFs). It is therefore not surprising that France "lacks the equivalent of 10,000 companies with 300 employees" (Betbèze & Saint Etienne, 2006) despite a series of measures and organizational arrangements, financial, tax and institutional offered by the State at the national, regional and local levels. This poor appreciation of the new international competitive conditions is reflected in the minimization of the fundamental role of NTBFs, a lack of entrepreneurial training in universities and too little investment in R & D. But time is running out because every year, the French position in the global scientific, technological and economic competition deteriorates. The objective of our paper is to shed light on three reasons why France stands in contrast with its partners and competitors in its dealings with NTBFs: - The first explanation is the inertia of the French system in the relationship between science and industry and its lack of interest in the behavioral and cognitive traits of researchers and innovators. - The second explanation is a purported lack of interest on the part of companies in taking a more aggressive attitude to recruiting PhD graduates and researchers from the universities and encouraging them to migrate to more attractive areas. - The third explanation is based on the uniqueness and specificity of NTBFs, which in France face enormous difficulties to find additional resources to implement and finalize their innovations and bring them to market

Keywords: NTBF, competitiveness, cognitive entrepreneurship, knowledge brokers, financing - innovation

Future Studies and new Product Development: Scenario and the Fuzzy Front end

Karl Friðriksson¹ and Runólfur Smári Steinþórsson²

¹Innovation Center Iceland, Iceland

²University of Iceland, Iceland

Abstract: This paper contains reflections on connecting two disciplines, Future Studies and New Product Development. Of the tools and methods that belong to Future Studies, the focus is on Scenario Planning, while within New Product Development, it is the Fuzzy Front End phase of the development process that is highlighted. The paper investigates the literature from these two disciplines with regard to overlapping of useful tools and practices for better performance, i.e. reducing the risk of an unexpected future. It considers possible gaps or lack of interaction between the two disciplines. The paper gives a short overview of Future Studies and New Product Development as a field of study and the tools and methodologies used in Future Studies as well as the Fuzzy Front End of developing products and services. The main theme of the paper is to probe the importance of further research in this area, for dialogue on effective tools that would improve performance and the effectiveness in commercialisations of new product and services. There is literature which underlines the importance of Scenario Planning in this respect, especially in dealing with strategy and innovation planning. Moreover there are also indications and findings that show that the usefulness of this tool can be much wider. Other tools under the discipline of Future Studies are also mentioned as possibilities for dealing with the unpredictable futures and challenges in Strategy Planning, and the process from idea-to-launch. However there is limited research on the benefit of different tools and approaches in the area of Future Studies in connection with performance and effective use in the New Product Development processes. Overall, there is a need to research the commonality of these fields with the objective of improving the innovation and performance of companies. It is also important for these two platforms to foster synergy, thereby increasing knowledge and improving effective management practices.

Keywords: product development, fuzzy front end, scenario

Journals and Jottings on Entrepreneurial Learning Journeys

Heather Fulford

Robert Gordon University, Aberdeen UK

Abstract: Review of relevant literature highlighted that entrepreneurs need help to reflect on, and make sense of, the challenges and opportunities that occur during the entrepreneurial process. For students who are unfamiliar with the entrepreneurial process, the notion of reflection can be even more daunting. The project outlined in this paper was set up to explore the design and development of learning resources to help students make sense of the complexities of an entrepreneur's learning environment, and to develop effective reflection habits as a means to improving their own entrepreneurial practice. A guided approach to reflective practice was devised for students for use as they enact the entrepreneurial process during their venture creation projects. Although a full evaluation of the project is not yet complete, initial results indicate that students are finding the approach helpful, their fluency in reflection is increased and their understanding of the value of "chewing over" entrepreneurial challenges and opportunities has grown. The breadth and depth of their learning environment seems to be clearer to them, and the importance of developing the habit of reflection is taken on board. Wider application of the project outcomes and outputs is envisaged among nascent entrepreneurs in mentoring / business advisory contexts.

Keywords: entrepreneurship education; experiential learning; informal learning; incidental learning; professional development; learning journal; reflective practice; enactment

Entering the World of Nanotechnology: Three Different Perspectives

Anna Glaser, Claire Auplat and Sonia Ben Slimane

Novancia Business School, Paris, France

Abstract: The aim of this paper is to build a holistic theoretical framework of factors that influence, positively or negatively, companies to enter the nanotechnology industry, with a particular focus on France. Since the beginning of the 21st century governments have invested heavily in nanotechnology research and development (R&D). The understanding and control of matter at such a small scale will impact nearly every industry sector and profoundly change production mechanisms and products of all sorts. After having invested heavily in R&D, governments now turn to new challenges, namely creating a positive environment or infrastructure that allows national companies to venture into this new technology

to find new fields of application. Bozeman et al. (2008, p. 750) underline, that the extent and the speed of commercialisation “*depend in large part on the extent to which barriers to companies’ adoption and integration of nanotechnology can be identified and then lessened*”. The identification of these barriers is thus particularly important for governments in order to win the global nanotechnology race and to support economic growth. Our methodology is based on a systematic literature review on nanotechnology, focusing particularly on three literature streams: the “green” view (e.g. sustainability, eco-design), the entrepreneurship view and the French view. We use the systematic literature review methodology (Tranfield et al., 2003) and thus explain explicitly how we searched for the relevant articles and on which articles we base our conclusions. Our findings show that the three investigated literature streams on nanotechnology (“Green” literature, Entrepreneurship literature and French literature) have some similarities but also several differences. All three literature streams underline the importance of knowledge sharing across boundaries, access to university scientists and facilities, and government intervention in order to accelerate the diffusion of nanotechnology. However, the main differences between the three views is that the “green” view is the only one that puts a lot of emphasis on integrating civil society, the entrepreneurship view particularly underlines the importance of venture capital, and the French view particularly concentrates on the role of clusters. All three views are thus very complementary and important to take into consideration in order to overcome barriers of nanotechnology diffusion.

Keywords: nanotechnology, systematic literature review (SLR), entrepreneurship, France, barriers, policy

The Analysis of Business Preferences to use Internal and External Sources of Research and Development

Oleg Golichenko and Svetlana Samovoleva

Central Economics and Mathematics Institute Russian Academy of Sciences, National Research, University Higher School of Economics, Moscow, Russia

Abstract: The research and development is a critical process providing business technological competitiveness and progressive position in innovation systems. The perspectives of this process are largely determined by research facilities of a business community and enterprise linkages in the area of external research and development (R&D) performed by government and higher education organizations. In turn, such primary factors as a stage of technological development, which a country is passing, an economic situation, a state of business environments, design and power of public policy affect business preferences in choosing the internal and external types of R&D sources. In the study, business preferences

are derived from complementarity and substitution effects of R&D sources and changes measured by shifts in their employing. Effects of complementarity and substitution are discussed in terms of interactions of macro-objects, i.e. institutional sectors. The main sector is a business enterprise one. The other institutional aggregates are higher education and government sectors. Linkages inside sectors are not considered. The study takes into consideration two groups of countries. The first one encompasses European innovation leaders, outsiders and countries occupying a middle position in terms of innovation. The second group comprises a number of BRICS countries: Russia, China and South Africa. In addition to the BRICS countries, Korea as a holder of the technological frontier of these countries is taken into consideration. The investigation shows that the business preferences for using internal and external sources of R&D depend largely on primary factors. Particularly, if a country proceeds to the development stage driven by national innovation, the external R&D sources of business sometimes replace internal ones during economic downturns. As a result, the cross-sectoral linkages between business enterprises and non-business organizations doing R&D are disturbed. For a country being on the investment-driven stage of development, the opposite effect, i.e. the substitution of internal business R&D sources with external ones takes place. This phenomenon creates a danger of a significant weakening of business research capacity. However, a strong public policy in R&D area can counteract the negative impact of these factors or reinforce their positive influence.

Keywords: R&D, internal and external sources, substitution, complementarity, business preferences

The Co-Operative Difference in Behavioural Innovativeness

Izold Guihur¹, André Leclerc² and Gilles Marcoux¹

¹Administration department, Faculty of Administration, Université de Moncton, Moncton, Canada

²Department of Human Sciences, Université de Moncton, Edmundston, Canada

Abstract: Innovativeness is a decisive factor for a firm's performance since it reflects its capability to adapt to changing conditions. When behavioural innovativeness is concerned, the socially oriented activities of co-operatives suggest that specific values and behaviours within such organisations may influence their innovativeness. Hence, this research aims at better understanding how this co-operative difference impact on the co-operative innovativeness. In order to answer this objective, the research focused on the particular case of the *Fédération des caisses populaires acadiennes* (FCPA), a Canadian second-level financial service co-operative, and 13 of its credit unions. A questionnaire was administered

online to a population of 888 employees, with a response rate of 65.1% (578 respondents). The component analysis of 9 statements on behaviours and values oriented towards innovation and improvement resulted in two factors accounting for a satisfactory 62.5% of the variance. The two factors represented components of the behavioural innovativeness in terms of the supervisor's transformational leadership, and team collaboration. Hypotheses were made suggesting the positive relationship between the two factors and behavioural innovativeness as expressed by the commitment of the employees towards the success of the cooperative and the improved quality of its services. Moreover, it was suggested that a co-operative difference, as perceived by the employees, would positively affect the relationship between the cultural factors and the behavioural innovativeness. Results of the structural analysis of the conceptual framework, using Lisrel 9, showed a significant and positive full mediation of the co-operative difference between the supervisor's transformational leadership and the co-operative behavioural, and a partial mediating role of the co-operative difference between team collaboration and behavioural innovativeness. These results are of interest for cooperative managers. With a focus on specific human resources practices aimed at enhancing an innovative culture at the management and the team levels, they could contribute to build a co-operative difference in the workforce and from these efforts, develop the organisational commitment towards innovation.

Keywords: co-operative difference, behavioural innovativeness, transformational leadership, team collaboration, innovative culture

The Enterprise Dynamic Indicators Matrix: Top Management Tool for Stable and Mature Process Sustainability

Danut Iorga, Cezar Scarlat and Sorin Ionescu

Doctoral School of Entrepreneurship, Business Engineering and Management, University Politehnica of Bucharest, Romania

Abstract: The current evolution of the world economy influences the enterprises' behavior in relation to their customers, shareholders and society. Therefore, the strain of the organizations to reach excellence in business is even greater than ever. More managers are interested in creating a robust business with stable and mature processes in order to create value and profit. The current paper highlights the importance of the integrated approach of the customers, strategic objectives and continuous improvement. For this purpose, the author presents an instrument, The Enterprise Dynamic Indicators Matrix (EDI – Matrix), created to sustain an organization transformed from an unstructured one into a structured organization with mature and stable processes able to generate satisfaction to the customers, profit to shareholders and safety to society. The author presents a case

study made into a Farmland Register Romanian Company with the main objective to help design and validate the EDI – Matrix. Thus, in order to create the instrument, the author used six steps methodology split into two phases. The purpose of the first phase was to develop a transfer matrix in order to identify the relation among critical factors of the business and in the second phase, with the help of the transfer matrix and other concepts and methods, to obtain the main instrument EDI – Matrix. The concepts used for this research were “Business Process Management”, “Lean Six Sigma”, “Design for Six Sigma”, and “Balanced Scorecards”. In addition, for developing and calibrating the transfer matrix, the author involved the multiple regression analysis and other advanced linear algebra tools. The results of the case study showed an important increase of productivity and company turnover (amounts doubled) during monitored period. The future steps of this initiative are to broad the area of interest by making research in “online services”, “e-commerce” and other industries in order to validate the benefits of the tool (EDI – Matrix) and the method. As a result, the instrument proved to be useful to the company management. The implications are important for practitioners (entrepreneurs and managers) as well as for researchers and academics, who are interested in developing management tools. The paper presents an original method for Land Book Registration service area to design a cyclic tool able to generate and sustain stability and profit. The designed instrument helps the company to adapt continuously to environment changes by monitoring the correlation among relevant elements of the business in a holistic way. Paper relevance: Innovation in Land Book Registration is something not very usual in Romania. From this perspective based on our current information our paper is a premier, because it combines Balanced Scorecard and Transfer Function Matrix (survey of the key variables) with continuous improvement initiatives in a consistent way through the Enterprise Dynamic Indicators Matrix, designed by the author based on Process Management and Lean Six Sigma philosophy.

Keywords: land book registration, process management, transfer function, multiple regression, balanced scorecard, lean six sigma

Crowdfunding: An Overview of Valuation Problems

Sima Jegelevičiūtė and Loreta Valančienė
Kaunas University of Technology, Kaunas, Lithuania

Abstract: The phenomenon of crowdfunding is a novel financing option related to numerous promising benefits. New bold ideas, startups and projects, which would not be able to get financing using any other way, get a chance to get financed and become a reality. Ordinary people, who are not able to invest large amounts, get a chance to invest small ones. Governments tend to perceive crowdfunding as a

way to create jobs and foster economic recovery. Therefore, governments are preparing legal acts to make crowdfunding more popular through legalizing crowdfunding for equity. After that, the scope of crowdfunding would be magnified. In the USA, the JOBS Act was signed in 2012 and provision of the rules to regulate crowdfunding was probably the most anticipated event for entrepreneurs in recent times. The rules were recently proposed by the Securities and Exchange Commission and they were in the 90 days comment period. These rules will allow private companies to offer and sell securities through online crowdfunding platforms and they are also expected to clarify the whole process. Despite the clarifying aspect of the rules, various problems arise as it often happens with novelties. In the press, several problems entrepreneurs face are outlined, including the choice of the platform, disclosure requirements and other responsibilities entrepreneurs undertake, the need to set a share price. Despite the ongoing active discussions in the business press, the phenomenon is also interesting and worth investigating from the science perspective because this way critical aspects of valuation can be identified. It is noted in the introduction that the article concentrates on the valuation problems. It is stated that this article aims at providing an overview of valuation problems associated with crowdfunding. The research question is formed as follows: what valuation problems are associated with crowdfunding and how are they solved? Value theory is applied in the article. Also, such research methods as systematic literature review and comparison are employed. The second part of the article is dedicated for introducing the crowdfunding industry – the utility it provides and the current state of its development. In the third part of the article is noted that there are currently five crowdfunding models: donation-based, rewards-based, debt-based, equity-based and royalty-based. It is noticed that valuation problems could be associated with certain models of crowdfunding. The authors outline six main problems: the existence of tangible and intangible value, uneducated investors ability to value, not suitable traditional valuation methods, valuation interference with the later stage, a question of what part of equity should be offered, and high liquidity risk. The discussion part provides an opinion on the current situation of how the identified problems are and could be solved.

Keywords: crowdfunding; entrepreneurship; value creation; business models; valuation

Creating Value With Social Entrepreneurship

Päivi Jokela and Maria Elo

Turku School of Economics, University of Turku, Department of Marketing and International Business, Finland

Abstract: Social ventures are a new type of organization that aim to create sustainable social value, such as promoting the well-being of communities, or developing solutions to tackle complex social problems. Through an in-depth case study, we aim to extend the understanding of social value creation, exploring its creation mechanisms, its management in social ventures and the role of stakeholder networks. The study findings indicate that value is created through a bidirectional flow between the pre-defined target audience and the stakeholder network, leading to the conclusion that the stakeholders are not only the instruments but also beneficiaries of value creation. It was also observed that the innovativeness of the venture, in terms of processes, can contribute significantly to the venture management, its resource mobilization and self-sustainability.

Keywords: social entrepreneurship, social ventures, value creation, social venture management

The Role of R&D Expenditures in People's Innovative Potential

Eva Jurickova

Tomas Bata University in Zlin, Zlin, Czech Republic

Abstract: The role of investments in a knowledge-based economy, which is the only way to be competitive and innovative, especially in a time of economic crisis, is increasing. R&D expenditures are important indicators of innovative performance and the best countries in the European Union invest the most finance in the area of research and development. The relationship between financial support for innovation and people, as holders of creativity and new ideas, is obvious. This paper focuses on the importance of R&D investments and researchers in the most innovative countries of the European Union. The hypothesis is based on the fact that researchers represent the most educated people in the population and bring innovation into the economy and help economic growth. The aim of this paper is to analyse and compare the R&D expenditures of five of the most innovative countries of the European Union, measured by the number of patent applications ranked in 2012, and people's innovation potential. The hypothesis of this article is based on the assumption that higher R&D expenditures in the government and business sector of selected countries should lead to a higher number of researchers in the monitored countries followed by an increasing number of patent applications as a result of innovation activities in companies. Using the Eurostat and World Intellectual Property Organization (WIPO) database for the period 2007–2011, the paper analyses and compares dependent variables, represented

by the number of researchers, to R&D expenditures by a linear regression method. The main results of the analysis are compared among selected countries of the EU and show the dependency of these two factors and their importance in innovation.

Keywords: R&D expenditures, innovation, patent application, human capital

Possibilities for Peer, Online Learning in Entrepreneurship: The Case of TeleCC Platform

Alexandros Kakouris^{1,2}, Sofia Tampouri² and Violetta Moustakali²

¹Faculty of Informatics and Telecommunications, National and Kapodistrian University of Athens, Athens, Greece

²TeleCC.org – a non-profit initiative, Greece

Abstract: Entrepreneurial learning is thought experiential. In addition, many scholars emphasise on the importance of reflection processes during the experiential learning cycles. Reflection is the key-process for meaning-making of experience adopted from practice. Entrepreneurial courses are usually driven by business plan tasks which emulate the way that entrepreneurs run their own firms. The impact of this pedagogical approach, especially in inspiring students to become entrepreneurs, is a subject for study and consideration. At the same time, fostering entrepreneurship has been associated with competencies able to support entrepreneurial initiatives. Hence, learning is inherent to venturing but there are still various aspects learning, and connections with competencies, to be considered for effective entrepreneurial teaching. The present paper examines possibilities for discussing entrepreneurship in career counselling contexts. We maintain that informal, peer-learning techniques in career counselling groups, can be a methodological tool to empower reflection on entrepreneurial principles and theoretical contingency approaches in connection with entrepreneurial skills and self-development. In the second part of the paper, we present an application: the online platform TeleCC.org – a non-profit initiative – designed to accommodate online career counselling groups in four-month seminars in Greece. The instructional design of the platform is discussed along with the pilot empirical tests with a Greek population interested in entrepreneurial career options.

Keywords: entrepreneurial learning, online learning, reflection, self-directed learning, career counselling

Methodological Facilitation of Collaboration in Innovation Networks

Holger Kohl¹, Markus Will², Oliver Riebartsch² and Jan-Patrick Cap²

¹Department Sustainable Corporate Development, Institute for Machine Tools and Factory Management, Technical University of Berlin, Berlin, Germany

²Division Corporate Management, Fraunhofer Institute for Production Systems and Design Technology, Berlin, Germany

Abstract: Organizations in the start-up phase are facing scarce resources and lacking experience. The ‘valley of death’ describes this danger along the development of a new organization mainly focusing on the financial perspective. However, the danger of failure along the development of an organization is not only due to financial reasons. The financial status can easily be monitored by performance indicators and actions can be derived from these. Other important aspects that are crucial and need to be monitored and improved are the structural capital (e.g. organization/management), human capital (e.g. professional competence and soft-skills) and relational capital (e.g. relations to Venture Capitalists, universities). These aspects are intangible by nature and therefore more difficult to evaluate than the financial status, but the success of a company highly depends on these aspects. Furthermore interdisciplinary problem definitions are increasingly demanding professional expertise and technological applications from different research fields. As a solution an assessment and improvement of intellectual capital combined with the identification of collaboration potential with partners can support organizations to survive the ‘valley of death’. Therefore we developed an integrated methodology that assesses the intellectual capital and resources of an organization and evaluates the collaboration potential between different organizations to improve the success of each organization. As a result the combination of entrepreneurial knowledge in networks can lead to multiplying effects for all involved parties and lead to multiple-win situations. The bundled expertise of research organizations, universities, enterprises and start-ups improves the overall performance of the participating organizations concerning acquisition, problem solving and efficiency. The methodology puts a strong focus on practical application.

Keywords: start-up entrepreneurship; innovation networks; collaboration; structural capital, human capital and relational capital; business model creation

Creating a Framework for Collaboration: An Exploration of Knowledge Alliances

Joan Lockyer

Institute of Applied Entrepreneurship, Coventry University, Coventry, UK

Abstract: Delivering on Europe's Modernisation Agenda for universities has been a work in progress since at least 2006 (COM, (2006) 208 Final). It has recently taken on a new impetus, with the current Erasmus+ Call for Proposals likely to inject a further 1,507,3 million Euros (14.7 billion over 7 years) into education, training, youth and sport in the years to come. In terms of higher education, priority will be given to projects contributing to the Modernisation Agenda. What this means in reality is building, "...new, innovative and multidisciplinary approaches to teaching and learning; stimulating entrepreneurship and [the] entrepreneurial skills of higher education...and enterprise staff and facilitating the exchange, flow and co-creation of knowledge" (Erasmus+ Programme Guide, 2014). This is the role of Knowledge Alliances, to foster closer collaboration between higher education, business and the wider socio-economic community. The aim is to create structured dialogues that will result in transnational, results-driven projects, based on common goals and mutual benefits and outcomes. By being an active partner in the education process, it is argued, business can more effectively deliver graduates as business/industry ready. The approach is premised on not just the co-development, but co-delivery of enterprise and entrepreneurship education, with what is envisaged as being, "a truly two way process, with higher education and business joining forces to design innovative, sustainable ways to increase human capital" (ibid). Facilitating the dialogue requires new approaches to governance, funding and staffing within higher education institutions and this is characterised as resulting from a cultural shift, which is seen as being necessary if the disjuncture between the needs and expectations of business and universities is to be overcome. But how might it work in reality? In 2011 three pilot projects were established to explore various models and frameworks for collaboration, as a precursor to the Erasmus+ Call. The aim was to 'test the water' and see what complexities might arise and how they could be resolved. This paper explores one of three pilot Knowledge Alliance projects which ran between 2011 and 2013. After setting the context, this empirically based paper will provide details of the various approaches and challenges faced by higher education institutions (HEIs) and business partners; what was tried; what worked and what did not. The findings will be of interest to university leaders and staff; business leaders looking to engage more closely with HEIs, also to students and their advisors who are interested in what the education system has to deliver. Knowledge Alliances are a key aspect of Europe's strategy for the future of enterprise and entrepreneurship education, through collaboration with business and the wider community. The approach has far reaching implication that stretch beyond building successful university/business collaborations and starts to impact on governance, control and delivery in the classroom.

Keywords: enterprise and entrepreneurship education; innovation, collaboration; knowledge alliances; new pact; modernisation agenda; Europe of knowledge

Venture Creation Programmes: Causation or Effectuation?

Joan Lockyer¹ and Nigel Adams²

¹Institute of Applied Entrepreneurship, Coventry University, UK

²University of Buckingham Business School, Buckingham, UK

Abstract: According to Edelman and Yli-Renko (2010) “creating a new firm is a complex, idiosyncratic process that starts with an aspiration by the entrepreneur and involves bringing together resources that the entrepreneurs does not necessarily control to pursue an opportunity” (ibid:833/4). Drawing on Sarasvathy (2001) and Stevenson & Jarillo (1990), they go on to argue that, “the entrepreneur needs to garner support, obtain the required resources and generate enough commitment from organisational stakeholders to take the idea from vision to reality” (Edelman and Yli-Renko, 2010: 834). Firms take time to establish and emerge through a series of actions. The route may be causally driven or the result of effectuation (Sarasvathy, 2001a, 2001b); one being the inverse of the other (ibid: 2001a:2). From a causal perspective there is a predetermined goal and a set of means; the aim being to seek the most efficient way possible to achieve the goal. Effectual reasoning begins with the means and allows the goals to emerge over time (ibid). Sarasvathy argues that entrepreneurs prefer effectual reasoning over causal reasoning in the early stages of venture creation. As the venture becomes established, the transition from causal to effectual must be managed and this poses a problem for some entrepreneurs. Causal thinking, (aligned with traditional managerialist thinking), is based on the extent to which it is believed that we can predict the future and control it (ibid: 6). Predictive tools and business management models support and encourage this logic. Effectual thinking on the other hand, is emergent and can accommodate multiple potential outcomes for a given range of means; this approach is more associated with entrepreneurial thinking. Reality, however, is often more complex than predictive tools are able to deal with (Obolensky, 2010). Managers, leaders and entrepreneurs have to be reactive or adaptive and responsive to complexity. Entrepreneurship, if effectively managed, should be able to reconcile the need for a vision and expectation of the future, whilst at the same time being able to adapt to the deeper uncertainty manifest in a changing dynamic environment. While rule based systems, such as universities, like the certainty of causal thinking, they also understand that effectual thinking, with its inbuilt serendipity, has the potential to create more impactful entrepreneurial outcomes. Drawing upon two case studies, this paper will explore the challenges and opportunities faced by effectual and causal thinking in the design of Venture Creation Programmes (VCPs) for under-

graduate students. In both cases the programmes were intended to be effectual in spirit, but one is unintentionally causal by design. Interest in VCP development is likely to follow a similar trajectory to the growing interest in enterprise and entrepreneurship education. This paper could help to inform thinking about the nature of VCP development and where such programmes should be sited (or positioned) within universities.

Keywords: enterprise education; causal; effectuation; venture creation programmes; action-based learning

Performance and Innovation Insights: Empirical Evidence From Portuguese and Spanish Listed Companies

Ilídio Tomás Lopes

ISCTE- University Institute of Lisbon, Lisbon, Portugal

Abstract: Knowledge creation inside companies stems from the systematic and dynamic combination of individuals and activities towards the best fit of innovation and performance. It results from the merger of knowledge creation activities and organizational capabilities which determine the firm's potential for innovation and potential returns. Those organizational skills embody the corporate knowledge assets, which include intellectual property and other intangible assets, recognized in the company's balance sheet or immediately expensed. In this dynamic process, marketable innovations are usually generated by human capital, strongly tacit knowledge based, and converted into legally protected intellectual resources. Thus, those resources translate the firm's innovative side and act as business drivers towards its current performance and future sustainability. Fostering the innovation processes inside the organization or within the entire network in which the company is integrated, it is the structure of sustainability and commitment with stakeholders' expectations. The value chains of innovation are responsible for ensuring the quality of products and processes, time based to markets and catalysts of reliable invested capital returns. In a purely logic of sustained value creation, innovation activities and decisions should emerge as key insights to business performance and sustainable return. Based on the companies integrating the stock exchange indexes PSI (Portugal) or IBEX (Spain), and through a regression estimation model, this paper aims to evidence whether and to what extent explanatory variables have a significant impact in the overall performance. We found a suggestive lag time between intangibles capitalization and its impact on turnover. It can suggest that returns deriving from intangibles are deferred according the IAS 38 scope and framework. This can also be a warning signal towards the identification of intangibles' useful lives and their potential impairment recognition.

Innovation and Strategy: Linking Management Practices to Achieve Superior Performance

Lawrence Loughnane

Loughnane International, Escondido, California, USA

Abstract: Strategic thinking is not a core managerial competency in most organisations and few established organisations innovate successfully. Strategy and innovation are critical *management practices*. Excellence in strategy formulation and execution is essential for superior performance and if innovation is pursued then excellence in it is also critical. Research contends superior performance results from the use of four primary management practices: *strategy, execution, culture and structure*. Additionally, the use of two of four secondary management practices: *talent, innovation, leadership and mergers & partnerships* are also required. This is referred to as the “4 + 2 Formula for Sustained Business Success”. Strategy and innovation are driven by an organisation’s vision. An organisation’s *context* determines if innovation is necessary and what form of innovation is best within that context. Pursuit of innovation as a management practice is a *strategic decision*. This paper distinguishes among three levels of strategy: *Corporate, Competitive and Functional*. Innovation is distinctly different at each level and most pronounced at the functional level. *Strategic skills* needed at each level are significantly different, as are the skills required along the *continuum of innovation*. The continuum of innovation begins at stability and predictability and progresses to a point of chance and chaos. At different points along the continuum different strategic, management and innovation skills are required. This paper discusses the difference between management practices and management tools and techniques. For example, some label *performance tracking* as a management practice (this paper considers performance tracking a management tool). Various *tools* and *techniques* can be used within the primary and secondary management practices to track inputs and outputs. Most management tools and techniques have no causal relationship to superior performance and should not be confused with management practice. Organisations using the management practice of innovation require new processes and values and will require people with different skill sets. The decision to use innovation as a management practice requires new capabilities and thus is linked directly to strategy. Scant literature examines the link between the management practice of strategy and the management practice of innovation. The literature does suggest there is a lack of strategic and innovation skills within most organisations and this lack of skills have contributed to the failure for many established organisations to innovate successfully.

Keywords: strategy, innovation, management practice, management tools and techniques, continuum of innovation

Higher Education, Stakeholders and Collaborative Work for Entrepreneurial Learning

Ana Paula Marques, Rita Moreira and Sandra Ramos

Centro de Investigação em Ciências Sociais, Universidade do Minho, Braga, Portugal

Abstract: Institutions of Higher Education can provide, in their internal environment, entrepreneurial learning opportunities for students stimulating new attitudes and behaviours towards entrepreneurship. The Portuguese universities have diversified their strategies to promote formal, informal and non-formal entrepreneurial learning that can be encouraged in various strategies. The participation of key actors and stakeholders involved in awareness, mentoring and project implementation of the entrepreneurial learning process is crucial for collaborating work in a competitive world. Moreover, obtaining employment is increasingly dependent on not only the potentials of individuals, but also, and even more, the ability to build solid networks of partnerships in science and innovation and employment. Within the scope of the ongoing project "Entrepreneurial Learning, Cooperation and the Labour Market: Good Practice in Higher Education" this paper aims to highlight the importance of non-formal and informal learning and to contribute to the reflection regarding added value of inter-organizational cooperation and collaborative work.

Keywords: higher education; non-formal and informal entrepreneurial learning; stakeholders; collaborative work

Application of the Complex Technology Assessment System for Product Development

Adam Mazurkiewicz and Beata Poteralska

Institute for Sustainable Technologies – National Research Institute, Radom, Poland

Abstract: An unquestionable need, resulting from the macroeconomic expectations of increasing the level of the innovativeness and competitiveness of national economies, is to develop products, technologies, and conduct projects that are innovative and comply with market needs. The importance of technology influences the need for technology assessment (TA), which is one of the key challenges in innovation management concerning support for the decision-making processes with regard to the development and implementation of technologies. The dominant actors in the field of technology assessment have been policy-making bodies;

however, the subject was later directed to research and industry. In the traditional understanding of technology assessment, two aspects are stressed: the usefulness of TA in the decision-making process and the impact on the society of the introduction of a new technology or the expansion of an already existing technology. The non-mainstream of TA research emerged in business, industry, and non-governmental circles, and it is currently developed and will probably expand in the future. It is connected mainly with economic evaluation, decision-making, and technology measurement methods. The authors of the paper present the origins and development of technology assessment approaches and the methods applied. In this field, single methods and simple and complex models for technology assessment are applied. There are models focused on one homogenous group of assessment factors and complex models that simultaneously take into account various aspects of technology development. Against the background of existing approaches, methods and systems in technology assessment, an original complex technology assessment system is presented that has been developed by the authors of the paper, verified, and experimentally implemented at the Institute for Sustainable Technologies – National Research Institute in Radom, Poland. It is embedded in the stream of TA research, corresponding with the needs of business and industry. It concerns support for the process of technology development and presently comprises the following three main modules: The implementation maturity level assessment module, The commercial potential assessment module, and The innovativeness level assessment module. The forth module concerning risk assessment is currently being designed. The main advantage of the system comprises the possibility to assess innovative products at any stage of a project execution, including ex-ante, ongoing, ex-post, and follow-up, and to compare the assessments results at different stages of product development (from the concept stage, through the development stage, to the final technology stage). The practical value of the system has been proven by its use for the assessment of several hundred technological solutions for the needs of research organisations, technological parks, and enterprises in Poland.

Keywords: technology assessment, complex technology assessment system, implementation maturity level, commercial potential, innovativeness level

Entrepreneurship in Higher Education: Nascent Entrepreneurs and Their Enhancers Factors

Rodrigo José das Neves Morais, Guida Mendes Coelho, Jorge Manuel Simões and António Ferreira

**Departmental Unit of Business Science, Polytechnic Institute of Tomar, NECE,
Tomar, Portugal**

Abstract: The current conjuncture is characterized by technological, economic, political, social and cultural, transformations affecting relations between countries and companies. In this environment, innovation becomes the main competitive differential and entrepreneurial personality is associated with perception capabilities of opportunities. According to various authors the nascent entrepreneur has features that provide business creation, but according to recent studies Entrepreneurship is not only innate, it can be taught. Therefore, higher education institutions have a central role in the reflection on the importance of entrepreneurship education. This article aims to foresee the role of higher education for the development of the entrepreneurial potential of individuals, through the construction of a conceptual model of research which will aim to assess whether the individual will become nascent entrepreneur driven by the characteristics identified in the systematic literature review.

Keywords: entrepreneurship, nascent entrepreneur, age, gender, training

Innovation in the Chemical Industry: Evidences From Spanish Businesses

Maria Obeso¹, Maria Jesus Luengo-Valderrey² and Teresa Areitio²

¹University of Cantabria, Santander, Spain

²University of the Basque Country, Bilbao, Spain

Abstract: At present time, innovation is considered to be a key element in order to improve societies and businesses. In this scenario, we present an original study about how businesses in the chemical industry manage innovation in Spain. In the first section, we provide a short review of the innovation process in general and the present situation of innovation activity in businesses from the Spanish chemical industry. Then, we present the methodology used in the analysis, explaining the factor analysis technique and how it helps to analyze the chemical industry. Factor analysis is defined as a variety of statistical techniques whose objective is to represent a set of variables in terms of a smaller number of underlying variables or factors. The sample is composed of 921 Spanish businesses dedicated to chemical industry. Data has been extracted by the Spanish National Institute of Statistics (INE) asking about the year 2010 and using a questionnaire about innovation in businesses. We select variables linked with innovative activity. These variables are organized in three categories: investment in innovation, innovation results and aims of innovation. In the next section, the results are presented. We identify seven factors linked to innovation activity in chemical industry: (1) Aims

of innovation, (2) R&D investment, (3) Assistants, (4) Different patents, (5) Innovation investment, (6) Intangible elements and (7) External consultants. Consequently, the most interesting factor identified by which to differentiate businesses is the aim of innovation. That is to say, management's decisions about how to represent the aims of the strategy. Afterwards, the second factor is R&D investment, which represents R&D interest and it is also interesting in order to distinguish organizational behaviours. Following the businesses' aims and R&D investment, personnel dedicated to support R&D activities are also important. Therefore, the international character of businesses is interesting. The less interesting factors are linked with general investment, intangible elements in general and external support to R&D. Finally, in the conclusions we explain the main findings and the implications. Firstly, the analysis is very interesting to the chemical industry in Spain, because we realize an analysis about them. We identify the critical factors in the innovation process specifying the most interesting variables so that businesses can recognize where to focus their efforts. Additionally, this study is interesting for the chemical industry in general because these results could be used by chemical companies in other nations in order to focus their efforts on critical factors and learn from others' situations. The research also contributes to business scholarship. We propose an original study about innovation in the Spanish chemical industry in which we analyze the critical factors, and thus these results could be used in other studies in order to compare situations between industries or countries, and even could help to build a model. In future research, we would like to conduct such studies.

Keywords: innovation management; knowledge management; R&D; Spanish chemical industry

Innovations and Entrepreneurship at a Time of Financial Crisis in Czech and Austrian Construction Industries

Pavla Odehnalová and Petr Pirožek

Faculty of Business and Economics, Masaryk University, Brno, Czech Republic

Abstract: This article describes the approach of construction companies in the border areas of the Czech Republic and Austria to innovation activities during the recent financial crisis. Within the project Development of Small and Middle-Sized Businesses in Border Areas, research into the cross-border cooperation of small and middle-sized construction companies was carried out in 2013, involving businesses active in the regions of South Moravia, Lower Austria and the city of Vienna. The research comprises 279 respondents, of which 176 were from the Czech Republic and 103 from Lower Austria and Vienna. Among other items, questioning was focused on innovation potential in the development of new products and

services. The research was a follow-up event to the M00200 Cross-Border Cooperation project. Among other findings, the research shows different approaches taken by Czech and Austrian entrepreneurs to innovation activities. The research was focused in particular on the relation between the receipts from innovated products and/or services and the size of the enterprise as well as on the impact of collaboration in innovations, research and development. All the factors were studied as a continuation of theoretical support and search for secondary sources in the construction industry in both countries. An interesting result is the fact that the innovation potential tends to be carried by small companies. This fact contradicts the results of statistical analyses highlighting large enterprises as carriers of the innovation potential. Another finding is that the cooperation of enterprises in product and innovation development does not affect the turnover or the receipts from innovated products. The theoretical assumption that business cooperation would affect turnover and receipts from innovated products was not confirmed. These facts are probably linked to external factors, given by the unfavourable situation of the financial crisis, which is reflected in the construction industry in particular as well as in political and legislative interventions in both countries.

Keywords: innovation, financial crisis, business cooperation, construction industry, small and middle-sized businesses

Can Social Outsourcing Enhance the Development Strategy of Social Enterprises?

Ruslan Pavlov

**Central Economics and Mathematics Institute, Russian Academy of Sciences,
Moscow, Russia**

Abstract: Nowadays social enterprises have been increasingly seen as a substitute for the state in those fields of national economies where its role is diminishing. In this context the emergence of such phenomenon as social outsourcing, which implies the transfer of certain business processes from the central and local authorities to social enterprises, becomes a critically important tool designed to enhance the ability of these entities to deliver public services. This process can be viewed as double-sided as it means both the legalization of transfer of social functions to the private sector and the provision of aid and experience of the public services to social enterprises. It is assumed that this transfer is realized due to the comparative advantages of social enterprises which seem to operate more efficiently than those in public sector, as they have a unique ability to combine business principles with those employed in charities and NGOs. Indeed that is not the case as evidenced by the numerous examples presented in the paper. For instance, in the UK most enterprises that deliver social services operate in private

sector, which is a matter of trouble as they seek to profit-making which is a point confronted with their main mission – to reinvest their income to further social projects. Moreover, the share of such entities in the private sector in some European countries was increased for the recent decade. According to the recent data, of the homes in England registered with Ofsted in September 2011, 76% were in the private or voluntary sector. The most prominent inequalities arise when analyzing the situation with children's care services. Profit-making and cost-cutting in children's services are exacerbating regional inequalities as the firms who provide children's residential care do so where it is cheapest for them, so children are placed away from their home boroughs where property prices are lowest, and they become more vulnerable to abuse. Nevertheless the very practice of social outsourcing has been spreading steadily for the recent years and has become a sort of strategy for social enterprises in their striving to survive and strengthen their sustainability. The main task of the paper is to find out, whether such strategy can facilitate the innovation process of social enterprises.

Keywords: social enterprise, innovation, social outsourcing, development strategy

The Impact of Inbound and Outbound Open Innovations: Empirical Evidence for SMEs across Europe

Dragana Radicic¹ and Geoff Pugh²

¹Accounting, Finance and Economics Department, Business School, Bournemouth University, Bournemouth, UK

²Centre for Applied Business Research, Business School, Staffordshire University, Stoke on Trent, UK

Abstract: The concept of open innovation has reinforced the importance of external knowledge and cooperation in enhancing firms' innovation performance. The literature on open innovation suggests that large firms are more likely to open up the innovation processes than small firms. However, open innovation is equally relevant for SMEs, as a complementary innovation activity to firms' absorptive capacity. This study examines the effect of both inbound and outbound open innovation practices on innovation performance of small and medium-sized enterprises (SMEs) across 28 European countries. Studies focusing on SMEs usually investigate open innovation activities in one or few countries. By investigating open innovation processes in SMEs across Europe, our study is the most comprehensive quantitative analysis of the impacts of various open innovation activities on SME innovation performance. Hypotheses derived from the open innovation literature are empirically tested on a cross-sectional data of 620 SMEs in manufacturing, Information and Communication Technology (ICT) and service sectors. A novelty of the study is the classification of countries depending on their innova-

tion performance measured and published in annual European Innovation Scoreboards. Furthermore, only very recently researchers begin to explore open innovation outside high-tech industries. This study investigates how open innovation affects innovation performance of SMEs in high- and low-tech industries, ICT and service sectors. The extent of opening up of the innovation process and its impact on innovation performance vary between micro, small and medium-sized firms, between those firms operating in national innovation systems more conducive to innovation and those in less innovative countries, and between high-technology and low-technology industries. Overall, customer involvement is found to have a positive impact on SME innovation performance, whereas participation in innovation networks and clusters has an adverse effect. Moreover, licensing-out is positively related to innovation performance in firms located in countries whose national innovation systems are more conducive to innovation. The findings are relevant for both managers and policy makers across Europe. From managerial perspective, empirical evidence indicate that certain open innovation activities have a positive influence on innovation performance, such as customer involvement, while a few have no or even negative impact on the output of innovation processes, such as participation in innovation clusters and networks. Furthermore, it provides evidence that SMEs across Europe adopt a portfolio approach to innovation, internalizing innovation through absorptive capacity as well as organising open innovation activities. These findings are consistent with the stylised fact advanced in the literature on absorptive capacity, that opening up the innovation process by exploiting sources of external knowledge is a complementary process to firms' absorptive capacity. Moreover, our findings suggest that policy makers should adopt a policy mix fostering both absorptive capacity and open innovation activities. However, a policy design should take into account heterogeneity of SMEs with respect to their firm, industry and country specific characteristics.

Keywords: open innovation, SMEs, innovation performance, absorptive capacity

Critical Factors for Innovation and Strategic Competitiveness in Global Companies

Felipe Rivera

Universidad Central, Santiago, Chile

Abstract: Companies are the main forces that drive an economy toward economic growth. Innovation encourages competitiveness within firms, and at the same time builds the conditions for it to happen. One of the most determinant factors of competitiveness is the teams workforce. As the world becomes more and more global, firms are working worldwide, under economies that are moving towards creating products and services with higher added value. Innovation management within the firms requires a particular vision on “global teams”. How will they go about the innovations? How will they be handle knowledge management? What are the transfer knowledge and learning rules for communities and workforces? How will the data analysed from global companies and different cultures be supported? The central hypothesis of this research has been focused on this particular approach: "The management of Global Companies needs to work on solving innovation basal factors to be successful in the search for managing a global workforce". So the challenge is to implement innovation processes that stress the focus on data support, cultural alignment and developing strong capabilities for the high performance workforce to create new value. The present paper identified, through the analysis of eight multinational companies, factors that determine the success of competitive strategy and innovation in global companies. We worked with an open-ended interview methodology and selected firms based on three specific criteria. By way of research results, we worked developing a model for managing innovation including the factors identified as success promoters: i) Cultural Strategic Alignment through the value chain, ii) Standardization of Processes along entire value chain, iii) Transversal strategic management indicators throughout the entire organization. iv) Incorporation of technological tools for collaboration. In fact, we can conclude that global firms need to address innovation management among their tools to strengthen their innovation processes like: knowledge management, learning process and feedback, human resources and global workforce, productive chains, and management of their core competence and complementary assets.

Keywords: innovation, strategy, global workforces, global companies, and knowledge transfer

The Views of University Professors of East Timor About Entrepreneurship

Cristina Rodrigues¹, Filipa Vieira², Tomas Xavier³ and Dorotea Silva⁴

¹Algoritmi Centre, Engineering School, University of Minho, Campus Gualtar, Braga, Portugal

^{2,4}CGIT Centre, Engineering School, University Minho, Campus Azurém, Guimarães, Portugal

³National University of East Timor, Díli, East Timor

Abstract: Entrepreneurship has been recognized as a source of sustaining basis in fostering innovation, creating opportunities, local sustainability and socio-economic development of a country, since is a transforming process from an innovative idea to an enterprise. Entrepreneurship has been argued as the most effective economic power in the global economics and social history. The Strategic Plan for Development of East Timor from 2011 to 2030 reports that since 2007 only 9% of the population had economic conditions to leave the so-called “poverty line” and that 41% of East Timorese are still classified as poor. Given this diagnosis, the government of East Timor defined the private investment in Small and Medium Enterprises (SMEs) as one of the four pillars of the economic framework by 2020. To ensure the growth of the private sector in rural and urban areas, government established a development program with several initiatives such as legislative changes, creation of financial support, and faster process enterprise creation. Being private sector a social priority, and given the limitations of existing employment in East Timor, it is necessary to recognize the individual attitude of entrepreneurship and promote this new dynamic of job creation. Authors believe that universities, especially the state university, the East Timor National University (National University of Timor Lorosa'e) should assume a leadership role in promoting entrepreneurship among its students. For East Timor, it is critical to highlight the mission of universities and professors in their role of education and preparation of young people, providing them with an entrepreneurial attitude that allows them to succeed in creating their own employment. This is even more important because there is no formal teaching entrepreneurship at academic level in East Timor. The paper presents results from an ongoing research that aims to contribute to the discussion of the theme of entrepreneurship in East Timor. The survey *EmpreendeTIMOR: UNIVPROF* intends to study the perception that East Timor academics have in relation to entrepreneurship. Based on a sample of 123 Timorese university professors, from five Timorese universities, the survey analyze how professors perceive entrepreneurs and entrepreneurship, what is their risk predisposition, how they perceive the skills and competences of their students, and how they perceive the role of the University and its professors in promoting entrepreneurship. Results suggest a good image of entrepreneurship and entrepreneurs but require further analysis since professors recorded contradictory results in two negative statements. Professors present a low risk predisposition. In relation to their students' skills and capacities, professors reveal a high confidence in the abilities and skills of their students to be successful in their own business and in their technical or financial preparation. Regarding the role of universities and its professors in promoting entrepreneurship, the professors expres-

sively recognize its importance and relevance, and agree with a more proactive role in promoting entrepreneurship.

Keywords: entrepreneurship; university professors; attitudes; survey; East Timor

Social Enterprise and Social Capital: A Proposed Methodology for Developing Innovation and Entrepreneurship in a Deprived Cornish Peri-Urban Locality

Alan Sanderson¹, Mike Leyshon², Annie Ostapenko-Denton¹ and Kevin Ostapenko-Denton¹

¹Community Studies, Truro and Penwith College, Truro, UK

²College of Life and Environmental Sciences, University of Exeter, Penryn, UK

Abstract: The English countryside invokes idyllic notions of an indigenous population living a rural dream desired by those who cannot escape urban pressures. However, this neglects the social reality for some individuals living in rural communities characterised by pockets of intense deprivation, where generational unemployment and domestic violence have created a landscape of anxiety and hopelessness. Voluntary organisations in these marginalised and lowly populated localities have found funding harder to obtain resulting, in some cases, in closure. The panacea for some analysts has been, the conception that the social enterprise model will improve wellbeing by achieving higher levels of social capital and participation amongst community members. The paradigm envisaging community activists entering into partnership with social entrepreneurs, effectively implementing public policies of the increasingly minimized state neglects contending perceptions of social reality possibly embraced by community members in urban-rural environments. These contending, but equally legitimate, pre-dispositions about the relationship between the individual and community involvement can be understood as (1) a preference for hierarchical community management; (2) the belief that community services should be determined by market mechanisms and (3) the perception that initiatives are instruments of potential or actual control rendering them determined automata. This last assertion may be the most relevant analysis regarding those residing in the deprived rural areas, specifically Cornwall in our case study. Nevertheless, all three understandings prompt the question – what is a realistic level of engagement in social enterprise initiatives in deprived localities? It is proposed therefore that a community-based participatory action research project, informed by the work of Freire (1985, 1996) and Bourdieu (1976, 1984, 1990 and 1998) may provide a methodology for enterprises to address stakeholder apathy and negativity in Cornwall.

Keywords: Cornish deprivation, participatory action research, Bourdieu and Freire

Improving Absorptive Capacity Through Social Media Networks for Firms' Innovativeness

Veronica Scuotto

Faculty of Business Creative Industries, Business School at University of West of Scotland, Scotland, UK

Abstract: firm's innovativeness come mainly from its ability to recombine knowledge acquired through external collaborative networks. Firms are increasingly employing social media to manage relationships with consumers so as to improve their own absorptive capacity and to generate new and innovative products and services. Absorptive capacity and social media become keys for the creation of a competitive advantage of a firm. The use of social media platforms can provide a wealth of information about individuals and their networks, which can be utilized for various business purposes. It allows people to create online communities and share user-created content (UCC). Within this context the active connections among people – “the trust, mutual understanding, shared values and behaviours that bind the members of human networks and communities and make cooperative action possible” (Cohen and Levinthal, 1990) – allow companies to generate innovations. More specifically, my aim is to investigate how firms give meaning to the information they collect and accumulate through these information technologies that enables them to interact with customers, suppliers, partners among others in order to absorb external knowledge, and to improve firm's innovative performance of a firm. Having analysed the data extracted by Amy and Poston (2013) on 217 global companies in diverse set of industries such as high tech and electronics, food and beverage, consumer durables, among others through the application of Partial Least Square Path Modelling with IBM SPSS software, I demonstrated the crucial role of social media in enhancing absorptive capacity.

Keywords: absorptive capacity, social media networks, innovation performance, global companies

Regional Structure of the Country on Costs and Results of Innovative Activity: The Case of the Russian Federation

Viacheslav Sirotnin and Marina Arkhipova

The department of Statistics and Data Analysis, faculty of Economics, National Research University Higher School of Economics, Moscow, Russian Federation

Abstract: Innovations have a great impact on the progress of modern society. Highly developed countries are homogenous in providing high living standards while countries with lower level of innovative activity cannot keep such a level and differ substantially from each other in values of main social indicators. We show it with the model of the relation between Global Innovation Index and Human Development Index for more than 100 countries. Generally the level of innovative development changes for the better worldwide. But the countries and their counties, or regions, progress in different ways. To provide the effective control of the regional devolvement it is important to obtain relevant information presenting regional structure of the country on innovative development indicators such as the output of innovative products and services and the expenditure on technological innovations. As a descriptive model we first use kernel density estimates of probability density function. Some groups in the structure are close to each other and hardly distinguished by traditional grouping procedures. In order to find if the regional system is really heterogeneous we use fuzzy approach to classification that seems to be the most suitable for compound structure analysis. It is based on a statement that each element (region) is a member of each group, and the degree of this participation is a value of the membership function. Both parametric decomposition of probability density function and nonparametric «c-means» clustering are applied for regions stratification on the innovation potential and activity indicators. For identified groups (strata) we search the influence of various factors on innovative development using weighted variables. As weights we apply the values of the membership function for corresponding group. For group profiling and modelling along with general indicators of regional economic development the specific indicators of small enterprise evolvement are used. Modelling results show the role of small entrepreneurship in innovative development in identified regional groups.

Keywords: innovative development, population well-being, regions stratification, fuzzy clustering, small enterprise

Knowledge Transmission Channels: A Comparative Study in Brazil and in Europe

Ana Paula Lisboa Sohn¹, Filipa Dionísio Vieira², Idaulo José Cunha¹ and Nelson Casarotto Filho¹

¹Department of Production Engineering, Federal University of Santa Catarina, Florianópolis, Brazil

²**Department of Production and Systems , University of Minho, Guimarães, Portugal**

Abstract: The process of globalization and the change on technological paradigm have important effects in the modeling of new patterns of competition. In this context there is a consensus among specialized researchers that the collaborative learning processes in clusters are crucial for the configuration at the competitive advantage of the companies individually and to the group that forms the cluster. This paper aims at identifying and analyzing the knowledge transmission channels in textile and clothing clusters located in Brazil and in Europe. Primary data was obtained through interviews with key individuals. The collection of primary data was carried out based on a questionnaire with ten categories of indicators of knowledge transmission. Secondary data was also collected through a literature review and through international organizations sites. Similarities related to the use of the main transmission channels of knowledge are observed in all cases. The main similarities are: influence of suppliers of machinery, equipment and raw materials; imitation of products and best practices; training promoted by technical institutions and businesses; and cluster companies being open to acquire new knowledge. The main differences lie in the relationship between companies, where in Europe the intensity of this relationship is bigger when compared to Brazil. The differences also occur in importance and frequency of the relationship with the government, with the cultural environment, and with the activities of research and development. It is also found factors that reduce the importance of geographical proximity in transmission of knowledge, and in generating trust and the establishment of collaborative behavior. This was the reality found in the studied clusters, that currently go through a process of adaptation to the changes in the real world.

Keywords: industrial clusters, interorganizational learning, knowledge transmission channels , textile and clothing industry

Dominant Business Models of Young Firms in the Renewable Energy Sector

Cristina Sousa and Isabel Salavisa
ISCTE-IUL and DINÂMIA'CET-IUL, Lisbon, Portugal

Abstract: This paper focuses on the behaviour of new technology-intensive firms (NTIFs) in the process of developing research-based renewable energy technologies, and introducing them into the market, thus contributing to the transition to

a low carbon regime. We adopt a business model framework to study value creation by NTIFs, taking into account the context, where obstacles and opportunities impact the action and outcomes of the companies. The framework is applied to a group of 28 Portuguese NTIFs in several renewable energy areas, trying to identify the main business models adopted by them. Results reveal the existence of different business models in the exploitation of renewable energy technologies by these firms. They also reveal that companies adopting different business models perceive differently the context where they operate, namely in terms of obstacles and opportunities assessment. These results are expected to contribute to further knowledge about the business models, which are emerging in this highly innovative new sector, giving insights into the strategies deployed by NTIFs exploiting the new energy technologies associated with the regime shift, and thus contributing to strategy and policy formulation aiming at developing the renewable energy sector.

Keywords: new technology-intensive firms; business models; obstacles and barriers to innovation; renewable energy technologies

Optoelectronics in Scotland: Network Reconfiguration in a Sectoral System of Innovation

William Sutherland

Aberdeen Business School, Robert Gordon University, Aberdeen, UK

Abstract: Optoelectronics (or photonics) has developed as a significant enabling technology central to the operation of a wide range of artefacts evident in defence, telecommunications, consumer electronics and medical devices. Optoelectronics technologies may be widely leveraged in these and other high-value sectors. Consequently, policy makers in several nation states and regions have been keen to build capability and capacity in optoelectronics activities. As in many other locations with a significant optoelectronics presence, Scottish firms tend to be geographically clustered. Chosen locations in Scotland tend to gravitate towards the 'Central Belt' area of the country. The paper explains reasons for the emergence of optoelectronics activity in these locations and accounts for the development of the sector from the fusion of a deep-seated science base in theoretical and applied physics with a strong engineering heritage. Optoelectronics activity in Scotland has been characterised using a sectoral systems of innovation approach which identifies key actors in the system. Among these, universities are identified as enduring contributors to knowledge production within the sector. These organisations provide bridging for research, development and subsequent innovation by firms. The Scottish sector has survived significant exogenous shocks in the opening decade of the 21st century and this heightened selection environment

has resulted in a reduction in the numbers of local firms at either end of the optoelectronics value chain (component manufacturers and producers of end-user products and systems). This has prompted a reconfiguration of the local network with changes to the relationships and interactions of actors in the system. Policy adjustments have had to reflect these changes and respond to global trends in manufacturing and sourcing, especially related to developments in modularity and the production of intermediate goods. The role of the remaining system integrator firms in stimulating and maintaining the sector is highlighted. Reactive and proactive strategies of these firms and other actors within the cluster are driven by the imperative to plug knowledge gaps and engage with global markets. This has enhanced the sector's connectivity to international optoelectronics value chains of knowledge and technology production.

Keywords: sectoral innovation; clusters; networks; optoelectronics; value chain

Case Study on Financing and Business Development Processes in Technopreneurship

Desislava Velikova, Jens Kohler and Rainer Gerten
University of Applied Sciences, Mannheim, Germany

Abstract: Technology-oriented innovations are the key to improving sustainable competitiveness within the European Union (EU). The success of a technology-oriented company depends on its ability to develop new technologies, products and services to enter new markets. The starting point of any business or organization is the precise definition of its business processes that lead to an efficient implementation of technology-oriented innovations. These innovations are then transferred into products and services to achieve an early economic success. There are various processes that have to be identified starting with an idea, its realization, the corresponding funding and finally its commercialization. They are affecting not only these processes entrepreneurs and innovators, but also other stakeholders (i.e. inventors, innovation managers, coaches, mentors, business angels, investors, etc.). All these parties contribute to the strengthening of innovation and competitiveness in the individual enterprise in particular and last not least in the entire EU. Europe benefits from its innovative strength, its efficiency in implementing new ideas and its scientific knowledge compared to other economic regions in the world. A growing development of technology innovations strengthens labor markets and thus the entire society benefits from technological innovations. According to a survey of the European Commission on the innovation performance of member states, there are still major differences within the EU countries, despite the fact that there have been many measures to improve the innovation strength. While countries like Sweden, Germany, Ireland and Luxem-

bourg are at the top of the rankings, countries like Bulgaria, Romania, Latvia and Poland are ranked on the last places. This raises the question: How can an assimilation of all EU countries on a high innovation level be achieved? A detailed analysis proved that it is necessary to improve the Technopreneurship processes based on cross-uniform models. Furthermore, the consistent definition and formalization of innovation processes enable all EU countries to develop technology-based innovations efficiently and quickly. With respect to this question, this case study analyses the financing and business development processes in Technopreneurship. The aim of this case study is to analyze these processes in selected countries and to compare Germany (as a leading innovator in the EU), Bulgaria (as one of the EU's modest innovators) and Switzerland (non-EU country, but ranked as one of the innovation leaders). The starting point for the development of these uniform cross-models is a comprehensive status quo analysis of the processes in the respective countries. Therefore, two major roles are considered: firstly, the roles of technology-oriented entrepreneurs and secondly, the roles of investors. The case study focuses on the three main financing phases of start-ups and young companies: the seed, A and B phase. With selected scenarios, we analyze challenges in technology-oriented innovation developments and their different approaches and processes in the three aforementioned countries. Based on these results we are able to present precise definitions, models and optimization capabilities of EU-wide Technopreneurship processes. Finally, we are able to derive consistent process models from these scenarios, that enable optimal assessments and evaluations whether to realize innovative ideas or not.

Keywords: technopreneurship, technology oriented entrepreneurship, process modeling

Attitudes and Entrepreneurial Intention of Portuguese Secondary Students

Filipa Vieira¹, Cristina Rodrigues² and Jose Azevedo³

¹CGIT Centre, Engineering School, University Minho, Campus Azurém, Guimarães, Portugal

²Algoritmi R&D Centre, Engineering School, University Minho, Campus Gualtar, Braga, Portugal

³Infante D. Henrique Portucalense University, Porto, Portugal

Abstract: Entrepreneurship emerges as a key factor in job creation and is crucial for socioeconomic balance in the region or the country. Entrepreneurship is an effective alternative, either through the development of existing businesses or by creating new ones. It should also emphasize that the entrepreneurial ability of a society is a collective well that should be preserved and cultivated. The situation of global economic crisis has been reflected in the different economies, particularly in the declined of employment to unimaginable heights. In order to counteract this negative cycle, it becomes imperative to stimulate, maintain and cultivate an entrepreneurial attitude cross, from the youngest to the current managers, to promote the creation of new business and develop existing yet. Looking for answers about the policies and mechanisms available for the creation of new businesses and the existence of an entrepreneurial attitude in a given region are of vital importance in promoting entrepreneurship. Portugal has experienced troubled times, with marked destruction of jobs and businesses affected by the economic and financial crisis, as well as by restructuring undertaken by the government, especially after the financial rescue that Portugal was subjected. Faced with a strong future scenario of high unemployment, what attitudes and entrepreneurial intentions reveal young Portuguese students? This research work focuses on secondary students from Oliveira de Azemeis, a city and municipality in northern Portugal, heavily industrialized in several business areas and with important references on employment size and internationalization capability. Taking as a starting point a survey with 308 students, all pre-university students, the paper presents and discusses the results obtained on various issues such as entrepreneurial behavior of students' parents, the attitude towards self-employment and perceptions of entrepreneurial intention. Results indicate a moderate entrepreneurial behavior of student's parents. In general, the attitudes towards self-employment are lower and the analysis identified differences considering the attitudes items. The data analysis also tested and identified differences considering gender, age, course type (regular or professional), school and self-employed parents. The analysis of intention identified 48.4% of students with entrepreneurial intention, and 51.6% with no intention. Statistical tests identified an association between intention and school and between intention and self-employed parents. Finally, the analysis identified significant differences concerning attitudes by intention group. The results give a contribution to the theme of Entrepreneurship through the investigation of the entrepreneurial attitudes and intention of young adults (pre-university).

Keywords: entrepreneurship, secondary students, attitudes, intention, Portugal

Participant Learning Objectives and the Potential of Extracurricular Business Plan Competitions

Kayleigh Watson¹, Pauric McGowan² and Paul Smith¹

¹University of Sunderland, Sunderland, UK

²University of Ulster, Belfast, UK

Abstract: Extracurricular university-based Business Plan Competitions [BPCs] assume a popular status in universities globally (Florin et al, 2007; Pittaway et al, 2011; Russell et al, 2008). Such competitions are assumed an entrepreneurial learning tool for those who participate, allowing the development of necessary entrepreneurial competencies (Hegarty, 2006; Russell et al, 2008). This principally attributable to their experiential nature and the opportunities afforded to the participant to engage in entrepreneurial activity within the competition context (McGowan and Cooper, 2008). However we lack appreciation of how learning motivates BPC participation from a participant perspective, notably the particular learning objectives which participants may have before participating and whether these are achieved through their participation. To explore this, the current qualitative paper draws insight from the participants of a regional university based BPC in the North-East of England. Participants were interviewed at the start and end of participation. Such an approach allowed the researcher to depict not only the learning objectives which may have guided their participation, but also capture whether these objectives were achieved through the competition experience. It was found that participants entered the competition perceiving there to be a competency ‘gap’ between the current statuses of their venture and where they wanted and were expected by others to be. The competition participation experience thus enlisted as a means of lessening this gap and gaining the competencies needed to take themselves and their venture forward. Competitors largely felt they had achieved their learning objectives and also appreciated that the competition had allowed the identification of further gaps in their competency base which would need to be addressed. These findings suggest a need to start dialogues with participants about what their learning objectives are so as to devise a means of supporting attainment of these through the competition.

Keywords: business plan competition; extracurricular; entrepreneurship education; competency based approach

Towards an Effective Model of Technology Transfer From Polish Public Research Organisations

Urszula Wnuk, Adam Mazurkiewicz and Beata Poteralska

Institute for Sustainable Technologies – National Research Institute (ITeE-PIB), Radom, Poland

Abstract: The intensification of globalisation processes, and the development of information societies has led to the increased demand for technologies, which help organisations build and maintain their competitive advantage, both on the

national as well as the international market. The transfer of technologies is beneficial for both research organisations commercialising their intellectual property, and companies in which research results are implemented. The advantages the technology transfer brings to the R&D and business sectors, therefore directly contribute to the improved level of a country's innovation performance and competitiveness. There are different approaches to technology transfer depending on the type of actors involved in this process (whether these are only business entities or whether technologies are transferred from the R&D sector to industry), and different models of technology transfer are applied. In the article the authors focus on technology transfer from a research organisation to a business enterprise. The focal point of the article are Polish PROs which, particularly those with the status of National Research Institutes, are an essential element of the Poland's National Innovation System (NIS) and play a crucial role in knowledge and technology transfer processes. Through the execution of research that is in line with the research directions specified in national and European strategic documents (i.e. Country's Development Strategy 2020 or Europe 2020), PROs contribute to the development of Poland's innovation performance and boost economic competitiveness. However, the Polish socio-economic conditions these organisations operate in, despite substantial and significant changes which have taken place in the organisation and management of knowledge and technology transfer processes, are still not fully favourable to the commercialisation of the results of research conducted at Polish research institutes. Based on literature review and the analysis of international case studies and best practices in technology transfer, the authors propose a technology transfer model for a Polish research institute. The model is based on the outcomes of the analysis of good practices conducted for, among others, the Max Plank Society, the Fraunhofer Society, the VTT, the TNO, the MIT, the Oxford University, and the ETH Zurich, but takes into consideration the unique socio-economic conditions the Polish PRO functions in. The model will be practically applied and verified at the Institute for Sustainable Technologies – National Research Institute (ITeE-PIB) in Radom, Poland on the example of Strategic Programme “Innovative Systems of Technical Support for Sustainable Development of Economy” financed from the EU structural funds in the period 2010-2015.

Keywords: technology transfer, PRO, technology transfer model, technology transfer mechanism, technology transfer structure

Model of Corporate Accounting for Sustainable Development

Jitka Zborková and Lilia Dvořáková

Faculty of Economics, University of West Bohemia, Pilsen, Czech Republic

Abstract: The concept of sustainable development was first discussed and gradually implemented at the macro level in response to the accelerating problems with the consumption of non-renewable resources, increasing environmental pollution and global problems of the world that are locally unsolvable. Nowadays, the concept of the sustainable development is considered a phenomenon of the 21st century, as the current consumption and production patterns are, at least in the long term, considered unsustainable. Nowadays, enterprises often implement voluntary environmental tools, create and subscribe to codes of ethics in environmental and social areas they affect, and lastly accept the principles of corporate social responsibility. The paper presents the results of research in the field of corporate accounting for sustainable development based on the integration of economic, environmental and social aspects of corporate performance as one of the key factors of competitiveness and business success. This paper analyzes the concept of sustainable development at the micro level in the context of economic, environmental and social terms of the 21 century. The primary objective of this paper is a constructive proposal of solution of the theoretical problems that arise during the implementation of tools that help to manage the business in accordance with the principles of sustainable development, and to propose a model of corporate accounting for sustainable development.

Keywords: sustainable development, efficiency, environmental and social aspects, accounting for sustainable development

PHD Research Papers

Environmental Stimulants of Creativity for Operatives and Non-Creative Workers

Radek Blahuš

Tomas Bata University in Zlín, Zlín, Czech Republic

Abstract: Competing with low cost production from developing countries is difficult for European companies as well for companies from other developed countries. Innovations can be one of their best competitive advantages in this fight. This may be the reason why innovation and creativity management is such a popular topic today. Many papers and research examining innovation management can be found describing conditions to support creativity of employees and ways to enhance their innovation potential. Despite the fact that well-known works of Amabile or Ekvall were discussed and developed in many other works, there is a lack of information whether these conditions have the same effect also on operatives and non-creative workers. In big industrial companies, operatives represent large part of company's employees and they are close to the manufacturing process. For these reasons, they are able to come with innovative ideas (especially with regards to process innovation) that could not be seen by knowledge workers, officers and executives. Although companies mostly recognize this potential, there is nearly no academic evidence of potential specifics of factors enhancing creativity and innovative work behaviour of operatives. The main objective of this paper is to refer about quantitative questionnaire research among operatives and non-creative workers in big Czech business companies during autumn 2013. This research focused on the importance of work environmental stimulants and obstacles described by Amabile. It is to find out whether these work environmental stimulants lead to process innovation among operatives or not and which of these stimulants are the most successful in achieving this goal. It is also to find out if the work environmental obstacles hinder process innovation among these employees. The collected data were analyzed by means of regression analysis and only small evidence was found for environmental stimulants and obstacles. The Poisson model was then used to verify the final model with only one Amabile's environmental stimulant accepted and statistically verified.

Keywords: stimulants of creativity, obstacles of creativity, process innovation, non-creative workers

Public Value as Indicator for Public Administration to Make Sustainable Decisions

Markus Bodemann¹, Marieta Olaru² and Mircea Sandru²

¹Bucharest University of Economic Studies, Warburg Germany

²Bucharest University of Economic Studies, Romania

Abstract: This paper highlights the results of a research carried out to offer a new indicator for public administration performance, in order to increase the efficiency and effectiveness in achieving the mandatory and voluntary tasks. The current situation of the public sector forces immediate measures to close the gap between revenues and expenses, to prevent further debts and regain freedom to act. Increasing complexity of mandatory tasks combined with maintenance of existent infrastructure are the current challenges of public administration. But exclusive focus to monetary values ignores the peculiar purpose of public administration and the challenges of the combination of economics and politics. Simple adoption of existent risk evaluation models leads to a limited view. To present an improved basis for appropriate decisions on parliamentary and administrative level, public value offers a second dimension beneath monetary judgment. First objective is to prove the current status of 'science' considering the term public value. Although the term was introduced 20 years ago and by application of the New Public Management (NPM) principles the public sector is in a transition, performance measurement remains vague. A theoretical approach is used to show the spectrum of public value used for economic purposes in order to evaluate the consequences and magnitude of current status and potential decisions. Different appraisals are compared to show limits, and to further focus on public value maximization. Second is to enlighten the consequences of decisions in the meaning of deviation from public value. The transformation of given public administration targets by execution of political programs creates changes. These processes cope with desired and non-desired directions, concerning utility to the population. Individual and collective articulated public interests are first indicators, while public value - as term - is created by private and public organizations, by the society or by individuals. Third objective is to convert the evaluation of public value deviation by decisions in numeric indicators for further application in public administration risk management systems, and for better in-sight of possible consequences to politicians and public managers. Further to the evaluation of the decisions ramification in order to enhance the basement of decisions by similar expected courses of actions. The use of public value as indicator will contribute to a comprehensive analysis of economic status and to citizen-valued distribution of the scarce resources by public administration. The result will contribute to enhancing

the grade of efficiency in distribution of resources, in the sense of increasing of individual and collective public value.

Keywords: public value, public administration, risk management, efficiency

Investigating the Adoption of Sustainable Green Initiatives in Scottish Food and Drink SMEs

Karan Dakup, Heather Fulford and Bill Sutherland

Robert Gordon University, Aberdeen Business School, Aberdeen, UK

Abstract: Increasing concerns towards environmental issues (transportation emissions, global warming, depletion of natural resources) in today's global economy has resulted in the need for businesses to be more environmentally friendly and act in an environmentally responsible manner. Like most developed nations, the UK has placed significant importance on the need for more sustainable business operations. However the smooth adoption and implementation of these green practices by businesses is slow due to challenges such as lack of awareness, cost, resourcing, legislation, and incorporation into existing business processes. Green practices are often assumed by SMEs to involve significant expense, and in some cases even unaffordable. Particularly during the recent time of recession, focus has been on keeping SMEs afloat rather than making substantial investment in what are perceived to be "nice to have" green initiatives. SMEs sometimes also cite lack of knowledge of how to implement green initiatives and lack of support for such activity. The focus of this research is Scottish food and drink sector, which plays a vital role contributing nearly £10bn yearly to the economy. However, this positive contribution of the sector to the economy sits in tension with the fact it also generates a substantial amount of waste (estimated to generate 2 million tonnes of waste annually), and thus has costly negative impacts on the environment. This paper forms part of a larger doctoral study on green supply chain initiatives in Scottish SMEs. Specifically, the research has been set up to explore the various factors motivating and inhibiting the adoption of green initiatives by food and drink businesses. In this paper, the focus is on a review of the literature that was undertaken to establish some initial motivators and inhibitors among SMEs across a range of sectors. These were then explored further in a pilot study among six small firms in the food and drink sector Scotland. This qualitative pilot study was undertaken using semi-structured interviews with the owner-managers. Arising from the findings of the pilot study, a scale of "green-ness" was devised to chart the extent to which the firms have innovated by incorporating green practices into their business processes. A more extensive study is now being designed to test and refine the scale with a view to creating a model to assist small businesses in their planning and strategizing in relation to introducing green

practices. The paper reports on the early stages of this research, including the pilot study and the creation of the “green-ness” scale.

Keywords: sustainability, green, environment, food and drink, green supply chain management, SMEs

Process Innovation as a Necessary Condition for Successful Implementation of a new Production Planning System

Denisa Hrušecká

Tomas Bata University in Zlin, Faculty of Management and Economics, Department of Industrial Engineering and Information Systems, Czech Republic

Abstract: Information technology is a really necessary requirement for today’s business environment. It helps to manage all business processes, enables efficient communication within the whole supply chain and provides important results for driving a company’s performance. However, the implementation of a new information technology system is not sufficient for reaching expected results. A lot of other changes are also required in terms of process innovations and people’s behaviour. A process innovation itself includes significant changes in process management, techniques, and equipment or software tools. However, the implementation of a new software tool without any other improvements in the relevant processes is not enough to achieve a complete process innovation process innovation. This paper deals with advanced planning systems and the process innovations needed for their successful implementation. The whole research part is based on the study conducted within Czech manufacturing companies that have implemented and used any type of advanced software support for production planning in the last five years. A questionnaire-based investigation was used just to obtain a basic overview of the actual state of this field. However, the most relevant results were reached through the interviews conducted with production managers or planners from selected companies, own experiences, case studies and other personal contacts with respondents. In particular, they were asked about the most significant benefits that were achieved in relation to the new planning software and process innovation that were adopted before finalising the whole implementation process. As the results show, process innovations are not always regarded so seriously during the whole implementation process, which might lead to the failure of the entire implementation. Therefore, the main goal of this paper is to point out the importance of process innovation for the successful implementation of advanced planning systems and to find out how strong the interdependence existing between these two variables is. The outcome of the whole research activity in this field should be some kind of methodology containing important requirements for the successful implementation of advanced pro-

duction planning systems and all the necessary process innovations that could significantly influence the whole implementation process.

Keywords: production planning, process innovation, information system, system implementation

Social Entrepreneurship: The new World Trend

Aigerim Kaumenova

Almaty Management University, Almaty, Kazakhstan

Abstract: Social entrepreneurship is a complex and multi-level phenomenon, which can be investigated through the use of various concepts and theoretically at different levels - individual, organizational and group. Given that area has not been previously studied in depth in Kazakhstan, the researcher saw the need for an exploratory research, a trial study, which requires describing and understanding the research subject and defining the scope, given the broadness of the concept. The paper explores the ways of innovative approaches to entrepreneurship. Its main focus is on the social change of these approaches. Therefore the understanding of social entrepreneurship is important. Exploring the process of pursuing innovative solutions to social problems also has social value (Dees, 1998). In order to make it sustainable, there is a need to define criteria of social entrepreneurship. To avoid ambiguities, the researcher has limited the meaning of "social enterprise" by the definition proposed by Alter (2007): A social enterprise is any business venture created for a social purpose—mitigating or reducing a social problem or a market failure—and to generate social value while operating with the financial discipline, innovation and determination of a private sector business. In its widespread usage, "social entrepreneur" is the individual and "social enterprise" is the organization. Therefore, social enterprise is an institutional expression of the term social entrepreneur". The paper also reviews the best practices of social entrepreneurship in the world. Therefore there is going to be a literature review that is either proved or not supported in the environment. The purpose of the study is to provide grounds for further research and development of country-specific analysis. In particular, it will review the existing literature on social entrepreneurship. It will also touch the barriers for the current social enterprises. The goal of the research is the idea of stimulating the development of social entrepreneurship in Kazakhstan. By conducting the research the author already creates social value. The objectives are: the analysis of the existing social enterprises and best practices in the world and exploring their presence in Kazakhstan. For this purpose a country profile will be introduced to see the prospects and dangers of social entrepreneurship in Kazakhstan.

Keywords: social entrepreneurship, social enterprise, sustainability, social value, Kazakhstan

Cultural Barriers to Open Innovation in Countries With a Transitional Economy: Case of Kazakhstan

Yelzhan Kushekbayev

International Academy of Business (IAB), Almaty, Kazakhstan

Abstract: After the breakdown of the Soviet Union, the economy of the Republic of Kazakhstan has been shifting from a centrally planned towards a free market-based model. The country has undergone many changes that led to lack of intellectual capital and strong barriers to innovation in industries. Due to economic globalisation and the subsequent attraction of the foreign capital into Kazakhstan's economy, particularly in the oil and mining industries, a lot of international companies have arrived to Kazakhstan. The country is rich in natural resources, which became a pole of attraction for foreign investors. All these factors make Kazakhstani economy highly dependable on export of raw materials. In order to sustain the economic development and shift from a resource-based economy Kazakhstani strategy is focused on knowledge management, internationalization of innovation, technology transfer and open innovation. The notion of open innovation has recently gained a widespread attention. The term encompasses the generation, capture, and employment of knowledge at the firm level by both acquiring intellectual property from outside the company and using external paths to market for commercialisation. Processes of open innovation emerge mainly from inter-organisational collaboration. When it comes to transitional economies, such as Kazakhstani one, inter-organisational cooperation and open innovation in general have many barriers, especially cultural. Therefore, this paper intends to provide an understanding of major challenges towards open innovation in Kazakhstan from the perspective of cultural aspects. To understand the theoretical background on open innovation, paper focuses on overview of management culture of Kazakhstan and its implications on open innovation. Kazakhstani management culture is reviewed using theoretical constructs developed by well-known researchers (Hofstede, 2010) in the field of organisational culture. Results suggest that the influence of peculiarities of national culture upon the adoption of certain elements of open innovation model is very prominent.

Keywords: open innovation, organisational culture, Kazakhstan, transitional economy

Business Success by Understanding the Process of Innovation

Dorin Maier¹, Marieta Olaru¹, Gregor Weber^{1,2} and Andreea Maier³

¹Bucharest University of Economic Studies, Bucharest Romania

²Renervis-consulting, Breunigweiler, Germany

³Technical University of Cluj Napoca, Romania

Abstract: Today, any organization - regardless of the specific activity - must be prepared to face continuous and radical changes, innovation thus becoming a condition of survival in a globalized market. Although the process of innovation is one of the most important drivers of growth and prosperity in today's global economy, it is also one of the least understood. Throughout the last century, industry leaders learnt to master the production process to such an extent that now it no longer functions as a significant competitive advantage. The new challenge is to master the innovation process – harnessing change, creating new competitive advantages by offering better products, using better processes, delivering better services or even offering entirely new solutions. The mastery of the innovation processes can be done only by knowing and understanding innovation, not just the definition but also the entire process that lead to the success of innovation and in the end the success of the companies that implement it. The purpose of this article is to offer a clear image regarding the innovation process so that every organization can implement innovation in their everyday activities. Better understanding that innovation is not a simple activity, that innovation needs to be seen as a process, is made in this article by proposing a number of steps for innovation process and by presenting the results and the benefits of the innovation process. The literature review on innovation made in this paper allows us to point out some important conclusions regarding the approach of the innovation process in organizations, innovation patterns and their evolution, the benefits of the innovation process and steps to be followed for achieving business success. This article can be also used as a base for future studies regarding the process of innovation, the management of the innovation process, the establishing of a management system of innovation and its implementation into existing management systems.

Keywords: innovation, innovation process, innovation management, business success

Factors Defining Satisfaction and Loyalty of the Online Shopping Customers Within e-Commerce and Cyber Entrepreneurship

Veronika Mašínová and Zuzana Švandová

Technical University in Liberec, Liberec, Czech Republic

Abstract: This abstract focuses on the analysis that concerns definition of the factors that affect customer satisfaction and loyalty when using the online shopping. Through the identified factors, it is possible to precisely specify online customer segments in terms of customer satisfaction and loyalty and that will help achieve considerably more efficient targeting of Internet marketing businesses when applied in practice. In the research, e-shops are firstly categorized according to assortment which most customers buy online, while questions to the satisfaction, trust and loyalty of customers relate to the selected, most purchased assortment. The paper analyzes several research areas affecting the level of satisfaction with realizing purchase on the Internet. The first of these areas is the design of the website, a graphic layout of the e-shop website. Web design is the first factor that can attract customers and make them form certain idea of the level of seriousness and professionalism of e-shop. Another of these areas is the clarity of the web, which means ease of navigation on the e-shop website. Another factor affecting the realization of online shopping and the level of satisfaction with the online shopping is the ease of use of website during ordering goods and payment. The quality of the visual capture of assortment is another research area specific to the E-commerce due to the impossibility to touch and examine the goods before buying. Communication with the customer is another research area affecting customer satisfaction with the purchase. Communication is meant both before and after the purchase, such as a shopping assistant function, handling complaints and grievances. Another research area that affects the degree of satisfaction with the online purchase is transport of goods. It means variety of transport possibilities, speed and flexibility of delivery of the goods according to customer's wishes. The price of goods also plays an important role in the decision to realize online-purchase. One of the last areas of this research is security of foreign exchange payments and guarantee for the protection of consumer data. All of these areas to a greater or lesser degree contribute to satisfaction or dissatisfaction with online-shopping. The level of satisfaction is a predictor of trust that arises between a satisfied customer and the online e-shop. Built trust affects the level of loyalty of online customers. Realization of repurchases and customer loyalty are critical to the success and profitability of online shops. This research was conducted on a sample of more than 500 respondents. For the processing were used descriptive statistics, hypothesis testing and correlation.

Keywords: cyber entrepreneurship, customer satisfaction, customer loyalty, trust, descriptive statistics, correlation

Design of Process and Organizational Innovation Application Methodology

**Pavlina Pivodova, Eva Jurickova and Roman Bobak
Tomas Bata Univerzity in Zlin, Zlin, Czech Republic**

Abstract: This paper reports on the current situation in many companies involved in improving their processes using industrial engineering methods. But the room for their use is still shrinking. There is a need for innovative approaches to be applied in the areas of process and organization for business competitiveness. This, however, affects management methods and approaches, which may be reasons for failure, as described in this paper. Opinions are supported by findings two kind of research. Quantitative research focuses on the weights of influences on business performance and applications of selected methods in industrial engineering companies. The second research inform about results of characteristics of improvement projects and approaches to improvement from conducted case studies in manufacturing companies are also listed. The results show the need for applications that cannot be random, but rather systemic. The conclusion of this paper is also an objective, whereby the design of a methodology for process and organizational innovation application is carried out.

Keywords: improvement, process innovation, organizational innovation, industrial engineering, project management, competitiveness

The Linkage Between Tacit Knowledge and Models of Innovation: A Theoretical Overview Towards Companies' Performance

Fernando Dias Santos¹ and Ilídio Tomás Lopes²

¹ESGTS – Escola Superior de Gestão e Tecnologia de Santarém, Portugal

²ISCTE- University Institute of Lisbon, Lisbon, Portugal

Abstract: Deeply embodied in emotions, personal values and beliefs, tacit knowledge emerges associated to skills which are dynamically translated into individual actions and experiences. Marked by its intrinsic difficulties in its formalization and communication processes, knowledge capture or creation seems to be intuitive, interpretive and hard to measure and disclose. Broadly understood as the main source of wisdom, it can be individual or collectively held, and its transformation process merges through the development and interpretation of explicit knowledge, usually structured around codification processes. If developed in a sustainable basis, those transformation processes are a source of competitive advantages. Its embodiment results in indexed drivers such as the contextual na-

ture in which the fluidity becomes the key enabler of creation. Embodied in proactive strategies, knowledge and innovation are linked in a bilateral cause and effect clue towards the competitive advantages identification. Thus, intangibles factors that support them plunge, naturally, in the four areas of innovation proposed by the *OSLO Manual*: product innovation, process innovation, marketing and organizational innovation. This linkage between tacit knowledge and innovation emerges from a multiplicity of contingent circumstances whose origin intersects the creation and the evolution of specific models which depends from the systematic capture of tacit knowledge typologies and natures. Despite the recognition of its importance in the economic and social development and sustainability, the efficiency and the effectiveness of the generating innovation processes have been characterized by their complexity in identifying, from a whole model, the causal links between science, technology, and society. This paper aims to identify the main innovation models from a macro and microeconomic perspective. Researchers and practioners could identify the main innovation drivers and the multilateral links between its structural dimensions. This outlook is a multivariate overview about innovation linkages and their potential impacts in the companies' performance. In this step, the theoretical model is also provided which identifies the main variables and cause and effect impacts in the integrated knowledge creation processes and intellectual property development and registration. Throughout a *Structural Model of Equations* (SME), our research aims to identify those structural linkages and theoretical relations between them. Furthermore, this theoretical model are derived from innovation boundaries and aligned with companies' performance indicators such as return on equity, return on assets or even economic value added. It is expected that most of those variables could positively influence the performance towards a dynamic and structured sustainability, from a financial and strategic positioning.

Keywords: tacit knowledge, intellectual property, models of innovation, performance

Evaluation of the Indirect Impact of Programs to Stimulate Innovation: Multi Case Studies

Dorotéa Silva, Fernando Romero and Filipa Vieira
University of Minho, Guimarães, Portugal

Abstract: The present study proposes an approach for the rationale of evaluating innovation programs, analysing indirect impacts in order to identify knowledge acquisition and transformation processes. It will look predominantly at the problem of assessing the intangible effects of innovation programs, which has been scarcely or unsatisfactory addressed by the literature. It is based on the observa-

tion and analysis of a program to encourage innovation in small and medium enterprises (SME). The program, called NITEC, aims to foster and support the creation of R&D structures inside SMEs. In this study, and in order to support our main arguments, we will refer to the experience of nine firms that participated in the NITEC program. The aim is to show how the NITEC program may contribute to the process of transformation of knowledge. Data was obtained through an extensive face to face interview with the top executive responsible for innovation, using a semi-structured approach. As part of each company case study, we compiled a detailed background analysis, through a semi-structured interview guide. The data was collected during the end of 2012 and the beginning of 2013, and involved interviews to the Head Manager of Innovation of the enterprise. It was found that there was a high degree of positive externalities, which are related to NITEC vocation to be a technological capability building program, with an important inducement potential inside and outside enterprises. The empirical observation that indirect impacts exist ratifies criticism of the linear model of innovation, since this model does not consider and not allow for those effects. In this case, the indirect impacts, i.e. knowledge acquisition and networking, are much more frequent as a perceived result of this program, which means that there are results that were not expected from the project's initial objectives. All the enterprises of the sample have strong indirect impacts. The most frequent indirect impact is on Transfer Capacity, a proxy for knowledge transfer, revealing its importance for program evaluation and policy-making. All the evaluated enterprises had this kind of impact. The concentration of technological transfer effects for enterprises indicates that it was by means of a free and informal process of transfer of product and process technology to suppliers that it appropriated the gains of innovation. The present study gave a real idea of what indirect outcomes of a large technological program are, a relatively under researched and previously unknown terrain, and confirms the magnitude of the importance of indirect impacts, in particular those related to knowledge transfer, and the need to consider them in future evaluations. The study case methodology gave the opportunity of recognizing more accurately the nature of knowledge acquisition in the context of NITEC.

Keywords: innovation programs evaluation; intangible effects of innovation; indirect impacts; Portuguese SME

Relevant Industrial Innovation Policy for the European Union

Jurgita Staniulyte

University of Leeds, Leeds UK

Abstract: The purpose of my PhD research is to propose industrial policy which addresses two problems: EU falling behind USA and Asia in innovation; and wid-

ening innovation gap within the Union. Europe is falling behind, because it has wrong policy targets, no relevant industrial policy tools or an institution to oversee policy coordination across Europe. Horizon 2020 innovation and research strategy fell short of what is required to catch up on global and regional level. I define industrial policy as government effort to promote specific industry or sector, support structural changes and innovation to generate spillovers that would lead to continuous economic development and ensure sustainable long term economic growth for the Union. Industrial policy tools should lead to interaction between regions as exchange of knowledge, skills and capital. My research is policy based with policy implication examples from historical data. My proposed policy tools are: a governing institution to oversee and coordinate industrial policy implementation across Europe; a joint information and communication system within the EU to improve knowledge accessibility; development and commercialization support of regional innovation systems for lagging regions; imposition of higher education planning and strategic R&D spending based on regional industrial policy for lagging regions; infant industry protection policies for lagging regions.

Keywords: European Union, Horizon 2020, industrial policy, innovation, R&D, regional development

A Discussion of Community of Practice and the Construction of Organization Core Competence: A Case Study of BS Supplementary Education Group

Stephen Dun-Hou Tsai, Jack Chih-yuan Wang and Roy Chih-You Lee
Business Management, National Sun Yat-Sen University, Kaohsiung, Taiwan

Abstract: The importance of core competence has been well discussed by many researchers, but how core competence can be developed still open to debate. The development of core competence is highly relevant to the environment where firms reside, co-constructed by the members of organizations, and has the nature of 'becoming'. Hence, this study aims to explore how core competence is developed based on Wenger's 'communities of practice'. A single case study, BS group, is selected, for the theory-building purpose. Ten interviews were conducted; and narrative approach was adopted as the analytical method. Our findings are Germinal learning in community; Participation in and Stages of the Negotiation of Meaning, and Negotiation of meaning constructs Core Competence.

Keywords: learning, core competence, knowledge organization, community of practice, narrative inquiry

Master's Research Paper

Entrepreneurship in Nursing Care: Perspectives, Incentives and Barriers in the Portuguese Context

Selma Martins, Emília Fernandes and Regina Leite
Universidade do Minho, Braga, Portugal

Abstract: In recent years, the importance given to entrepreneurship in Portugal has become notorious, especially as a way to fight or alleviate the difficulties occurring in the labor market, namely the high unemployment rate, job scarcity, and the precariousness of labor contracts. Given this scenario, the Portuguese government has advocated the emergence of entrepreneurial activity in order to identify new and interesting business opportunities, and, consequently, stimulate the economy and help solving the serious problems of unemployment. The health sector has been thought of as a new context for the emergence of those business opportunities. Some important changes took place following the government measures to lower costs in healthcare. Such measures had a severe impact on hiring and working conditions of many health professionals, namely nursing staff, forcing these professionals to rethink their career paths. Additionally, there is a growing demand for nursing services which seems to justify the need for entrepreneurial activity among such professionals. The present study aims to analyze the perceptions of a group of 18 nursing entrepreneurs from the North of Portugal that participated in semi-structured interviews in order to explore the main incentives and barriers to the implementation and survival of entrepreneurial activities in the Portuguese economic context. The content analysis suggests that entrepreneurship in nursing care seems to be characterized by a prevailing individual approach, since the success of the entrepreneur is viewed as being strongly dependent on a personal and psychological profile that affects the economic viability of the venture. Such a profile is not exclusively technical and instrumental, but also includes expressive and relational skills, that gives special importance to work in the community and the idea of nurturing others. The study findings also revealed a paradoxical positioning between two major perspectives in the nursing entrepreneurship: a) an economic perspective centered on the need to make profit and ensure financial viability; and b) a social perspective focused on the humanism of nursing vocation and concern for the patient. Six main categories of incentives and obstacles to nursing entrepreneurship have been identified: logistical support, financial support, bureaucracy, marketing strategies, the role of institutional and government services, and the national economic context. This study aims to contribute to the development of knowledge and practice of entrepreneurship in nursing care by addressing political and economic measures that can more effectively meet the needs of nurse entrepreneurs.

Keywords: entrepreneurship, health, nursing care, perceptions, incentives and barriers

Non Academic Papers

New Formats of Work With Creative Entrepreneurs and Sociocultural Project Initiatives

Olga Kizina

Project Centre “Creative Moscow”, Moscow, Russia

Abstract: Creative entrepreneurship is entrepreneurial activity in the field of creative industries (crafts, architectural projection, visual arts and the gallery business; film and video, media, advertising, literature and publishing; software and computer games, Internet and new media; and performing arts and entertainment, music and recording). A creative entrepreneur aims to build and use creative and intellectual capital, and this often implies some social effect. Current creative entrepreneurship and socio-cultural project initiatives in Moscow’s cultural policy are considered an important resource for territorial development, which: enhance the city’s competitiveness in the global innovative products market; contribute to finding resources for the development of the economic and social potential of the territories; contribute to increasing the quality of human life and the quality of a city’s innovation environment; play a vital role in the saturation of socio-cultural and leisure spheres of city life; offer modern competitive content for cultural institutions and public urban spaces; attract the creative class. Moscow is experiencing an acute shortage of public spaces and areas for creative and intellectual leisure activities. The city’s remote areas are not covered by any kind of cultural offerings since these are mostly concentrated in the centre. One of the priority areas of Moscow’s cultural policy is the transformation of former Soviet houses of culture into modern multifunctional cultural centres. Problems being faced by these new cultural centres include changing their audiences, harmonising relations with the local community, creating a comfortable creative and intellectual environment including in problem areas and so on. The development of Moscow as a global city, as a centre of innovation, creativity and modern lifestyles, is only possible with the development of modern management mechanisms to support significant cultural projects and institutions and creative entrepreneurship. The trend is that public funding resources for Moscow’s cultural institutions should be aimed at supporting contemporary cultural projects and the inclusion of new people in cultural processes. The Project Centre “Creative Moscow” was created in August 2013 at the initiative of Moscow’s Department of Culture. Its tasks include supporting creative industries and sociocultural project initiatives in Moscow through the implementation of educational projects, professional competitions, and the organisation of professional activities.

Keywords: creative industries, creative entrepreneurship, cultural projects, state support, cultural institutions

What's the secret? An Australian Perspective on Partnerships for Change

Lucy Richardson

Condamine Alliance, Toowoomba, Australia

Abstract: As a sunburnt country with droughts and flooding rains, rainforest and deserts, cities and the outback, Australia has a highly complex environment with widely variable issues across the landscape. In the 1990s, the Australian government supported a move to catchment-based natural resource management, which has built over a decade of learnings in how to achieve societal change at catchment scale under a range of different models. As one of the 56 regional bodies, Condamine Alliance have tested many innovative approaches, and have compiled invaluable insider knowledge on what has worked and what hasn't throughout this period. Natural resource management projects in the Condamine catchment have been built on partnerships in their truest form—everyone has “skin in the game”, everyone invests (time and/or money) and everyone benefits. These partnerships ensure the buy-in and ownership necessary for success, and increase the buying potential of any individual investment. This partnership approach has also facilitated focusing on real priorities, as those involved need to all value an activity for it to happen; no one gets their outcomes for free. This legacy of ownership supports the continuation of work after the projects move on to other issues, with networks and skills left behind to maintain and expand upon the outcomes over time. From 2-year flood recovery projects to 10-year multi-award winning river recovery programs, the Condamine catchment has seen significant investment in improving the condition of its natural resources. The catchment-based partnership approach has built the region's capacity in a way that provides legacy way past the direct environmental benefits to the catchment and into the resilience of the catchment community. These challenges and successes of these activities and of the broader Australian approach, can provide important learnings of relevance to other regions and nations across the world.

Keywords: Australia, catchment management, partnerships, change

Work in Progress Paper

The Role of Social Media for Business and Service Systems

Christian Zinke and Sandra Prätör
University of Leipzig, Germany

Abstract: Social media has an enormous impact on all kinds of businesses. In this paper, we discuss that social media and applications have the potential to trigger social business processes by changing value chains and hereby challenge existing business models. In our view, based on further developments, social business models will evolve where service is exchanged for service. In this paper we describe these social businesses using the service systems theory and S-D-logic. Our target is to develop a scientific basis for social business research in order to understand, how social media applications modify traditional business approaches.

Keywords: social business, service science, rhetorical practices, social network systems, social media

Late Submissions

Enterprise and Entrepreneurship Education: Implications for Innovation in Delivery

Dr Christopher J Moon

Middlesex University, London, UK

Abstract: This paper studies current provision of enterprise and entrepreneurship education at one university and provides recommendations for curriculum development across several different subject areas. The paper reviews the Quality Assurance Agency for Higher Education (2012) report Enterprise and entrepreneurship education: Guidance for higher education providers; and the recent All-Party Parliamentary Action Group for Micro Businesses report (2014) An Education System fit for An Entrepreneur. The former report highlights the importance of four factors concerning the students learning experience (enterprise awareness, developing an entrepreneurial mind-set, developing entrepreneurial capability, entrepreneurial effectiveness) and relates these to graduate outcomes (behaviours, attributes, skills). The approach of this research is to map existing delivery in three subjects against the above factors and consider what gaps can be plugged and how. Thus the approach is largely a mapping exercise but includes primary interviews with four senior managers (n=4) and a sample of students (n=42) to elicit their feedback on changes in delivery. The results provide a basis for curriculum development planning applicable to the particular subjects involved. However, implications are stated for how other subject areas can innovate in three key areas of HE provision (teaching, learning, and assessment) in order to improve the effectiveness of entrepreneurs and the employability of graduates in general. The value of the report is in highlighting key aspects of current delivery that can be improved through enhanced student learning, and improved delivery, around the theme of enterprise and entrepreneurship education.

Keywords: Enterprise education, Entrepreneurship education, innovation in learning and delivery, experiential learning, learning by doing

Fine-tuning Entrepreneurship Education: How do Programs Impact Entrepreneurial Characteristics in Students?

**Rafael Alcaraz-Rodríguez, Marcia Villasana, Mario Moises Alvarez
Tecnológico de Monterrey, Monterrey, México**

Abstract: Entrepreneurship education is no longer about developing technical skills in business. It is also about strengthening a positive mindset in potential entrepreneurs and contributing to building an enterprise culture in the community. Universities are in a unique position to not only influence and shape the atti-

tudes towards entrepreneurship for new venture creation, but also to develop an entrepreneurial perspective that students can apply to the multiple roles they will play in life. In Latin America, a region where entrepreneurship is becoming a desirable career choice and early-stage entrepreneurship is mostly headed by young people, an increasing number of universities are integrating entrepreneurship education and promoting strategies for developing a supportive culture. Such efforts should come accompanied by an assessment of the approach and impact of programs, a key element for identifying gaps in their design that may hinder effectiveness. This paper reports findings as part of a larger study on the entrepreneurial characteristics of undergraduate students. The purpose is to examine the impact of an entrepreneurship course on 10 entrepreneurial attributes (creativity, initiative, self-confidence, work energy, perseverance, leadership, risk taking, need of achievement, tolerance, problem management skills). The mandatory course, based on an experiential learning approach, focuses on three core areas: a) academic, applying learning materials and activities to provide technical knowledge; b) motivational, aiming at the development of entrepreneurial competences; and c) institutional, providing support through laboratory infrastructure and business incubators. A 50-item questionnaire was designed in-house and administered to 327 undergraduate students at Tecnológico de Monterrey, a private university in Mexico. Participants responded the survey before and after the course in order to compare entry and exit results. Findings indicate that creativity, risk management, self-confidence, and problem management skills were the most positively impacted by the program. These results allow for the preliminary conclusion that exposure to a formal and structured program can modify characteristics considered as desirable in entrepreneurs, and can be regarded as encouraging that university entrepreneurship programs can contribute to developing enterprise competences. Studies such as this highlight the value of performing assessments on the impact of entrepreneurship education to ensure achievement of its objectives.

Keywords: Entrepreneurship education, entrepreneurial attributes, universities, entrepreneurship

Abstracts Only

How do Employees Learn and Innovate in Lean?

Steen Høytrup¹ and Anne-Charlotte Teglborg²

¹Department of Education, Aarhus University, Denmark

²Novancia Business School, Paris, France

Abstract: How do employees learn and innovate in Lean? Many firms in European countries opt for Lean organization. Furthermore, Lean rates highly in comparisons of different kinds of learning environments. According to research in the field, discretionary learning is often rated as the most supportive learning environment, but Lean comes a close second. This is perhaps surprising in that Lean is also outstanding in terms of delivering explicit, well-defined guidelines, continuing production standards, etc. Surprising because a good deal of research suggests that these factors are characteristic of restrictive learning environments in which learning in the workplace is often impeded. The following issues will be addressed: Is Lean capable of providing a fruitful learning environment? How does Lean support learning in the workplace? And, lastly, what do Lean learning processes look like when applied in a corporate environment? We apply a case study methodology in which we focus on Lean whiteboard meetings as a potential site of learning. Employees and managers were interviewed and a number of Lean whiteboard meetings were observed. Interviews were informed by the concept of “Boundaries”, as well as by theories of workplace learning and employee driven innovation. Qualitative data were categorized and analyzed in the light of these concepts. Results fall into three categories. Firstly, a list was made of learning conditions provided in the whiteboard meetings. These conditions are illustrated by quotations taken from the interviews. Secondly, genuine learning processes are identified and described in reference to Ackerman & Bakker’s concept of boundary learning dynamics. We conclude that Lean can be seen as a double-edged sword. The approach encompasses factors that impede learning, for example in terms of the current emphasis on working standards and narrow job descriptions. But Lean also provides organizational approaches such as whiteboard meetings that can be fruitful sites of learning and innovation in the workplace.

Keywords: lean, learning, workplace learning, innovation, employee-driven innovation

Mastering the Front end of Innovation via Open Innovation

Kleman Irok and Borut Likar

University of Primorska-Faculty of Management, Koper, Slovenia

Abstract: Content: Innovation management methods, tools and knowledge are well established and documented, as are various procedures and methods applied

in the companies. Market offers different IT support systems, consulting services, organization support (training, technology parks). Later phases of innovation process are formalised and legally regulated. Upon this a conclusion can be drawn, that innovation process is more-less well known, ubiquitous/widespread/globalised and above all institutionalised and regulated. Nowadays in global competitive environment companies do not consider dilemma whether to innovate or not, but instead consider the amounts of necessary investments into innovation process in order to provide wide and reach enough basis of research problems and ideas of their possible solutions which are then systematically analysed and further elaborated with (more-less) standardised procedures and methods in order to be further developed, patented and marketed. The dilemma of innovation thus often turns into question of available financial resources and time that could be allocated in available tools and services which quite often are by no means cheap. In contrary, the investments are quite often enormous. In reality these investments related to systemic and organised innovation can only be afforded by financially strong predominately big companies. However, there are only few such companies in small economies like Slovenia. For SME's and micro companies, such organised innovation efforts are quite often nothing more the 'wishful thinking', meaning that more than 75% of companies struggle with catching up the 'innovation train'. The depicted problem can be translated into question, how to introduce/bring closer the innovation process to SME's and micro companies that quite often do not dispose with experts possessing required qualifications or expertise of innovation management. Is it possible to offer at least part of this required knowledge to these companies in form of outsourced knowledge and thus taking away the burden of significant/huge initial investments? Then; which parts of the innovation process knowledge can be outsourced offered in scale simultaneously to various companies? In times of recession another question emerges at the same time; can the innovation process be subjected to optimisation (lean & mean) and be outsources to 'outside providers' and to what extent? One way to approach those questions is through virtual learning and e-supported training which enables large scale individualised knowledge (transfer) support. In this article we present the conceptual framework of e-learning innovation support system focused into the front end of innovation that has been developed and tested within cross-border SHARTEC project. SHARTEC develops a platform for exchange of technology information and ideas for SME's and medium sized companies in industrial sector of manufacturing of high precision mechanical components in Eastern Italy and Slovenia. In addition the implementation of the e-learning innovation support system will be addressed alongside the impact assessment in participating companies.

Keywords: innovation, front end, distance learning, creativity

Measuring and Enhancing the Entrepreneurial Readiness of College Students

John Liptak

Radford University, USA

Abstract: Many college students, unable to find employment in this sour economy, are increasingly turning to less traditional employment options such as self-employment (Liptak, 2012). Similarly, Reinink (2012) found that driven by a desire to find personal fulfillment and by a sour economy that makes traditional employment seem just as risky as starting a business, members of the so-called millennial generation the 20-something children of the baby boomers are increasingly foregoing traditional career paths and are developing business plans based on social responsibility and their own passions, interests and ideals.

Liptak (2009) found that college students are forgoing traditional employment and are taking advantage of self-employment opportunities, yet are often not ready for the rigors of starting a new business. Most of the reasons cited for these failures include lacking the right entrepreneurial attitude, unwillingness to make necessary sacrifices or take risks, lack of readiness and poor planning.

Given this information, a study was conducted at Radford University to determine how ready college students are for starting an entrepreneurial venture as determined by their scores on six critical components of entrepreneurial readiness on the Entrepreneurial Readiness Inventory (ERI; Liptak, 2009).

Purpose

Readiness to begin an entrepreneurial venture is a critical component in the success of any business (Liptak, 2009). The purpose of this study was to assess the readiness of college students to begin their own business upon graduation.

Research Questions

Do college students enrolled in entrepreneurship classes and/or concentrations demonstrate readiness to begin their own business upon graduation from college? If so, in what areas do they feel ready, and in which areas do they not feel ready for entrepreneurship? How do men and women compare in entrepreneurial readiness?

Methodology

1. Determine the factors that comprise entrepreneurial readiness.

Six entrepreneurial readiness factors including vision, risk tolerance, perseverance, motivation, independence, and resources were identified from the literature (Liptak, 2008, 2009, 2012).

2. Identify Participants

154 participants (80 women and 74 men) from medium-sized university agreed to participate in the study. These were participants enrolled in the university entrepreneurship classes and/or entrepreneurship concentration. All participants reported wanting to own their own business at some time after they graduated.

3. Administer an Instrument to Measure Readiness

Each participant completed the Entrepreneurial Readiness Inventory (Liptak, 2009) to measure how ready they are to begin their own entrepreneurial venture.

4. Compare and Contrast

Explore areas in which college students showed strong readiness for entrepreneurship and those areas in which they can use assistance to increase their entrepreneurial readiness. Compare women's and men's scores for each of the six entrepreneurial readiness areas.

*Results will be provided and discussed.

Keywords: Entrepreneurship, Innovation, Millennial, Readiness, Self-Employment

Personal Vulnerability: The Pivot-Point on the Entrepreneurship Teaching Journey

Douglas MacDonald and Alex Bruton

Bissett School of Business, Mount Royal University, Calgary, Alberta, Canada

Abstract: This paper presents an exploitive case study of the personal and professional challenges entrepreneurship faculty encountered in moving from teaching entrepreneurship based on traditional learning theories (Cognitivism and Behaviourism) i.e. specifically using "The Business Plan Model" to the adoption of the emerging "Lean Startup" (Constructivism) educational approach. Special attention was given to the issues of faculty's vulnerability and their tolerance for ambiguity while fostering students' innovativeness and adaptability. The eco-system setting for this study is a large Canadian undergraduate university. Giving a human face to the players engaged within the emerging paradigm shift in entrepreneurship education.

Keywords: vulnerability, entrepreneurship education, Lean Startup
