

**Proceedings of the  
15<sup>th</sup> European Conference on  
Research Methodology for  
Business and Management Studies  
Kingston Business School, Kingston University  
London, UK  
9 - 10 June 2016**



**Edited by  
Vladlena Benson and Fragkiskos Filippaios**

**Proceedings of  
The 15th European  
Conference on  
Research Methodology for  
Business and Management  
Studies**

**ECRM2016**

**9 - 10th June 2016**

**Hosted by  
Kingston Business School  
Kingston University London  
UK**

**Edited by  
Vladlena Benson  
Kingston University, UK  
And  
Fragkiskos Filippaios  
University of Kent, UK**

Copyright The Authors, 2016. All Rights Reserved.

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

#### Review Process

Papers submitted to this conference have been double-blind peer reviewed before final acceptance to the conference. Initially, abstracts were reviewed for relevance and accessibility and successful authors were invited to submit full papers. Many thanks to the reviewers who helped ensure the quality of all the submissions.

#### Conference Proceedings

The Conference Proceedings is a book published with an ISBN and ISSN. The proceedings have been submitted to a number of accreditation, citation and indexing bodies including Thomson ISI Web of Science and Elsevier Scopus.

Author affiliation details in these proceedings have been reproduced as supplied by the authors themselves.

The Electronic version of the Conference Proceedings is available to download from DROPBOX.

(<http://ecrm.com/2016>) Select Download and then Direct Download to access the Pdf file. Free download is available for conference participants for a period of 2 weeks after the conference.

The Conference Proceedings for this year and previous years can be purchased from <http://academic-bookshop.com>

Print version ISSN: 2049-0968

Print version ISBN: 978-1-910810-94-1

E-Book ISSN: 2049-0976

E-Book ISBN: 978-1-910810-95-8

Published by Academic Conferences and Publishing International Limited  
Reading, UK. 44-118-972-4148. [www.academic-publishing.org](http://www.academic-publishing.org)

## Contents

Paper Title	Author(s)	Page No
<b>Preface</b>		iv
<b>Committee</b>		v
<b>Biographies</b>		vi
<b>Research papers</b>		
Linguistic Analysis of Manager Behaviour Aimed at Replacing Human Managers with Robots	Justyna Alnajjar and Olaf Flak	1
Comparing Millennials With Their Predecessors Regarding Online Travel Behaviours: A Logistical Regression Modelling Approach	Suzanne Amaro, Carla Henriques and Paulo Duarte	9
Modelling Formative Second Order Constructs in PLS	Suzanne Amaro and Paulo Duarte	19
Innovation on the RM Curriculum to Help Develop Research Skills Before the Final Year Master's Dissertation	Marie Ashwin and Alan Hirst	28
Square but Straight: Measurement Tool Design to Improve Response Task Fluency and Certainty	Alice Audrezet and Béatrice Parguel	34
From Methods to Design: Teaching Research Methodology as a Reflective Practice	Lars Bækgaard and Christian Lystbæk	43
Taking off With a Pilot - the Importance of Testing Research Instruments	Jane Brooks, Deborah M Reed and Barbara Savage	51
21st Century Managers and Intuition: Evaluating the Learning Achieved From an Example of Pedagogic Change for Business Undergraduates	Ann Brown and Martin Rich	60
Evaluating the Contribution of Technology Start-up Incubators: Exploring Methodological and Data-related Conundrums	Anthony Paul Buckley and Stephen Davis	68
Interdisciplinary Approach to Research in Business and Management Studies Based on Consumer Behaviour and Organizational Conflict	Felicjan Bylok and Leszek Cichobłaziński	76
Teaching Subjectivist Research Methodology: Starting With "why?" not "what?"	Oliver Couch, Caroline Cole, Steven Chase and Murray Clark	84
DBA Impact Statements as Self-Research Methods: PhD Plus or Practitioner Frolic?	Julie Davies	91
Using Relationship-building Methodology for Developing Trust: World Café in Action	Lesley Gill, Philip Ramsey, Sarah Leberman and Stephen Atkins	99
Learning, Teaching and Researching for Developing Professional Agency: the Ethics of Self-Making	Gloria Gordon	108
The VIPLAN Methodology in Management Research	Stephen Harwood	117
Contingency Theory as a Lens for Qualitative Data Analysis in Information Systems Studies	Tiko Iyamu and Sibongiseni Tunzelana	126
Strategies for Reconciling Positionality Dynamics in a 'Homecomer-Stranger' International Research Team	Eva Kipnis and Aurelie Broeckerhoff	136
Psychogeography in a Time of Calamity – Deriving with Defoe	Deborah Knowles, Damian Ruth and Clare Hindley	143

Applying Grounded Theory in Complex Case Study Context – Issues and Lessons Learned From Knowledge Management Research	Shuyang Li, Alex Peng and Jorge Martins	149
Facilitating Organizational Change: A Collaborative, Open Systems Perspective	Ludmila Malinova, Peter M Bednar and Christine Welch	159
Analysis of Research Methodology in Business and Management Studies as Reflected in the ECRM 2015 Proceedings	Hendrik Marais and Magdalena Pienaar-Marais	167
Gaining Access to Organizational Elites in Qualitative Research: Implications for Teaching Research Methods	Efrider Maramwidze-Merrison	175
Confirming the Measurement Properties of an Engagement Measure	Nico Martins	184
Teaching and Learning Research Methods – Towards Developing a Deeper Appreciation of Their Assumptions	John Mendy	193
Application of Quantitative and Ex-post Facto Research Methodology in Corporate Borrowing in Nigeria: Empirical Evidence.	Peter Okpamen	201
Increasing Response Rates for Surveys Conducted in Busy Cities: Lessons Learned From a Smart City Study	Guochao Alex Peng and Luqing Zheng	210
The Challenges of Using Mixed Methods in Requirements Engineering Research	Rozilawati Razali, Fares Anwar, Marfizah Abdul Rahman and Fatin Filzahti Ismail	217
Telling Tales; Storytelling as a Methodological Approach in Research	Tara Rooney, Katrina Lawlor and Eddie Rohan	225
A Mixed Methods Approach to a Bourdiean Analysis of Innovation in Family Firms	Udeni Salmon	233
Research 3.0—Use of Semantic Web Technology in a Qualitative Research Process	Reto Schneider	241
Meta-Action Research: A Methodology for Improving Practice-Based Research	Gertjan Schuiling and Derk Jan Kiewiet	251
A Review of Mixed Methods Research by South African Computing Researchers	Shawren Singh	259
Detecting and Militating Against Data “Curbstoning” in Business and Management Research	Anthony Stacey	265
Semi-quantitative Systems Analysis Using Fuzzy Cognitive Maps	Anthony Stacey	275
Making Bricks From Straw: Promoting Undergraduate Research With Diminishing Resources	Barry Strydom and Kerry McCullough	285
Appreciating Methods/Analysis Choices: Humanitarian Aid as a Teaching Context	Tonny Tonny and Stephen Atkins	293
Applying Educational Design Research to Virtual Reality Safety Training in Mines	Etienne Anton van Wyk and Mary Ruth de Villiers	302
Effective Methodological Tools applied to Modelling the Influence of Relational Efforts on Performance	Armando Luís Vieira, Carlos Costa, and Arthur Filipe Araújo	313
Reducing the Carbon Footprint of Research by Recycling Item Level Data	Hartmut von der Ohe and Nico Martins	322
Towards a Systemic Landscape Model for Operational Excellence	Christine Welch, Tammi Sinha and Nigel Ward	330
Towards a Systematic Approach to Reviewing Literature for Interpreting Business and Management Research Results	Kambidima Wotela	338

Strategy Variable in Subsidiary Research – the Case of Miles and Snow Typology	Sylva Žáková Talpová	349
<b>PhD Research Papers</b>		359
Developing a Frameworks for a Successful for Claim Management in Malaysian Construction Industry	Nor Azmi Bakhary, Hamimah Adnan and Azmi Ibrahim	361
Investigating Employee Attitudes Towards Adopting Green Supply Chain Practices in Indian Smes – Using Qualitative Methods: Literature Review and Research Methodology	Manpreet Dhillon, Yongmei Bentley and Teslim Bukoye	367
Critical Perspectives on Corporate Social Responsibility Research Methods: An Evaluation of Two Different Research Strategies and Designs	Barbara Jensen	375
A Case Study as a Method of Researching the use of Social Media in Enterprises	Marta Zembik	383
<b>Non Academic Paper</b>		391
From Case Analysis to Model: Inspiration Drawn From an Investigation of Company Culture	Luciano Traquandi	393
<b>Work In Progress Papers</b>		403
What is Your Influence on Social Media? A Sentiment-Based Model	Wei-Lun Chang	405
Integrating Qualitative Data Collection Methods to Examine Knowledge Management Across Disciplinary Boundaries	Titima Thumburmung, Ana Cristina Vasconcelos and Andrew Cox	408
<b>Late Submission Paper</b>		413
A Critique of the Structural Equation Modeling Technique	Daniel Makina	415

## Preface

The 15th European Conference on Research Methodology for Business and Management Studies is hosted this year by the Kingston Business School, Kingston University London, UK on the 9-10 June 2016.

The Conference Chair is Dr Vladlena Benson from Kingston University, and the Programme Chair is Dr Fragkiskos Filippaios from Kent Business School, University of Kent.

ECRM is a recognised event on the European research conferences calendar and provides the opportunity for individuals working in the area of business and management research to meet and discuss their experiences of using the varied and expanding range of research methods available to them.

Three keynote speakers will give presentations at the conference this year; *The Revival of Deductive Qualitative Research* by Professor Ad Kil from Nyenrode Business University in The Netherlands. Professor George Saridakis, from Kingston University Business School, UK will continue on the theme of qualitative research methodology with a presentation on *Emerging Challenges in Quantitative Methodology* Nick Rushby of Conation Technologies Ltd, in the UK will address the issue of *Research and Publication Ethics in Rapidly Changing Times*.

With an initial submission of 136 abstracts, after the double blind, peer review process there are 43 Research papers, 4 PhD papers and 1 non Academic paper, 2 work in progress papers published in these Conference Proceedings. These papers come from some many different countries including Czech Republic, Denmark, France, Ireland, Italy, Malaysia, Netherlands, New Zealand, Nigeria, Poland, Portugal, Slovenia, South Africa, Taiwan, UK.

A selection of the best papers – those agreed by a panel of reviewers and the editor will be published in a conference edition of the EJBRM (Electronic Journal of Business Research Methods [www.ejbrm.com](http://www.ejbrm.com), ISSN 1477-7029). These will be chosen for their quality of writing and relevance to the Journal's objective of publishing papers that offer new insights or practical help into the application of research methods in business research. Papers presented in the Systems Approach and its applications in Management Research mini track will be considered for further development and publication in the International Journal of Systems and Society (IJSS), published by IGI-Global, ISSN: 2327-3984.

We wish you a most interesting conference.

Vladlena Benson  
And  
Fragkiskos Filippaios  
June 2016

---

## Conference Committee

### Conference Executives

**Dr Vladlena Benson**, Kingston Business School, UK

**Dr Fragkiskos Filippaios**, Kent Business School, University of Kent, UK

**Dr Chris Hand**, Kingston University, UK

**Dr Elena Fitkov-Norris**, Kingston University, UK

**Dr Rebecca Steliaros**, Kingston University, UK

### Mini track chairs

**Prof Nico Martins**, University of South Africa, RSA

**Prof. Mortaza Kokabi**, Shaheed Chamran University, Ahwaz, Iran

Dr; Khodayar Abili, The University of Tehran, Iran; Dr; Bulent Acma, Anadolu University, Eskisehir, Turkey; Ass; Prof; Dr; Hamimah Adnan, Universiti Teknologi MARA, Malaysia; Dr; Hamid AL-Asadi, Basra University, Iraq; Dr; George Alexandrou, Kingston University, UK; Prof; Dr; Maizam Alias, Universiti Tun Hussein Onn Malaysia, Malaysia; Dr; Suzanne Amaro, Polytechnic Institute of Viseu, Portugal; Dr; Fatima Annan-Diab, Kingston University, UK; Dr; Andrew Armitage, Anglia Ruskin University, UK; Dr; Marie Ashwin, Ecole de Management de Normandie, France; Udo Averweg, eThekweni Municipality and University of KwaZulu-Natal, South Africa; Joseph Azzopardi, University of Malta, Malta; Sue Balint, Westminster Business School, London, UK; Dr; Joan Balantine, University of Ulster, UK; Dr; Heather Banham, Okanagan College, Kelowna, Canada; Andrew Basden, University of Salford, UK; Dr; Hazel Beadle, University of Chichester, UK; Ass; Prof; David Bednall, Deakin University, Australia; Peter Bednar, Department of ISCA, Portsmouth University, UK; Lau Bee Theng, Swinburne University of Technology Sarawak Campus, Malaysia; Dr; Gary Bell, London South Bank University, UK; Angela Benson, University of Brighton, UK; Dr; Egon Berghout, University of Groningen, The Netherlands; Dr; Frank Bezzina, University of Malta, Malta; Dr; Milena Bobeva, Bournemouth University, UK; Dr; Ann Brown, CASS Business School, UK; Cathal Brugha, University College Dublin, Ireland; Dr; Roslyn Cameron, C Q University Australia, Australia; Dr; Marian Carcary, The National University of Ireland Maynooth, Ireland; Dr; Lindsey Carey, Glasgow Caledonian University, UK; Prof; Sven Carlsson, School of Economics and Management, Lund University, Sweden; Dr; Vincent Cassar, Birbeck College, University of London, UK; Dr; Jennifer KimLian Chan, Universiti Malaysia Sabah, Malaysia; Prof; Prasenjit Chatterjee, MCKV Institute of Engineering, India; Dr; Vikas Choudhary, National Institute of Technology, Kurukshetra, India; Dr; Jyoti Choudrie, University of Hertfordshire, UK; Dr; Murray Clark, Sheffield Business School, UK; Aileen Corley, Liverpool John Moores University, UK; Dr; Reet Cronk, Harding University, USA; Ken D'Silva, London South Bank University, UK; Fariba Darabi, Sheffield Hallam University, UK; Geoffrey Darnton, Bournemouth University, UK; Dr; Linda Dawson, University of Wollongong, Australia; Prof; Leslie Dinauer, University of Maryland University College, USA; Dr; Eileen Doherty, Innovation Value Institute, Maynooth University, Ireland; Verena Dorner, Chair of Business Computing II, University of Passau, Germany; David Douglas, Staffordshire University, UK; Prokopios Drogkaris, University of Aegean, Greece; Prof; Dr; Paulo Duarte, University of Beira Interior, Portugal; Dr; Dev Dutta, University of New Hampshire, Durham, UK; Prof; Rohit Dwivedi, Rajiv Gandhi Indian Institute of Management Shillong, India; Dr; Hossein Ebrahimpour, The University of Kashan, Iran; Dr; Jose Esteves, IE Business School, Madrid, Spain; Mahmoud Fakhra, College of Business Studies, Kuwait; Prof; Paula Fernandez Gonzalez, University of Oviedo, Spain; Prof; Paula Odete Fernandes, Polytechnic Institute of Bragança, Portugal; Dr; Paula Fernández González, University of Oviedo, Spain; Dr; Elena Fitkov-Norris, Kingston University, UK; Dr; Elena Fitkov-Norris, Kingston University, UK; Olaf Flak, University of Silesia in Katowice, Poland; Prof; Balan George, German-Romanian University, Romania; Prof; Dr; Adriana Giurgiu, University of Oradea, Faculty of Economic Sciences, Romania; Dr Aaron Glassman, Embry-Riddle Aeronautical University, USA; Gerald Goh, Multimedia University, Melaka, Malaysia; Dr; Sayed Mahdi Golestan Hashemi, Iranian Research Institute for Creatology, TRIZ & Innovation Management & Engineering, Iran; Dr; Karuna Gomanee, Regents College, UK; Dr; Andrea Gorra, Leeds Metropolitan University, UK; Gillian Green, School of Informatics, University of Northumbria, UK; Dr; Anabel Gutierrez Mendoza, Regent's College London, UK; Dr Birgit Hagen, University of Pavia, Italy; Dr; Chris Hand, Kingston University, UK; Dr; Stylianos Hatzipanagos, King's College London, UK; Dr; Prof; Yunke He, Okanagan College, Kelowna, Canada; Alex Hiller, Nottingham Trent University, UK; Prof; Clare Hindley, International University Bad Honnef -Bonn,, Germany; Clive Holtham, Cass Business School, City of London University, UK; Dr; Bob Hughes, University of Brighton, UK; Prof; Rahinah Ibrahim, Universiti Putra Malaysia, Malaysia; Fahmi Ibrahim, Glasgow Caledonian University, UK; Prof; Devos Jan, Ghent University, Belgium; Dr; Wyn Jenkins, Staffordshire University, Stoke-on-Trent, UK; Kristina Jespersen, Aarhus University, Denmark; Helena Karjalainen, Normandy



Business School, France; Diane Keeble-Allen, Anglia Ruskin University, UK; Prof; Habibul Khondker, Zayed University, Abu Dhabi, United Arab Emirates; Cyril Kirwan, Cyril Kirwan Associates, Dublin, Ireland; Rembrandt Klopper, University of Kwa Zulu Natal, South Africa; Dr; Jenny Knight, University of Brighton Business School, UK; Dr; Deborah Knowles, University of Westminster, London, UK; Karl Knox, Nottingham Trent University, UK; Prof; Mortaza Kokabi, Shaheed Chamran, Iran; Dr; Branka Krivokapic-Skoko, Charles Sturt University, Australia; Branka Krivokapic-Skoko, Charles Sturt University, Australia; Dr; Kelly La Venture, Bemidji State University, USA; David Lamb, Edith Cowan University, Australia; Rebecca Lees, Kingston University, UK; Prof; João Leitão, University of Beira Interior, Portugal; Prof; Arminda Lopes, Instituto Politécnico de Castelo Branco, Portugal; Prof; Eurico Lopes, Polytechnic Institute of Castelo Branco, Portugal; Jonathan Lord, University of Salford, UK; Prof; Sam Lubbe, NWU, South Africa; Dr; Maria Cristina M; De los Santos, Kyungdong University-Global Campus, South Korea; Dr; Sandy MacDonald, University of Northampton, UK; Prof; Dalgobind Mahto, Green Hills Engineering College, India; Prof; Hendrik Marais, University of Pretoria, South Africa; Garance Marechal, University of Liverpool, UK; Dr; Maria do Rosário Martins, Universidade Cape Verde, Portugal; Dr; Ellen Caroline Martins, Organisational Diagnostics, South Africa; Prof; Nico Martins, University of South Africa, South Africa; Angela McGrane, Northumbria University, UK; Dr; Rachel McLean, University of Bolton, UK; Cathi McMullen, School of Management and Marketing Charles Sturt University, Australia; Lisa McNeill, University of Otago, Dunedin, New Zealand; Mr Mohd Shamsuri Md Saad, Universiti Teknikal Malaysia Melaka, Malaysia; Anabela Mesquita, Instituto Politécnico do Porto, Portugal; Dr; Ian Michael, Zayed University, Dubai, United Arab Emirates; Dr; Avinash Mulky, Indian Institute of Management, Bangalore, India; Dr; Graham Myers, Durban University of Technology, South Africa; Dr; Emanuela Alia Nica, Center for Ethics and Health Policy (CEPS) and University "Petre Andrei" Iasi, Romania; Dr; Arlene Nicholas, Salve Regina University, India; Prof; Rita Niemann, University of the Free State, South Africa; Prof; Hester Nienaber, Unisa, Pretoria, South Africa; Dr; Kersti Nogeste, RMIT University, Melbourne, Australia; Dr; Chetsada Noknoi, Thaksin University, Thailand; Miguel Nunes, Sheffield University, UK; Dr; Madeleine Ogilvie, Edith Cowan University, Perth, Australia; Ass; Prof; Dr; Abdelnaser Omran, School of Economics, Finance and Banking, Universiti Utara Malaysia, Malaysia; Steve Page, University College Chester, UK; Dr; Vijayakumar Parameswaran Unnithan, Tata Institute of Social Sciences, India; Dr; H;B; Patel, Grow More College of Education, India; Dr; Swetketu Patnaik, LAIBS, Anglia Ruskin University, UK; Dr; Noel Pearce, Rhodes University, Grahamstown, South Africa; Prof; Rui Pimenta, Escola Superior Tecnologia Saúde Porto, Portugal; Dr; Iwona Pisz, Opole University, Poland; Ganesh Prabhu, Indian Institute of Management at Bangalore, India; Diana Rajendran, Swinburne University of Technology, Melbourne, Australia; Prof; Thurasamy Ramayah, Universiti Sains Malaysia, Malaysia; Dr; Isabel Ramos, Minho University, Portugal; Karsten Boye Rasmussen, University of Southern Denmark, Odense, Denmark; Theo Renkema, Rabobank Nederland, The Netherlands; Martin Rich, CASS Business School, UK; Kristina Risom, The Aarhus School of Business, Denmark; Dr; Isabelle Royer, University Lyon, France; Dr; Maria Ryan, Edith Cowan University, Perth, Australia; Dr; Faith Samkange, SHMS Hotel Belvedere, Switzerland; Joseph Santora, International School of Management, Paris, France; PhD Risto Sääntti, University of Vaasa, Finland; Prof; Chaudhary Imran Sarwar, Mixed Reality University, Pakistan; Mark Saunders, University of Surrey, UK; Dr; Ousanee Sawagvudcharee, Liverpool John Moores University, Thailand; Dr; Simone Domenico Scagnelli, University of Torino, Italy; Dr Elena Seghedini, Alexandru Ioan Cuza University of Iasi, Romania; Dr; Nima Shahidi, Islamic Azad University, Iran; Junaid Shaikh, Curtin University, Malaysia; Dr; Anshuman Sharma, College of Applied Sciences, Ministry of Higher Education, Oman; Marie Sheahan, Charles Sturt University, Australia; Miles Shepherd, Bournemouth University Business School, UK; Prof; Ali Simsek, Anadolu University, Turkey; Dr; Tammi Sinha, Winchester University, UK; Ibrahim Sirkeci, Regent's University, London, UK; Prof; Peter Smith, University of Sunderland, UK; Dr; Shahryar So-rooshian, University Malaysia Pahang (UMP), Malaysia; Prof; Rui Dinis Sousa, University of Minho, Portugal; Dr; Rajeev Srivastava, Motilal Nehru National Institute of Technology, India; Prof; Anthony Stacey, University of the Witwatersrand, Johannesburg, South Africa; Prof; Jim Stewart, Coventry Business School, UK; Kerstin Thomson, Stockholm University, Sweden; Claudine Toffolon, Université du Mans - IUT de Laval, France; Prof; Shiv Tripathi, Mzumbe University, Tanzania; Dr; Jim Underwood, University of Technology, Sydney, Australia; Arvind Upadhyay, University of Brighton, UK; Dr; Prof; Asta Valackiene, Kaunas University Of Technology Panevezys Faculty, Lithuania; Dr; Jocene Vallack, CQ University, Rockhampton, Australia; Dr; Ana Vasconcelos, University of Sheffield, UK; Dr; John Venable, Curtin University of Technology, Perth, Australia; David Wainwright, University of Northumbria, UK; John Walton, Sheffield Hallam University, UK; Teresa Waring, Northumbria University, UK; Christine Welch, University of Portsmouth, UK; Dr; Piotr Wiśniewski, Warsaw School of Economics, Poland; Lilia Zerguit, Sheffield Business School, Sheffield Hallam University, UK; Prof; Dr; Muhamamd Zia-ur-Rehman, National Defence University, Pakistan; Dr; Daiva Zostautiene, Kaunas University of Technology, Lithuania

---

## Biographies

### Conference Chair



**Dr Vladlena Benson** is an Associate Professor and a Course Director of the MA Management programme at Kingston Business School, Kingston University. Vladlena's research interests are in the area of information security, information strategy and social platforms. She publishes widely and her research is recognised by the British Computing Society (BCS) and the British Academy of Management (BAM). She has authored and edited several books including *Cutting-Edge Technologies and Social Media Use in Higher Education* and *Implications of Social Media Use in Personal and Professional Setting*. Vladlena publishes extensively in such journals as *British Journal of Educational Technology*, *International Journal of e-Business*, *Computers in Human Behaviour* and others.

### Programme Chair



**Dr Fragkiskos Filippaios** is currently a Reader in International Business at Kent Business School, University of Kent. Fragkiskos was awarded his Ph.D. in 2004 by the Department of International and European Economic Studies, Athens University of Economics and Business. His research interests are on the roles of subsidiaries of Multinational Enterprises, the location strategies of multinationals' subsidiaries, and the role of technology in the multinational group. He is also actively researching areas of education management and development with specific focus on the use of online social networks. Fragkiskos has worked as a consultant for the Ministry of Development in Greece and published in internationally recognised academic journals. He also acts as a reviewer for various international journals, he is an Association of MBAs Accreditation panel member and he is an active member of the Academy of International Business and the European and International Business Academy.

### Keynote Speakers



**Ad Kil** is Professor of Research Didactics for Professionals and Director of Executive PhD programs, Nyenrode Business Universiteit, The Netherlands and Chendu (China) and Professor of Research at Nordic International Management Institute, China. Ad holds a MA in Social Pedagogic, a BA in Psychology, a PGDip P&O, a PGDip CE (Corporate Education), a MA Managing Human Resources, a MBA Legal Practice, a MSc Human Resource Development and a PhD in Management Science and Business Administration. His PhD research was on competences of managing partners of law firms.



**Nick Rushby** has been working in the area of educational and training technology for over 44 years. He holds a Diploma in Teaching and Course Management in Higher Education from the London Institute of Education. Nick is the author of numerous papers on various aspects of learning technology and most recently is the co-editor of the *Wiley Handbook of Learning Technology* (to be published in February 2016). He has been a journal editor for 36 years, firstly for *Programmed Learning and Educational Technology*, then for *Interactive Learning International* and, for the past 22 years, for the *British Journal of Educational Technology*.



**Professor George Saridakis** is a Professor of Small Business and Entrepreneurship at the Kingston University Business School and Honorary Professor at the University of the West Indies. He is also an Editor of the *International Small Business Journal* Special Issue on "Enterprise Activity, Performance and Policy during Times of Crisis" and co-editor of the book on "How Can HR Drive Growth?". His research focuses on the econometric analysis of cross-sectional, time-series and panel data related to entrepreneurship, small businesses and illicit behaviour. His recent work appears in *Journal of Business Venturing*, *British Journal of Industrial Relations*, *Human Resource Management*, *British Journal of Management*, *International Small Business Journal*, *Journal of Applied Statistics* and *Review of Law & Economics*.

## Executive Committee



**Dr Birgit Hagen** is Assistant Professor of International Entrepreneurship and International Marketing at the University of Pavia, Italy. She received her PhDs from the Vienna University of Economics and Business and from the University of Pavia. Her research interests fall at the intersection of small firm internationalization and international entrepreneurship with a focus on small firms' strategic patterns. She has published in the *International Business Review*, *Management International Review* as well as in several books on International Business and International Entrepreneurship. She is a visiting fellow at the University of Sussex, regular visiting professor at the University of Lyon 3 and she was visiting scholar at the University of Valencia. She is currently the Pavia-Unit leader for a Horizon 2020 project and a Strategic Partnership Program on Entrepreneurship.



**Dr Chris Hand** is Associate Professor of Marketing in the Department of Strategy, Marketing and Innovation at Kingston Business School, Kingston University where he teaches market research and research methods at undergraduate and postgraduate level and directs the Business School's doctoral training programme. His research interests include online buying behaviour and consumer behaviour in leisure and entertainment markets. Chris' work has appeared in journals such as the *European Journal of Marketing*, *Journal of Marketing Management*, *International Journal of Market Research* and the *European Journal of Operational Research*.



**Dr Elena Fitkov-Norris** is an Associate Professor at the Department of Accounting Finance and Informatics, Kingston Business School, London. She has a BSc in Mathematics and Management from King's College London before moving to University College London, where she was awarded an MSc in Information Technology and a PhD in Electrical and Electronic Engineering. Her research interests are wide ranging, from the use of quantitative optimisation and control techniques for yield management to semi-qualitative methods such as neural networks for building predictive models. Currently, Elena is looking into ways to support social science and business students on their journey through the challenges of statistical analysis and identifying innovative approaches for supporting their learning. She is an expert evaluator for the European Commission's Future and Emerging Technologies Open Scheme, designed to be "continuously responsive to novel and fragile ideas that challenge current thinking and to support foundational breakthroughs that can open radically new directions for information and communication technologies in the future".

## Mini-Track Chairs



**Jonathan Lord** is a Lecturer in HRM at the University of Salford previously being a HR Director, Manager and Consultant, working across all three sectors. Jonathan is a Chartered Fellow of the CIPD, a Fellow of the Higher Education Academy and a member of the Industrial Law Society as well as the British Academy of Management.



**Prof Nico Martins** has worked in the Department of Industrial Psychology at the University of South Africa since 1995, where he specialises in the field of organisational psychology. His fields of expertise are organisational development and change. Articles which he has published have dealt with organisational culture and climate, organisational diagnoses, employee engagement, organisational trust and diversity. He has presented papers at more than 50 national and international conferences based on work performed at various companies. He has participated in about 500 reports on various aspects of organisational diagnoses. His research approach is both quantitative and qualitative.



**Dr Christine Welch** is a Visiting Research Fellow in Portsmouth Business School, following thirty years' service in further and higher education. She has research interests in the fields of Systems thinking and practice, knowledge management and Information Systems, in which she has published many articles, conference papers and book chapters. She is co-author of *The Manager's Guide to Systems Practice*, published by Wiley.

Christine is a director of SPMC, a member of SCIO and a former Director and President of the UK Systems Society. She serves on the Editorial Review Boards of several journals, including the International Journal of Systems and Society.

---

## Contributing Authors

**Dawuda Alhassan** 1<sup>st</sup> year PhD student at the Faculty of Management and Economics, Department of Industrial Engineering and Information Systems from the University of Tomas Bata in Zlin – Czech Republic. Have a Master of Art in International Economics from Faculty of Economic Science at the University of Warsaw-Poland, ACCA – CAT (UK) Affiliate and Graduate Diploma in Accounting.

**Justyna Alnajjar**, PhD, is Assistant Professor at the Institute of Specialised and Intercultural Communication and Head of the Research Center for Business Communication Audit at the University of Warsaw. Her research interests include intercultural business communication, communication in virtual project teams, and communication audit. She is deputy editor of *Lingwistyka Stosowana/ Applied Linguistics/ Angewandte Linguistik*.

**Suzanne Amaro** has a PhD in Marketing and is an associate professor at the Management Department of the Polytechnic Institute of Viseu, Portugal. She is currently head of the Marketing BSc Degree and of the Marketing Research MSc Degree. Her current research interests include: travellers' online purchase behaviour and the use of social media.

**Dr Paul-Alan Armstrong** is Senior Lecturer in HRM and Leadership, University of Sunderland, UK. He researches digital reflection and reflexivity, approaches to teaching for creative thinking, developing reflexive conscious professionals and the visualization of professional identity. Presented at national and international conferences, he is a reviewer for *Reflective Practice: An Interdisciplinary Journal*.

**Marie Ashwin** . With over two decades of experience in higher education in the UK and the Far East, Marie is currently working at EM Normandie, France. She collaborates with colleagues from around the world on teaching and research projects to enhance the standing of RM amongst staff and students, and add value to the teaching of methodology

**Stephen Atkins** spent his early adult life as a manager and industrial engineer in spacecraft operations and later as a behavioral scientist in the study of astronaut performance in Shuttle and Space Station environments. He now serves as Research Coordinator (Business) for Otago Polytechnic's College for Enterprise and Development.

**Alice Audrezet** is an Assistant Professor of Marketing at Institut Supérieur de Gestion (ISG International Business School, Paris) since 2012. She holds a Ph.D from Paris-Dauphine University. Her research interests focused on Market Research Methodology and Fashion Behaviors. She has spoken in national and international conferences on marketing. Alice teaches marketing and methodology courses.

**Nor Azmi Bakhary**, Senior Lecturer Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia BEng in Civil Engineering – Universiti Teknologi MARA, Malaysia. MEng in Construction Management – Universiti Teknologi Malaysia. 15 years of teaching in Construction Business and Project Management Division, Universiti Teknologi Mara, Malaysia. Teaching area: Construction and Project management course Construction management; Construction contract; Project management.

**Peter Bednar** is from the School of Computing, University of Portsmouth, UK and Department of Informatics, Lund University, Sweden. Senior academic at the University of Portsmouth, UK. He is also a researcher at the Department of Informatics at Lund University, Sweden. Educated in engineering Peter worked in industry before becoming an academic. His main research interests are in Information Systems, Systems Thinking and Contextual Inquiry into Complex and Ambiguous problem spaces.

**Jane Brooks** has a nursing background, with extensive management experience in the NHS, voluntary and education sectors. She currently works on a freelance basis managing a variety of health-related projects and also

lectures part-time. Jane has an MSc in Strategic Quality Management and is studying for a PhD, researching patient and carer involvement in primary care.

**Ann Brown** Visiting Senior Lecturer in Information Management, Faculty of Management, Cass Business School. Doctorate from City University (2005), based on work into problems and potential of Information Systems applications to create Business Value for organisations. Ann is also the editor of Electronic Journal of Business Research Methods (EJBRM). Research interests include IS implementation; IS exploitation by organisations; Research methods for business, ethnography and innovative teaching and learning methods.

**Anthony Paul Buckley** is Assistant Head, School of Marketing, College of Business at the Dublin Institute of Technology. Tony holds a PhD in Management from Lancaster University (UK), a Post Graduate Certificate in Learning and Teaching from DIT, an MBS in International Marketing from UCD and an MA and BSc in management from Trinity College Dublin.

**Wei-Lun Chang** is the associate professor in department of business administration of Tamkang University, Taiwan. His major was management information systems and primary research area covers service science and management, social network analysis, and general management.

**Leszek Cichobłaziński** is an Assistant Professor of Human Resources Management and Negotiation at the Management Faculty of the Częstochowa University of Technology, Poland. His main scholarly interests are in human resources management. His research focuses on the anthropology of organization, organizational semiotics, mediation in collective bargaining as well as on organizational conflict management. The educational background of Cichobłaziński is in Sociology.

**Caroline Cole** is a Visiting Fellow at Sheffield Business School. She contributes to the school on organisation theory, research philosophies and methods and doctoral supervision. Her Doctorate of Business Administration was awarded in recognition of a programme of research: ‘The emotions of individuals during strategic and organisational change: a hermeneutic exploration’.

**Julie Davies** is Subject Lead for HR, University of Huddersfield. She researches on higher education and diversity. Julie completed a PhD at Warwick Business School in strategic management. She is a Fellow of the CIPD and HEA, a member of the CIPD’s membership committee. She chairs the membership committee for the Association of Asia-Pacific Business Schools. Previously she was Deputy Chief Executive at the Chartered Association of Business Schools.

**Ruth de Villiers** is a professor emeritus and professor extraordinaire at Unisa where she taught Computer Science and Information Systems and delivered masters and doctoral students. Her research interests are human-computer interaction and e-learning, which she combines by developing and evaluating varying e-learning environments. She also conducts meta-research on research designs and methodologies.

**Manpreet Dhillon** studying PHD in University of Bedfordshire, MBA from London School of Commerce and my MSc from Glyndwr University. Topics are employees’ attitudes towards adopting green supply chain practices in indian smes – using qualitative methods: literature review and research methodology.

**Olaf Flak** is an assistant Professor at the University of Silesia (since 2010), Assistant Professor at University of Economics in Katowice (2002-2012). Olaf is a Scientist and specialist in business management, Managing Director in a consulting company konsultanci24.pl. He investigates how automatic pattern recognition techniques can be applied in the management science in order to replace managers with robots.

**Gloria Gordon** teaches in the Business School at London South Bank University. Her academic specialism is Human Resource Development underpinning her 2002 National Teaching Fellowship remit of engaging in professional learning for professional agency: the purpose being to transform the black British

**Stephen Harwood** has experience as both a practitioner in the oil, electronics and tourism sectors and an academic. His research interests span a variety of areas, that included Problem Structuring Methodologies, the use of technologies and Innovation System dynamics. His research is conceptually grounded in the domains of Sociology of Technology and Organisational Cybernetics.

**Carla Henriques** holds a PhD degree in Applied Mathematics, in the field of Probability and Statistics. She conducts research in statistics and data analysis, with several articles published in International journals. She is an associate professor at the Polytechnic Institute of Viseu, Portugal and member of the *Centre for Mathematics of the University of Coimbra*.

**Clare Hindley** is a Professor in the Language and Communication department of the IUBH School of Business and Management. She is Coordinator for the university's Research Methods and Thesis Writing courses and also lectures in Business Communication.

**Barbara Jensen**, Dipl. Kfm, Exec. MBA is conducting her PhD and working in the department Strategy, Marketing and Innovation of Kingston Business School after having successfully finished her MBA at Kingston Business School, London with her dissertation on customer value and CSR initiatives. Prior to her academic career she worked in different positions at leading telecommunication companies in Germany and Denmark.

**Derk Jan Kiewiet** has a PhD in management studies and is director of a research center on Strategic Entrepreneurship at the Windesheim University of Applied Sciences. He was an associate professor in business research methodology at the University of Groningen and head of the innovation department of an insurance company before joining Windesheim UAS.

**Deborah Knowles** is a Principal Lecturer at the University of Westminster. She divides her time among academic research and teaching on Organizational Behaviour modules. The application of a psychogeographical approach to business and management research combines these two interests.

**Minhye Lee** is a lecturer in Marketing and Innovation at the University of Winchester. She received her PhD from the School of Management, University of Leicester in 2015. Minhye's research interests lie in the field of ethical consumption, consumer identity, consumer culture and qualitative research methods. She is particularly interested in the complex dynamics of ethical consumption such as various forms of practices and interpretations of ethics in consumption.

**Ophillia Ledimo** has a PhD in Industrial and Organisational Psychology and is currently working at The University of South Africa; Department of Industrial and Organisational Psychology. Her field of specialization is Organisational Psychology and has presented papers at several national and international conferences within this field.

**Shuyang Li** is a PhD student in the Information Systems Research Group in the Information School at the University of Sheffield, UK. Her research interests include knowledge management, knowledge sharing and project management. Particularly, her PhD research is focused on knowledge sharing skills required by project managers in the construction industry.

**Christian Lystbaek** is an associated professor at Department of Business Development and Technology, Aarhus University, Denmark. His main research interests are Human Resource Management and Knowledge Management - and research methodology in these fields of research. He is teaching business research methodology in BA and MA programs. He has a background in philosophy, and is primarily interested in the mutual development of technical, practical and paradigmatic competencies in research methodology

**Daniel Makina** holds a PhD from the University of Witwatersrand, Johannesburg and is Professor at the University of South Africa. His research interest is business, finance and economics and has published in, among others, international journals such as the International Journal of Social Economics, Journal of Applied Business Research, Business Review and Applied Economics.

**Hendrik Marais** holds a Ph D in experimental social psychology and specialises in research methodology, management and innovation policy. He is currently Research Fellow, Institute for Economic Research on Innovation at the Tshwane University of Technology, Pretoria.

**Efrider Maramwidze-Merrison**, PhD is a Lecturer in the Department of International Business and Management, Sheffield Business School at Sheffield Hallam University. She holds a Ph.D in International Business and

Management. A research methods enthusiast, Dr Efrider also holds a Master's degree in Business Research Methods.

**Nico Martins** holds a PhD in Industrial Psychology and is with the Department of Industrial and Organisational Psychology at The University of South Africa and specializes in the field of Organisational Psychology. He published several articles and presented papers at several national and international conferences in organisational culture/climate, organisational trust, employee engagement, organisational diagnoses and research. .

**Brian McArthur** holds a BSc in Computer Science, an MA in English, an MBA and a PhD in Education (Information Systems Research Methodology Curricula). He is currently an Associate Professor at the University of KwaZulu-Natal where he teaches Research Methodology in the discipline of Information Systems and serves as the Academic Leader: Research.

**John Mendy** is currently a Senior Lecturer and Programme Leader for MSc HRM. He is interested in research, HRM, Organisational Behaviour, organisational culture and change, change management, how to manage relationships between international graduates, home graduates and other employees and smart cities as learning cities.

**Alex Peng** is a Lecturer in Information Systems in the Information School at the University of Sheffield, UK. He has been the PI of a number of projects funded by research councils and industrial partners, produced over 50 publications, and served as the chair of a number of international conferences.

**Rozilawati Razali** received her PhD in Computer Science from University of Southampton, United Kingdom. Prior to joining Universiti Kebangsaan Malaysia, she used to work in industry as a Software Engineer. Her research interests include requirements engineering, empirical software engineering and software management as well as information systems and information security management.

**Tara Rooney** is a Lecturer in Strategic Marketing. Her developed skills are in both qualitative and quantitative research with particular expertise in narrative methodologies and social constructionism. Tara has considerable practical and theoretical knowledge of Consumer Relationship Marketing, specialising in the process and mechanics of consumer relationship dissolution.

**Udeni Salmon** is doctoral candidate at the University of Salford. Her PhD thesis explores how Bourdieu's theories of doxa, fields and habitus can be used to understand the distinctive nature of family firms in the manufacturing sector of the UK.

**Reto Schneider** is a part-time researcher. He got degrees in mechanical engineering, information technology, business administration, organizational psychology and education. He is the founder and owner of two consulting companies in Switzerland which are specialised in organizational development and digital marketing. His major research interest is in the semantic web and its application in digital marketing.

**Gertjan Schuiling** is a senior partner of Thierry & Schuiling. He obtained his PhD from VU University Amsterdam in 2001. He served as professor of Organizational Learning at HAN University of Applied Sciences and was a member of the editorial board of M&O, the Dutch Journal for Management and Organization, for six years.

**Shawren Singh**, is a senior lecturer in the School of Computing at the University of South Africa, and has spent more than 15 years teaching and researching in the Information Systems space. His research has focused on e-Government, with particular interest in the design and development of these applications. His research has been published internationally and he has presented papers at several conferences. He is also supervising several post graduate candidates.

**Andrej Srakar**, PhD, is a research associate at the Institute for Economic Research and teaching assistant at the Faculty of Economics, University of Ljubljana. His main research interests include cultural economics, mathematical economics, macroeconomics and economics of ageing. He has numerous publications in scientific publications and frequently lectures at scientific conferences home and abroad.

**Anthony Stacey** is Associate Professor of Research Methodology and Decision Science at the Wits Business School, Johannesburg. He is director of graduate research and is responsible for coordinating and facilitating the research activities of all MBA students at the School. His principal research interests are research ethics and quantitative methods.

**Barry Strydom** is a Senior Lecturer in the School of Accounting, Economics and Finance at the University of KwaZulu-Natal, South Africa where he has taught Finance for more than 20 years. His research interests include asset pricing theory and SME financing. He is a co-author of the South African edition of Principles of Managerial Finance.

**Titima Thumbumrung** is a Ph.D. student of the Information School, the University of Sheffield, the United Kingdom. Her research is centred on knowledge management across disciplinary boundaries. She was a librarian in the National Science and Technology Development Agency, Thailand where she was offered a scholarship to study in a Master and a Ph.D. degree in the United Kingdom.

**Luciano Traquandi** is Adjunct Professor in Organizational Behaviour at MIP Polytechnic of Milano, Graduate School of Business. He teaches Psycho Sociology of Organisations at LIUC University, Italy. He is founder and partner of Aalto Hi Touch Consultants, performing management training and organizational culture analysis

**Armando Luís Vieira** teaches at University of Aveiro, where also serves as director and vice-director of undergraduate and postgraduate degrees in Tourism Management and Planning. Researches services marketing, tourism and hospitality management, and psychology. He is the author of a range of books and articles on these and related subjects. Recent publications have appeared in International Journal of Tourism Research, Journal of Business-to-Business Marketing, and Journal of Sexual Medicine.

**Kambidima Wotela** is an Andrew W. Mellon Foundation Scholar and a William and Flora Hewlett Foundation Fellow. He studied demography and population studies for all his degrees. He teaches development interventions as well as 'research strategy, design, procedure and methods' at the WITS Graduate Schools of Governance and Business Administration. His current research is on 'research tuition'.

**Sylva Žáková Talpová** works as an assistant professor, her research has particularly dealt with MNEs, MNE subsidiaries and project management. Her teaching experience includes international management, project management, international trade and management simulation games. She worked as a consultant in a company focusing on consulting, coaching and expert services in the field of public expense programmes and project implementation.

**Marta Zembik**, M.Sc., University of Economics in Katowice, Institute of Business Information Systems in Poland. Her principal research areas are focused on social media marketing, virtual communities and marketing research on the Internet.





# Comparing Millennials With Their Predecessors Regarding Online Travel Behaviours: A Logistical Regression Modelling Approach

Suzanne Amaro<sup>1,3</sup>, Carla Henriques<sup>1,4</sup> and Paulo Duarte<sup>2,5</sup>

<sup>1</sup> Polytechnic Institute of Viseu, Viseu, Portugal

<sup>2</sup> Human and Social Sciences Faculty, University of Beira Interior, Covilhã, Portugal

<sup>3</sup> CI&DETS – Centre for the Study of Education, Technologies and Health

<sup>4</sup> CMUC - Centre for Mathematics of the University of Coimbra

<sup>5</sup> NECE – Research Center in Business Sciences

[samaro@estgv.ipv.pt](mailto:samaro@estgv.ipv.pt)

[carlahenriq@estgv.ipv.pt](mailto:carlahenriq@estgv.ipv.pt)

[pduarte@ubi.pt](mailto:pduarte@ubi.pt)

**Abstract:** Millennials, also known as Generation Y, are characterized by their use of technology, which is an integral part of their lives. Research has shown that they are different from earlier generations regarding their behaviours and attitudes. This article investigates and compares the behavior of Millennials with those of previous generations using data collected among 1,732 Worldwide Internet users. In order to understand what differentiates Millennials, this study considers several characteristics related with the way travelers use and perceive online resources to exchange information and buy travel products. Logistic Regression was applied to identify which factors independently discriminate between the two groups and the area under the receiver operator characteristic (ROC) curve, known as AUC, was used to assess the discriminative ability of the model. To select the variables to be considered in the multivariate logistic regression modelling stage, a univariate comparison was conducted. All significant variables were included in the multivariate analysis, significant being measured as having a p-value<0.05. Furthermore, because some non-significant variables may constitute an important contribution in the presence of other variables, all variables with p-value<0.1 were also considered for inclusion in the regression model. Forward step analysis was then used to find the final model, identifying a set of variables that independently contribute to differentiate the two groups. A distribution-free approach which aims to find the best linear combination that maximizes the AUC was also applied. The study found that, when compared with their predecessors, Millennials are more involved with travel social media and have a higher estimation to purchase travel online. Millennials behaviours may be an indication of the way people will behave in the future (Bolton et al., 2013). Therefore, it is crucial that Marketers and retailers better understand this young generation. This study provides useful insights, with indications of which factors matters most to Millennials in the online travel domain.

**Keywords:** Generation y, logistic regression modelling, millennials, online travel behaviour, ROC, travel social media.

---

## 1. Introduction

Research has shown that Millennials are different from earlier generations regarding their behaviours and attitudes. For instance, they are more likely to be influenced by WOM and learn about new products through WOM (eMarketer, 2007). Also, when choosing a destination, they consider visiting big cities more important than their predecessors (Huang & Petrick, 2010).

While there are several studies addressing travel behaviours of seniors and baby boomers, there is a lack of studies investigating Millennials (Huang & Petrick, 2010). Furthermore, there is scarce research addressing this cohort's use of social media (Bolton et al., 2013).

In order to fill these gaps, this article investigates and compares Millennials' behavior with those of previous generations, considering several characteristics related with their use of social media for travel purposes, the purchase of travel online and other travel related behaviors. The findings are useful to online marketers and travel managers and organizations in general, since the Millennials represent an important market. Indeed, it has been projected that by 2020, the impact of this group will increase and their spending power will be significant (Donnelly & Scaff, 2013). On the other hand, the millennials' behavior may be an harbinger of how people will behave in the future (Bolton et al., 2013). Thus, it is paramount that research is carried out to investigate which factors differentiate the millennials from their predecessor cohorts.

## **2. Millennials**

### **2.1 Definition and Characteristics**

There is not a general consensus for the categorization of Millennials, also referred to as Digital Natives or Generation Y. It is usually defined as those born between the years 1977 and 1994 (Huang & Petrick 2010). Yet, other period ranges can be found in the literature. For instance, from 1982 to 2002 (Pendergast 2010; Sago 2010) or from 1980 to 1991 (Lenhart et al. 2010). Seppanen and Gualtieri (2012) reported as many as 21 different birth spans.

Although dates do vary from author to author, the main characteristics attributed to this new generation is the utilization of technology and the Internet (Koutropoulos, 2011). According to the generational theory, each generation has common traits, values, beliefs and interests (Pendergast 2010). The millennial generation has grown up with digital technologies and the Internet (Kilian, Hennigs & Langner 2012) that undeniably influence their traits. Although there may be some contradictions regarding millennials traits, there is one that is consistent: their digital sixth sense (Seppanen & Gualtieri 2012), which encourages them to be efficient multitaskers (Koutropoulos 2011). They are strongly influenced by online and media content (Tripadvisor 2015), but also by friends and peers (Pendergast 2010).

### **2.2 Travel Behaviours**

According to a study conducted recently by Tripadvisor (2015), millennials are engaged and adventurous travelers. When making travel plans they want to travel somewhere they have never been and experience something new. Simultaneously, they are the generation most price conscious, regarding flight and accommodation prices. Tripadvisor's study also revealed that when gathering ideas before travelling, Millennials are the group most influenced by word of mouth and by contents posted not only from family and friends, but also from other travelers.

Regarding the purchase of travel, the Tripadvisor study (2015) found that 63% of millennials book an accommodation online. Interestingly, a higher percentage of travelers from Generation X book online (66%), demonstrating that millennials are not the only active group on the Internet. Yet, the fact that Millennials are the group with a higher percentage of bookings made by a mobile app (Tripadvisor 2015) may be a sign of their fluency with new technologies.

Millennials are indeed a wired generation, even when they travel. Eighty seven per cent of millennials consider that their smartphone is the most essential item while travelling, against 73% in Generation X and 55% of Baby Boomers (Tripadvisor 2015). Compared to their predecessor generations, they consider the inclusion of in-room Wi-Fi more important. Millennials are much more likely than non-Millennials to have a travel app on their smartphone (Barton et al. 2013).

### **2.3 Social Media Use**

Members of the millennial generation are significant users of social media (Sago 2010). In 2014, 89% accessed social sites regularly (eMarketer 2014). The perceived utility they obtain from using these websites is a key reason for Millennials to use and interact on social media (Nusair, Bilgihan & Okumus 2013).

Millennials are more likely than the general population to share content on their social networks, with an average of four shares per week (eMarketer 2014). Sixty percent of them produce and upload online content compared to 29% of non-millennials (Barkley 2011). These shares influence purchases, as millennials are more likely than older generations to make a purchase based on content shared by their peers on social media (eMarketer 2014).

Different sources demonstrate the importance of social media to millennials in the travel domain. For instance, Gretzel and Yoo (2008) found that older travelers were less likely to read travelers reviews and that 90% of younger travelers consider reviews important for deciding where to stay. A different study revealed that Millennials are twice as likely as non-Millennials to share travel photos on social media, blog or recount travel experiences online, and post travel reviews (Barton et al. 2013).

### 3. Methodology

#### 3.1 Data collection and measures

An online survey was designed in which the first section contained questions regarding travel behaviors in the past 12 months, such as the number of domestic and international trips taken, the number of online travel purchases and the number of online purchases of other products or services. The second section contained questions regarding social media use for travel purposes, such as which social media sites were used and if respondents were members of travel social media websites. It also included questions to assess respondents' involvement with travel social media, using four dimensions, social media creation, social media consumption, perceived playfulness and interest (see Table 1). The third section of the questionnaire included questions regarding respondents' opinion on the purchase of travel online and are presented also in Table 1. The last part of the survey included socio-demographic questions, such as nationality, education and age.

**Table 1:** Measures used to assess travel related behaviors

Construct	Indicators	References
Estimation of Purchasing Travel Online(a)	EST - If you were to purchase travel the probability of purchasing online would be...	Teo & Yeong (2003) and Grewal, Monroe & Krishnan (1998)
Intention to Purchase Travel Online(b)	INT - I expect to purchase travel online in the near future.	Limayem, Khalifa & Frini (2000) and Bigné et al. (2010)
Self-Efficacy(b)	SEF1 - I am proficient in using the Internet for travel shopping. SEF2 - I feel confident that I can use the Internet to purchase travel.	Vijayasathy (2004)
Technical resources(b)	TCH - All necessary resources (e.g. computer, internet access, time) for purchasing travel online are accessible to me.	Pavlou & Fygenon (2006)
Financial Instruments(b)	FIN - I have the necessary financial means (e.g. credit card, Paypal) to purchase travel online.	New Measure
Trust(b)	TRT1 -I believe online travel sites are trustworthy.	Kim, Chung & Lee (2011)
	TRT2 - Internet shopping is unreliable. (R) TRT3 - Internet shopping cannot be trusted, there are too many uncertainties. (R)	Lee & Turban (2001)
Compatibility(b)	CMP1 - Using the internet to purchase travel is compatible with the way I like to shop. CMP2- Using the Internet to purchase travel fits with my lifestyle.	Vijayasathy (2004)
Perceived Complexibility(b)	CXY1 - I feel online purchasing procedures are not clear to me. CXY2 - I feel it is not easy to book travel online.	Li & Buhalis (2006)
Perceived Risk(b)	RSK1 - I do not feel comfortable giving out credit card information to make a transaction over the Internet.	Cho (2004)
	RSK2 - I feel apprehensive about purchasing online.	New Measure
Convenience(b)	CNV - Purchasing travel online is more convenient than regular shopping, as I can do it anytime and anywhere.	Limayem, Khalifa & Frini (2000)
Financial Advantages(b)	FAD1 - I save money by purchasing travel online.	Kim, Chung & Lee (2011)
	FAD2 - Online travel shopping provides more discounts than offline travel purchasing.	
	FAD3- Generally, travel websites offer tourism products at cheaper prices.	Li & Buhalis (2006)
Enjoyment(b)	EJY1 - Purchasing travel online is more exciting than purchasing offline.	Verhoef & Langerak (2001)
	EJY2 - Purchasing travel online enjoys me more than purchasing offline.	Childers et al. (2001)
Construct	Indicators	References
Time Saving(b)	TSV1-Purchasing travel online enables (will enable) me to complete shopping quickly.	Davis (1989)
	TSV2 - I can save time by purchasing travel online.	Limayem, Khalifa & Frini (2000)
	TSV3- Purchasing travel online takes less time than purchasing at travel agencies.	Cho (2004)
Product Variety(b)	PVR1 - There is a larger choice of travel products available when purchasing online.	Jensen (2009)
	PVR2 - The Internet allows me to purchase travel services that are not available offline.	

Construct	Indicators	References
Social Media Consumption(c)	SMC1 - I read hotel reviews from other travellers.	New Measures
	SMC2 - I searched for travel information on social media websites.	
	SMC3 - I looked at activity/attractions reviews of other travellers.	
	SMC4 - I read other travellers' experiences and tips.	
	SMC5 – I search for travel information on social media websites (for example, things to do or where to eat)	
Social Media Creation(c)	SMCR1 - I write hotel reviews on social media websites.	
	SMCR2- I post photos on social media websites.	
	SMCR3- I write reviews of activities/attractions on social media websites.	
	SMCR 4- I write reviews of the place and/or monuments I visited on social media websites.	
	SMCR5 – I check in to the location I am at/update my location on social media (for example, on Facebook, Foursquare)	
Perceived Enjoyment(b)	PE1-Using social media for travel purposes is enjoyable.	Lee, Cheung & Chen (2005)
	PE2-Using social media websites for travel purposes is fun.	Moon & Kim (2001)
	PE3-Using social media websites for travel purposes stimulates my curiosity.	
	PE4- I consider the use of social media for travel purposes a big hassle. (R)	Verhoef & Langerak (2001)
Social Media Involvement(d)	Social Media is....	McQuarrie & Munson (1992)
	SMI1 – Unimportant...Important	
	SMI2 – Irrelevant...Relevant	
	SMI3 – Means nothing to me...means a lot to me	
	SMI4 – Unexciting...Exciting	

Items measured with 5 point Likert scale:

- 1=Very Unlikely and 5=Very Likely
- 1=Strongly Disagree and 5=Strongly Agree
- 1=Never and 5=Always
- Differential semantic scale

In August of 2012, emails were sent to a database with over 3,000 contacts, with a link to the online survey. Respondents were asked to forward the email to their contacts. A link to the questionnaire was also posted on Facebook groups. Online questionnaires present many advantages that influenced the choice of this particular method. Indeed, data collection through the Internet is believed to be more appropriate and suitable for studies addressing online shopping (Chen 2006). Furthermore, respondents find them to be more appealing and interesting than traditional questionnaires and the data is collected much faster than other survey methods (Cook, Heath & Thompson 2000).

The online survey was available in Portuguese and English. To ensure comprehensiveness and test the questionnaire online before distribution, both versions were pretested among a convenience sample of colleagues, students and consumers from the general public. The respondents of the pre-test were asked to provide comments on the relevance and clarity of the questionnaire items and time taken to complete it. Based on the feedback from the participants the wording of some questions was changed to minimize ambiguity.

Theoretically, the population comprises all Internet users aged 18 or more. However, since there does not exist a list of Internet users it is impossible to select our sampling elements from the population directly. Consequently, a non-probabilistic sampling procedure - convenience sampling - was used to collect data. Convenience sampling means that the sample is selected purely based on convenience and on the ease with which the researcher can access the participants. Although convenience sampling has the disadvantage of offering no guarantee of a representative and unbiased sample (Gravetter & Forzano 2011), it is the most employed method in social and behavioural sciences (Durrheim & Painter 2008) and has been supported by many academic scholars, since it is appropriate to obtain a large number of questionnaires quickly and economically (Jennings 2010).

To increase responses, the respondents were offered an incentive in the form of a fifty dollar Amazon voucher. These incentives were drawn at random among the respondents that provided their emails. Only 15% of the respondents did not leave their e-mail. Offering an incentive has been found to generate a strong response rate and high data quality (Bosnjak & Tuten 2003).

A total of 1,732 valid responses were collected, from all over the world, of which 63% were Millennials, which for the purpose of this study were considered as those born between 1973 and 1994. An interesting fact to note is that from the total of respondents that started answering the online survey, 30% did not complete it. This shows that despite respondents having intentions to answer the questionnaire, they often do not complete them. One of the reasons may be due to the fact that the questionnaire was rather long, with an average of 15 minutes of completion time. Indeed, as found by Deutskens et al. (2004), shorter questionnaires have a significantly higher response.

### **3.2 Statistical procedures**

In order to check for unidimensionality of the set of items used to measure each construct, factor analysis was applied to each set of items defining a specific construct. Internal consistency was assessed using Cronbach's alpha coefficient.

To investigate which characteristics are specifically linked to the millennial generation, univariate comparisons were performed either through Mann-Whitney, chi-square or Fisher exact test. Fisher exact test was conducted whenever conditions of the chi-square test on the expected values were not met. This univariate analysis enabled the identification of several variables that distinguish the millennials from the previous generation. All variables with a  $p < 0.05$  were considered to be significantly related to the millennial generation.

The differentiation of Millennials was further investigated by logistic regression. However, for the construction of the multivariate logistic model, not only the significant variables identified in the univariate analysis were considered for inclusion in the model. Indeed, because non-significant variables may constitute an important contribution in the presence of other variables, all variables with a *p-value*  $< 0.1$  were considered for inclusion in the regression model. This procedure of increasing the threshold of significance (usually to 0.1, 0.2 or 0.25) to select variables for a multivariate analysis is often applied and clearly advised by many authors (see e. g. Hosmer & Lemeshow 2000, Vittinghoff et al. 2011).

Forward stepwise procedure was then used to find a set of variables that best discriminate between millennials and their predecessors. For logistic regression models, discrimination is often measured by the area under the ROC curve (AUC), which measures the ability of the model to distinguish subjects of one group from subjects of the other. The AUC was, therefore, computed for the final logistic regression model to assess its discriminative ability.

A distribution-free approach, proposed by Pepe and Thompson (2000), was also applied in order to confirm the set of variables given by the logistic regression modelling as the best discriminative one. Pepe and Thompson (2000) proposed this approach to select a linear combination of markers (diagnostic markers) in order to optimize the area under the ROC curve. For two variables,  $X_1$  and  $X_2$ , the strategy consists of evaluating the AUC for each combination  $X_1 + \alpha X_2$ , with  $\alpha$  ranging from  $-1$  to  $1$  with increments of, for example,  $0.01$ , and then for  $\alpha X_1 + X_2$  which has the same AUC as  $X_1 + 1/\alpha X_2$ , since the ROC curve is invariant for monotone transformations. For  $p > 2$  variables, the search extends to the  $p-1$  dimensional space, looking for  $(\alpha_2, \dots, \alpha_p)$ , which is a computationally demanding procedure. As an alternative, the authors suggest a stepwise approach, searching first for the best linear combination of two variables, then looking for the next variable such that when put in optimal linear combination with the linear combination found in the previous step, produces the best AUC, and so on. Of course this strategy does not necessarily yield the optimal solution in terms of AUC. Although discriminant analysis is the best approach to maximize the AUC if data follow a multivariate normal distribution in each group (Su & Liu 1993), this technique was not used in this study since the normality assumption was not met.

Statistical analysis was carried out using IBM SPSS, version 22, and R software (R Core Team 2015).

## 4. Results

### 4.1 Factor Analysis

Factor analysis was applied to each set of items relative to a specific construct. For each construct, the one-factor solution explains more than 70% of the variance and the factor loadings are above 0.8 except for TRT1, which is 0.78. Furthermore, Cronbach's alpha values are above the general accepted recommended level of 0.7. These results validate the unidimensionality of the scales, allowing data to be reduced. Thus, in the following analysis each construct will be represented by the mean value of the corresponding items. An alternative approach would be to use factor scores or the values of one of the items to represent each construct (Hair, Black, Babin & Anderson 2010). Whenever scales are used, all these different approaches are common in social sciences literature and in particular in business and management research. The option to use the mean value of the constructs' items, has the advantage of retaining 100% of the information contained in the data, whereas the latter ones lead to some loss of information. This is the methodology used, for example, by Disatnik and Steinhart (2014) and by Hollenbaugh and Ferris (2015), just to cite some recent studies on management research.

### 4.2 Univariate Analysis

There was no significant differences between Millennials and their predecessors neither with respect to the number of domestic trips nor with respect to the number of on-line purchases of other products besides travel. However, there was a significant trend for less international trips ( $p < 0.0005$ ) and fewer on-line shopping of travel products ( $p = 0.001$ ) among Millennials. In fact, 37% of Millennials had not made an international trip, while for non-Millennials this percentage is only 25%. On the other hand, only 12% of Millennials had made more than four international trips, whereas in non-Millennials this percentages rises to 20%. Regarding to the number of on-line travel purchases in the previous year, 42% of non-Millennials had done it more than 7 times; for Millennials this percentage drops to 34%. Moreover, zero on-line travel purchases was the answer for 25% of Millennials compared to a fewer percentage of 22% for non-Millennials.

As shown in Table 2, for Millennials the estimation of purchasing travel online is significantly higher, but the intention to do so in a near future does not differ significantly from non-Millennials. Additionally, there is no evidence of differences in the technical instruments to purchase travel online. However, Millennials had significantly lower values regarding financial instruments. As for the number of Social Media sites (used for travel purposes and memberships), Millennials had significantly higher values. Also, with respect to perceived enjoyment, Millennials exhibited significantly higher values, the same occurring for all the dimensions of Social Media involvement (SMC, SMCR, PP and ISM). No significant differences were found regarding the remaining dimensions.

**Table 2:** Univariate comparisons between Millennials and non-Millennials

	Mean± Standard Deviation		p
	Non-Millennials	Millennials	
EST	3.78±1.25	3.96±1.12	0.015
INT	3.94±1.08	4.03±0.99	0.252
TCH	4.50±0.65	4.51±0.63	0.887
FIN	4.38±0.78	4.04±1.04	<0.0005
CNV	4.10±0.78	4.10±0.74	0.808
Number of sites used for travel purposes	1.68±1.60	1.81±1.48	0.012
Number of social media memberships	1.50±1.50	1.94±1.52	<0.0005
Self-Efficacy	4.09±0.86	4.19±0.73	0.069
Trust	3.61±0.77	3.60±0.75	0.7
Compatibility	3.63±1.00	3.66±0.93	0.813
Perceived Complexity	2.22±0.82	2.23±0.83	0.726
Perceived Risk	2.63±0.92	2.63±0.91	0.858
Financial Advantages	3.76±0.71	3.80±0.73	0.287
Time Saving	3.96±0.77	3.97±0.67	0.568
Enjoyment	2.98±0.87	3.10±0.80	0.003
Product variety	3.43±0.78	3.47±0.78	0.326
Consumption of Social Media	2.80±1.17	3.10±1.23	<0.0005
Creation of Social Media Content	1.65±0.80	2.07±0.99	<0.0005
Perceived Playfulness of Social Media	2.79±1.11	3.12±1.10	<0.0005
Interest in Social Media	3.17±1.01	3.51±0.89	<0.0005

### 4.3 Multivariate Analysis

The final model, resulting from forward stepwise logistic regression analysis, is presented in Table 3. The model was statistically significant according to the likelihood ratio test ( $p < 0.0005$ ), with a Nagelkerke R square of 0.201, which is a common value in logistic regression modelling. Indeed, as Hosmer and Lemeshow (2000) pointed out “low R square values in logistic regression are the norm” (p. 167). The p values presented in Table 3 indicate the significance of each variable given that the others are present in the model. Moreover, if all variables with  $p\text{-value} < 0.1$  in the univariate analysis were forced to enter in the logistic regression model, the significant variables would be the ones present in Table 3.

**Table 3:** Coefficients of the logistic regression model

Variables	Coefficient	p
Number of International Trips (zero is the reference class)		0.000
1-3	-0.401	0.003
4-6	-0.928	0.000
$\geq 7$	-0.663	0.012
Number of Travel Purchases Online (Never is the reference class)		0.001
1-3 times	-0.184	0.316
4-7 times	-0.363	0.103
7-10 times	-10.085	0.000
$> 10$ times	-0.567	0.011
Number of sites used for travel purposes	-0.142	0.001
Number of social media memberships	0.084	0.050
EST	0.357	0.000
FIN	-0.580	0.000
Self-Efficacy	0.304	0.001
Creation of Social Media Content	0.529	0.000
Interest in Social Media	0.177	0.006

The results indicate that the variables that can be considered to distinguish Millennials are the number of international trips (less for millennials), the number of travel purchases online (also less), the perceived estimation of purchasing travel online (higher), the Financial Instruments (smaller), the perceived self-efficacy (higher), the creation of social media content (higher), the interest in social media (higher), the number of social media site memberships (higher) and the number of Social Media sites used for travel purposes (smaller). This latter observation is different from what was disclosed in the univariate analysis.

The AUC for the model is 0.734, which, according to Hosmer and Lemeshow (2000), may be considered as an acceptable discriminative value.

Applying the distribution-free approach of Pepe and Thompson (2000), the variables which were successively chosen for the linear combination, until the AUC could not be improved over 0.724, were the same selected by the forward logistic regression technique. Although this approach does not yield the optimal linear combination in terms of AUC (in fact the AUC for the logistic regression model was slightly higher), its results confirm the above mentioned set of variables has good discriminators of Millennials.

## 5. Conclusions

Millennials are an important target for marketers, since many are now building careers, homes and families (eMarketer, 2014). According to a study conducted by Pricewaterhouse (2011), by 2020, millennials will form 50% of the global workforce. Millennials are not only transforming their own shopping behaviors but those of their parents (Donnelly & Scaff, 2013). In the travel field, two in every five Millennials plan to increase spend on travel in 2016 (Tripadvisor, 2015) and will be future heavy consumers of travel. In fact, it is projected that in 5 to 10 years, millennials will enter their peak regarding spending and travelling (Barton et al., 2013). For all these reasons, it is crucial to gain a better understanding of this generation. This study has provided useful



insights for travel marketers and managers to be more successful in promoting and targeting this generation and has found that there are several characteristics that differentiate millennials from their predecessors.

The most differentiating characteristics of Millennials found in the current study include fewer financial instruments to purchase travel online, international trips and online travel purchases. These results are consistent with other studies that have demonstrated that generation X books more travel online than millennials (Tripadvisor 2015) and that millennials have limited discretionary income, preferring to purchase other products instead of travel (Barton et al. 2013). Thus, these differences are most likely due to limited income and not for a lack of interest in travelling or less use of online resources. In fact, Millennials have a higher estimation to purchase travel online than non-millennials. This indicates that millennials are an attractive market for online travel providers. Online travel providers need to cater for this segment in order to stimulate online travel purchases. Considering that a recent study showed that millennials want to control and customize every phase of their shopping experience (Nielsen 2015), online travel providers could, for example, offer a personalized experience on their websites.

Another important differentiating factor is the Millennials evident higher involvement with travel social media. This supports the results obtained in other studies that have demonstrated millennials active behavior on social media (e.g. Barton et al. 2013; Gretzel and Yoo 2008). Travel providers should be attentive to this fact, especially considering that millennials are the group most influenced by contents posted from other travelers (Tripadvisor 2015). On the other hand, they should see this as an opportunity to engage with millennials through social media and deepen the relationship and loyalty with this group. For example, offering personalized and targeted promotions is a successful strategy to obtain Millennials' loyalty (Donnelly & Scaff 2013) and this can be done easily using social media.

The methodology used in this study includes logistic regression, which is a widely used technique to derive a combination of variables that discriminates between two groups. The distribution-free approach proposed by Pepe and Thompson (2000) is another easy to implement technique which aims to optimize the discriminative ability of a linear model, but not so widely used. As noted by these authors, this technique is free from assumptions on the distribution of the variables. Simulation results reported in that paper revealed good performance when compared to logistic regression and discriminant analysis. The current study responds to Pepe and Thompson's (2000) call for further applications of the technique to real data sets. With the present sample, logistic regression and the distribution-free approach yielded similar results, supporting Pepe and Thompson's (2000) argument about the latter technique's potential.

## **Acknowledgments**

This work was partially supported by the Centre for Mathematics of the University of Coimbra -- UID/MAT/00324/2013, funded by the Portuguese Government through FCT/MEC and co-funded by the European Regional Development Fund through the Partnership Agreement PT2020. The authors would also like to thank the Polytechnic Institute of Viseu, the Center for Studies in Education, Technologies and Health (CI&DETS), the Research Center in Business Sciences (NECE-UBI), the University of Beira Interior and the Portuguese Foundation for Science and Technology (FCT).

## **References**

- Barkley, S., Boston Consulting Group. (2011) American Millennials: Deciphering the Enigma Generation.
- Barton, C., Haywood, J., Jhunhunwala, P. and Bhatia, V. (2013) Traveling with Millennials. Available online at: [https://www.bcgperspectives.com/content/articles/transportation\\_travel\\_tourism\\_consumer\\_insight\\_traveling\\_with\\_millennials/#chapter1](https://www.bcgperspectives.com/content/articles/transportation_travel_tourism_consumer_insight_traveling_with_millennials/#chapter1)
- Bigné, E., Sanz, S., Ruiz, C. and Aldás, J. (2010) "Why Some Internet Users Don't Buy Air Tickets Online" in *Information and Communication Technologies in Tourism 2010*, eds U. Gretzel, R. Law & M. Fuchs, Springer, Vienna, pp 209-221.
- Bolton, R. N., Parasuraman, A., Hoefnagels, A., Migchels, N., Kabadayi, S., Gruber, T., . . . Solnet, D. (2013) "Understanding Generation Y and their use of social media: a review and research agenda", *Journal of Service Management*, Vol. 24, No.3, pp 245-267.
- Bosnjak, M. and Tuten, T. L. (2003) "Prepaid and promised incentives in Web surveys", *Social Science Computer Review*, Vol. 21, No2, pp 208-217.
- Childers, T. L., Carr, C. L., Peck, J. and Carson, S. (2001) "Hedonic and utilitarian motivations for online retail shopping behavior", *Journal of Retailing*, Vol.77, No.4, pp 511-535.
- Chen, C. (2006) "Identifying significant factors influencing consumer trust in an online travel site", *Information Technology & Tourism*, Vol.8, No.3/4, pp 197-214.

- Cho, J. (2004) "Likelihood to abort an online transaction: influences from cognitive evaluations, attitudes, and behavioral variables", *Information & Management*, Vol. 41, No.7, pp 827-838.
- Davis, F. D. (1989) "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology", *MIS Quarterly*, Vol.13, No.3, pp 319-340.
- Cook, C., Heath, F., and Thompson, R. L. (2000) "A Meta-Analysis of Response Rates in Web- or Internet-Based Surveys", *Educational and Psychological Measurement*, Vol. 60, No.6, pp 821-836.
- Deutskens, E., De Ruyter, K., Wetzels, M. and Oosterveld, P. (2004) "Response rate and response quality of internet-based surveys: An experimental study", *Marketing letters*, Vol. 15, No.1, pp 21-36.
- Disatnik, D. and Steinhart, Y. (2014) "Need for Cognitive Closure, Risk Aversion, Uncertainty Changes, and their Effect on Investment Decisions", *Journal of Marketing Research*, Vol. 52, No.3, pp 349-359.
- Donnelly, C. and Scaff, R. (2013) Who are the Millennial shoppers? And what do they really want? *Outlook: Accenture*.
- Durrheim, K. and Painter, D. (2008) "Collecting Quantitative Data: Sampling and Measuring" in *Research in Practice: Applied Methods for the Social Sciences*, eds M. T. Blanche, K. Durrheim & D. Painter, Juta and Company, Cape Town, pp 131-159.
- eMarketer (2007). Colleges Perfect for Word of Mouth. Available online at: <http://www.emarketer.com/Article/Colleges-Perfect-Word-of-Mouth/1005296>
- eMarketer (2014) Millennials Roundup. Available online at: <http://on.emarketer.com/Roundup-12022014-Millennials.html?Source=millennials-roundup-index>
- Gravetter, F. J. and Forzano, L. A. B. (2011) *Research Methods for the Behavioral Sciences* (4th ed.), Cengage Learning, Belmont.
- Gretzel, U. and Yoo, K. H. (2008) "Use and Impact of Online Travel Reviews" in *Information and Communication Technologies in Tourism 2008*, eds P. O'Connor, W. Hopken & U. Gretzel, Springer, Vienna, pp 35-46.
- Grewal, D., Monroe, K. B. and Krishnan, R. (1998) "The effects of price-comparison advertising on buyers' perceptions of acquisition value, transaction value, and behavioral intentions", *The Journal of Marketing*, Vol.62(April), pp 46-59.
- Hair, J. F., Black, W. C., Babin, H. J., and Anderson, R. E. (2010) *Multivariate Data Analysis* (7th ed.), Prentice Hall, New Jersey.
- Hollenbaugh, E. E. and Ferris, A. L. (2015), "Predictors of honesty, intent, and valence of Facebook self-disclosure", *Computers in Human Behavior*, Vol.50, pp 456-464.
- Hosmer, D. W. and Lemeshow, S. (2000) *Applied Logistic Regression*, John Wiley & Sons, New York.
- Huang, Y. C. and Petrick, J. F. (2010) "Generation Y's travel behaviours: A comparison with baby boomers and generation X" in *Tourism and Generation Y*, eds P. Benckendorff, G. Moscardo & D. Pendergast, CAB International, London, pp 27-37.
- Jennings, G. (2010) *Tourism Research* (2nd ed.), John Wiley & Sons Australia, Queensland.
- Jensen, J. M. (2009) "Travellers' Intentions to Purchase Travel Products Online: The Role of Shopping Orientation" in *Advances in Tourism Economics: New Developments*, eds A. Matias, P. Nijkamp & M. Sarmiento (Eds.), Physica Verlag, Heidelberg, pp 203-215.
- Kilian, T., Hennigs, N., and Langner, S. (2012) "Do Millennials read books or blogs? Introducing a media usage typology of the internet generation", *Journal of Consumer Marketing*, Vol.29, No.2, pp 114-124.
- Kim, M.-J., Chung, N. and Lee, C.-K. (2011) "The effect of perceived trust on electronic commerce: Shopping online for tourism products and services in South Korea", *Tourism Management*, Vol.32, No.2, pp 256-265.
- Koutropoulos, A. (2011) "Digital Natives: Ten Years After", *Journal of Online Learning and Teaching*, Vol.7, No.4, pp 525 - 538.
- Lee, M. K. O., Cheung, C. M. K. and Chen, Z. (2005) "Acceptance of Internet-based learning medium: the role of extrinsic and intrinsic motivation", *Information & Management*, Vol.42, No.8, pp 1095-1104.
- Lee, M. K. O., and Turban, E. (2001) "A Trust Model for Consumer Internet Shopping", *International Journal of Electronic Commerce*, Vol.6, No.1, pp 75-91.
- Lenhart, A., Purcell, K., Smith, A. and Zickuhr, K. (2010) "Social Media Use and Mobile Internet Use Among teens and Young Adults", Pew Research Center.
- Li, L., and Buhalis, D. (2006) "E-Commerce in China: The case of travel", *International Journal of Information Management*, Vol.26, No.2, pp 153-166.
- Limayem, M., Khalifa, M. and Frini, A. (2000). "What Makes Consumers Buy from Internet? A Longitudinal Study of Online Shopping", *IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans*, Vol.30, No.4, pp 421-432.
- McQuarrie, E. F. and Munson, J. M. (1992) "A Revised Product Involvement Inventory: Improved Usability and Validity", *Advances in Consumer Research*, Vol.19, No.1, pp 108-115.
- Moon, J.-W. and Kim, Y.-G. (2001) Extending the TAM for a World-Wide-Web context. *Information & Management*, Vol.38, No.4, pp 217-230.
- Nielson. (2015). Millennials in 2015: Retail Deep Dive. Available online at: <http://www.nielsen.com/us/en/insights/reports/2015/millennials-in-2015-retail-deep-dive.html>
- Nusair, K. K., Bilgihan, A. and Okumus, F. (2013) "The Role of Online Social Network Travel Websites in Creating Social Interaction for Gen Y Travelers", *International Journal of Tourism Research*, Vol.15, No.5, pp 458-472.
- Pavlou, P. A. and Fygenson, M. (2006) "Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior", *Management Information Systems Quarterly*, Vol.30, no.1, pp 115-143.

- Pendergast, D. (2010) "Getting to Know the Y Generation" in *Tourism and Generation Y*, eds P. Benckendorff, G. Moscardo & D. Pendergast, CAB International, London, pp 1-15.
- Pepe, M. S. and Thompson, M. L. (2000) "Combining diagnostic test results to increase accuracy", *Biostatistics*, Vol.1, No.2, pp 123-140.
- Pricewaterhouse. (2011). Millennials at work: Reshaping the workplace.
- R Core Team. (2015). R: A language and environment for statistical computing. Available online at: <http://www.R-project.org/>
- Sago, B. (2010) "The Influence of Social Media Message Sources on Millennial Generation Consumers", *International Journal of Integrated Marketing Communications*, Vol.2, No.2, pp 7-18.
- Seppanen, S., and Gualtieri, W. (2012) "The Millennial Generation Research Review", Washington, DC: National Chamber Foundation.
- Su, J. Q. and Liu, J. S. (1993) "Linear Combinations of Multiple Diagnostic Markers", *Journal of the American Statistical Association*, Vol.88, No.424, pp 1350-1355.
- Teo, T. S. and Yeong, Y. D. (2003) "Assessing the consumer decision process in the digital marketplace", *The International Journal of Management Science*, Vol.31, No.5, pp 349-363.
- Tripadvisor. (2015). 6 key travel trends for 2016 Available online at: <https://www.tripadvisor.com/TripAdvisorInsights/n2670/6-key-travel-trends-2016>
- Verhoef, P. C. and Langerak, F. (2001) "Possible determinants of consumers' adoption of electronic grocery shopping in the Netherlands", *Journal of Retailing and Consumer Services*, Vol.8, No.5, pp 275-285.
- Vittinghoff, E., Glidden, D. V., Shiboski, S. C., and McCulloch, C. E. (2011) *Regression methods in biostatistics: linear, logistic, survival, and repeated measures models*, Springer Science & Business Media, Chicago.