# **2014 IEEE International Conference on Management of Innovation and Technology**

(ICMIT 2014)

Singapore 23-25 September 2014



IEEE Catalog Number: ISBN: CFP14795-POD 978-1-4799-5530-5

#### **Table of Contents**

#### **Innovation Policy and Management**

Negative Effects of Relative Proximity and Absolute Geography on Open Innovation Practices in High-tech SMEs in the Uk David WEISS, Tim MINSHALL	1
Growing Enterprises through a Technology Upgrading Strategy (GET-Up) - An Alternative Mode of Technology Transfer Chang Chieh HANG, Poh Kam WONG, Yuen Ping HO, Yi RUAN	7
The Effects of Co-opetition Capability on Innovation Practices and Competitive Advantage: A Cross- National Comparative Study Hoang Vuong NGUYEN, Ja-Shen CHEN, Chung-Shing LEE	13
Growth Factors Model Building and Empirical Analysis of Small and Medium Sized Technology Enterprises Danyang WANG, Luxiu ZHANG, Yuming ZHANG	19
Conceptual Model Development of Local Cultural Brand Experiences Ching-Yu LIEN, Eric NG	25
Technology Strategy and Management in Developing Countries	
Patterns of Innovation of a Successful Latecomer Firm: A Longitudinal Analysis of the Case of Huawei Jian ZHANG, Pierre VIALLE	29
What Drives Venture Capital Fundraising in India: An Empirical Analysis of Systematic and Non- systematic Factors <i>Kshitija JOSHI, M.H. BALA SUBRAHMANYA</i>	35
Product Modularity and Supply Chain Collaboration: An Empirical Study of Firm Performance for 221 Chinese Manufacturing Industries Shuiyin ZHOU, Zonghong GU, Jiafeng YUAN	41
How to Use Improvement Gap Analysis to Identify Which Incremental Innovations Should Be Incorporated Into Products: Managerial Recommendations Gerson TONTINI, Klaus Solberg SØILEN	48
Innovation and Production Management Through a Just in Sequence Strategy in a Multinational Brazilian Metal-mechanic Industry Eric Charles Henri DORION, Julio Cesar Ferro GUIMARAES, Eliana Andrea SEVERO, Zaida Cristiane REIS, Pelayo MUNHOZ OLEA	54
Human Capital for Innovation	
Where Do Breakthrough Ideas Come From? Characteristics of Scientists' Research Behaviors Le WANG, Jun LIN, Wentian CUI	61
Does Academic Breakthrough Lean on the Shoulders of Giants? A Bibliometric Investigation of	66

Effects of Transformational Leadership Behavior on the Relationship between Team Condition and Team Performance Amin AKHAVAN TABASSI, Abu Hassan ABU BAKAR, Nor'aini YUSOF, Kamand M. ROUFECHAEI	71
Perception on Training and Employee Innovativeness: An Evidence from Small Firms Nor Hazana ABDULLAH, Lee LEE PING, Eta WAHAB, Alina SHAMSUDDIN	76
Knowledge Management	
Organizational Ambidexterity in Construction Projects Per Erik ERIKSSON, Henrik SZENTES	81
Freeing Entities of Attributes: Revisiting Database Normal Forms from an Organizational Knowledge Perspective Marc IDELSON, Christophe DANY	87
Agents-based Model of Knowledge Sharing Among Personnel with Varying Learning Rate in Products Cross-Selling: Case of Indonesia National Bank <i>T.M.A. Ari SAMADHI, Heriyono LALU</i>	93
The Knowledge Exchange: A Platform for Pooling Technology Intelligence Knowledge Between Practitioners, Researchers, and Technologists <i>Guenther SCHUH, Patrick KABASCI, Susanne AGHASSI, Toni DRESCHER</i>	99
Influencing Factors and Requirements for Designing Customized Technology Transfer Portals Guenther SCHUH, Susanne AGHASSI, Bernd SCHNEIDER, Patrick BARTELS	105
Intellectual Property Management	
Excavating the Role of NPEs in the Innovation Process: Did We Start a Mission Possible? Rob DEKKERS, Frank TIETZE	111
Using Web of Science as the Indicator for Patenting Strategies Hoi Yan Anna FONG, Shang-Jyh LIU	119
The Worldwide IP Economy - Reality or Utopia? Lorenz KAISER	125
Design Thinking and Management	
Integration of Design Thinking with Strategy and Innovation in an Enterprise Context <i>Tirumala Rao VINNAKOTA, Narayana MANDALEEKA</i>	131
Design Factors of Mobile Game for Increasing Gamer Chih-Lung CHOU, Chia-Liang HUNG, Ying-Hsun HUNG	137
Project Performance Indicators of Engineering Design Groups: Evaluation and Proposed Improvement Budi HARTONO, Irawan MUHAMAD	140
Determined the Critical Factors of Facial Mask Products and Size Design Bor-Shong LIU, Siou-Ning LIN, Ching-Wen LIEN, Hsin-Hung LAI	145
Ensuring Quality in Process Design: Tracing Requirements to People and Systems Supriya KUMMAMURU, Nikhil. R. ZOPE	151

## Innovation Policy and Management in Public Sector

Purpose and Experience of Patenting and the Processes of Patent Management Employed by University Scientists <i>Teh-Yuan CHANG, Chung-Yuan TSAY</i>	156
A Preliminary Examination of Stimulating and Building University-Industry Collaborative Works at a Public University Ng KIM-SOON, Isabella ANAK NIKOL, Wahid RAZZALY, Abd Rahman AHMAD	162
Knowledge and Technology Transfer Barriers - Polish Universities Perspectives Dariusz M. TRZMIELAK, Malgorzata GRZEGORCZYK	168
The Development of a KIM Behavioural Framework to Support Knowledge Transfer in the Defence Sector - A Case Study Approach <i>Roger DARBY, Charles KIRKE</i>	174
Innovation Process in ASEAN Firms: Focus on Internal Capability, External Linkages and Transmission Channels Masatsugu TSUJI, Yasusi UEKI, Hiroki IDOTA, Masaru OGAWA	181
Innovation & IT	
Telecommuting: Impact on Productivity of Telecommuters Adeel AHMED, Azam ISHAQUE, Tahir NAWAZ, Yusra ALI, Farah HAYAT	187
Innovation and the Cloud: A Review of Literature Surya KARUNAGARAN, Saji K MATHEW, Franz LEHNER	193
The Connection of the Stakeholder Cooperation Intensity and Team Agility in Software Development Tomi JUHOLA, Man Hang YIP, Sami HYRYNSALMI, Tuomas MÄKILÄ, Ville LEPPÄNEN	199
Investigating the Effects of Information Quality and Perceived Risk on Information Adoption on Travel Websites Shun-Yao TSENG, An-min KUO	205
Information and Communication Technology Introducing Efficiency in Emergency Medical Services Adeel AHMED, Azam ISHAQUE, Tahir NAWAZ	211
Entrepreneurship	
Less Becomes More: Resource Reconstruction in Entrepreneurial Bricolage Ruey-Lin HSIAO, Chi-Hsu LIAO, Chun-Fong YANG	216
A View on Science-based Start-ups as Innovation Ecosystems: Exploring Functions of Basic Mechanisms Saku MÄKINEN	223
How Does Effectual Logic Impact Survival of High-tech Startups in an Emerging Economy? - Evidence from 99tests.com Case Study <i>H S KRISHNA, M.H. BALA SUBRAHMANYA</i>	230
Entrepreneurship, Entrepreneurial Enterprise, and Valuation Issue Rongning CAO, Zeyong TIAN	236

Entrepreneurial University Model: A Theoretical Perspectives on Strategy, Entrepreneurship, and	242
Innovation	
Phannaphatr SAVETPANUVONG, Pakorn PANKASEM	

## New Product Development

Recreating Something from Everything: New Product Innovation through Social Construction of Frugal Resources <i>Ruey-Lin HSIAO, Su-Hua OU, Huan-Hung CHEN</i>	248
Research on Generation Ideas Process for Product Radical Innovation Based on Technology Evolution Theory Enshun PING, Runhua TAN, Jianhui ZHANG, Bo HAN	256
Innovation during the Supplier Selection Process: A Novel Multi-Stage Process Case Alan PILKINGTON, Isabel PEDRAZA	262
Method for Product Integrated Innovation Based on Functional Combination and TRIZ Fang LIU, Xuepeng LI, Fei YU, Enshun PING	268
A Vision Oriented Approach Proposed & Compared Madhumita SINGHA, Vandana BHATTACHERJEE, Rupa MAHANTI	273
Technology Intelligence and Planning	
Disruption Recovery Modeling in Supply Chain Risk Management Jie Liang Aloysious LEE, Allan N. ZHANG, Mark GOH, Puay Siew TAN	279
The Development of a Supply Chain Model for Tourism Crisis Management Walter S. L. FUNG, Richard Y. K. FUNG	284
Quantitative Model of the Technology Lifecycle for Forecasting the Maturity of Manufacturing Technologies Josef GREITEMANN, Benjamin STAHL, Nicolas Vincent MICHELS, Boris LOHMANN, G. REINHART	290
Personalized u-Commerce Recommending Service using Weighted Sequential Pattern with Time- series and FRAT method Young Sung CHO, Keun Ho RYU, Kwang Sun RYU, Song Chul MOON	295
Simulation-based Training Model to Develop Project Management Competencies Arief RAHMANA, Mustofa KAMIL, Endang SOEMANTRI, Ayi OLIM	301
Service Innovation	
Study of Service Innovation on School Bullying Treatment with Inviting Knowledge Management Features Yu-Tso CHEN, Ching-Ching LI	306
A Study on Operating Pattern of Restaurant Franchise from the Service-Dominant Logic Perspective <i>Ya-Lan CHIN, Feng-Shang WU</i>	312
Conceptual Model for Reducing Outpatient Care Waiting Times in Teaching Hospital in Indonesia Oktri Mohammad FIRDAUS, T.M.A. Ari SAMADHI	317
Maintenance Innovations - Types, Patterns and Emerging Trends Ville OJANEN	321

Cloud Computing in Budget Hotel Management
Montri WIBOONRAT

## **Innovation Policy and Management**

Innovation, Organization Transformation and Human Resource Management: A Discourse Analysis Study of Swedish Managers in Singapore <i>Cheryl Marie CORDEIRO</i>	333
The Threshold Effect between Technology Gaps Based on the Heterogeneity Zeyong TIAN, Tao LU	339
Technology Management and the Firm Arif SIKANDER	345
Quo Vadis Third Party Payment After Deregulation of Bank Act? A Qualitative Observation on the Trend of E-Commerce Patents in Taiwan <i>Sung-Min LIN, Anne Yen-Ching LIU</i>	349
Knowledge Internalization for Individual Innovation Capability Augustina Asih RUMANTI, Trifenaus Prabu HIDAYAT	355
Total Innovation Management Paradigm for Firm Innovation System Qingrui XU, Zhiyan WU, Suping ZHANG, Siyu LIU	359
Accumulation and Innovation in a Capability Leveraging Perspective: Review of Theories and Evidence <i>Qingrui XU, Siyu LIU, Suping ZHANG</i>	365
Corporate Social Responsibility and Innovation: Evidence from Emerging Economies <i>Xuefeng LIU, Fangning XU</i>	369
Does ICT Effectively Contribute to the Delivery of Mass Education in Developing Countries? Ravi SHARMA, Zhang Hao GOH, Guangyuan SUN, Wei Ta HO	375
Factors Affecting New Project Delays in Saudi Arabian Manufacturing Organisations Aminul ISLAM, Ali AL OWAD, Omar BADRAIG, Lin MA, Azharul KARIM	381
Intellectual Property Creation of MNCs in Developing Countries - The Cases of China and Thailand Masayuki KONDO	387
2012: The Actors of Innovation in the Province of Quebec, Canada Gabriela Cristina LAIN, Eric Charles Henri DORION, Cleber Cristiano PRODANOV, Francois COALLIER, Pelayo MUNHOZ OLEA	393
Government Interventions and the Formation of Innovation Cluster: A Case Study of Guangdong Real Faith Science Park Hanwei ZHANG, Xiaohong CHEN, Yuan ZHOU	399
The Impacts of National Characteristics on Adoption and Substitution of Innovation Yudai ARAI, Tomoko KAJIYAMA, Noritomo OUCHI	406
A Causal Model of the Bicycle Industry Development - The Case in Taiwan <i>Hui-Hua HUANG</i>	412

327

## **R&D** Management

How Technology Search Facilitate Technological Innovation Capability Reconfiguration: Empirical Study under Emerging Economy <i>Qingrui XU, Litian CHEN</i>	418
Aligning Innovation Ecosystem Strategies with Internal R&D Petra BOSCH-SIJTSEMA, Jan BOSCH	424
Contextual Ambidexterity in the Development of an R&D Oriented Company Hideko KONO	431
A Pyramidal Model for Initial Problem Situation Analysis Process Bo HAN, Jianhui ZHANG, Kechang LIU, Lizhen JIA, Rui LIANG	436
Process Innovation in Partnering: A Framework for Aligning Organizational Cultures in the Malaysian Construction Industry <i>Faizatul Akmar ABDUL NIFA, Vian AHMED</i>	442
Technology Strategy and Management	
Study on Financial Support Model of Enterprises Low-carbon Technology Innovation Luxiu ZHANG, Yuming ZHANG, Danyang WANG	448
Development Assessment and Strategy Planning in Mobile Computing Industry Wei-Hsiu WENG, Woo-Tsong LIN	453
Research on the Interactive Relationship between Corporate Governance Culture and Accounting Information Disclosure <i>Han QIANQIAN</i>	458
The Forecasting Model of 4G LTE Implementation in Indonesia Muhammad SURYANEGARA, Achmad RAMADHAN, Afid Kurnia AKBAR, Muhamad ASVIAL	461
New Changes in Organizational Design to Instigate Co-creation Dynamics and Innovation: A Model Based on Online Multiplayer Games Mateus PANIZZON, Lucas Bonacina ROLDAN, Margarete Argugeri MENEGOTTO, Eric Charles Henri DORION	467
Technology Intelligence and Planning	
A DSS Framework for Integrating Inventory Management and Purchasing in ATO Production Environment Sumin JEON, Chin Soon CHONG, Ramasamy S. VALLIAPPAN	475
A Discrete Particle Swarm Optimization for Disassembly Sequence Planning Choosak PORNSING, Arnat WATANASUNGSUIT	480
Improving Medical Tourism Services Based on a Hybrid MCDM Model Combined by DANP and VIKOR Techniques <i>Ying-Hsun HUNG, Jung MA, Jerome Chih-Lung CHOU, Gwo-Hshiung TZENG</i>	486
Measuring Performance of Reverse Supply Chains in a Computer Hardware Company Maulida BUTAR BUTAR, D. SANDERS, G. TEWKESBURY	489
Classification Algorithms for Virtual Metrology Shaima TILOUCHE, Samuel BASSETTO, Vahid PARTOVI NIA	495

## Sustainable Development & Environmental Protection

Sustainability Strategies and Reverse Logistics Management: A Contingent Link <i>Chien-Lung HSU, Yi-Chuan LIAO</i>	500
Enabling Green Design with TRIZ Carman LEE, Marcus, Jia En TAI	508
Building a Novel Model of Performance Measurement System for Corporate Social Responsibility Towards Sustainable Development <i>Astrie KRISNAWATI, Gatot YUDOKO, Yuni Ros BANGUN</i>	514
Predicting the Success Possibility for Green Supply Chain Management Implementation Rakesh Kumar MALVIYA, Ravi KANT	520
Strategic and Adaptive Knowledge-Environment-Technological (SAKET) Management System for Sustainable Reuse of Dredged Marine Soils <i>Chee-Ming CHAN, Alina SHAMSUDDIN, Azeanita SURATKON</i>	526
Quality Management and Innovation	
Better Improvement Management to Overcome Inventory, Transportation, and Unnecessary Motion Waste in Retail Stores <i>Yusepaldo PASHARIBU, Ferry JIE, Joshua JACOBS, Andrew PUNTURIERO</i>	531
The Effect of TQM Implementation Towards Productivity of Employees Using Structural Equation Modeling (SEM) Analysis Method in PT XYZ Nilda Tri PUTRI, Haesti Sujita DARMA	537
Performance-Based Maintenance Contract For Equipments Used In Mining Industry Hennie HUSNIAH, Udjianna PASARIBU, Andi CAKRAVASTIA, Bermawi P. ISKANDAR	543
Improving the Efficiency of Taguchi with Six Sigma - A Case Study of Hand Tool Drilling Process Production <i>En-Wei LIN, Meiling WONG</i>	549

#### **Author Index**

555