



Proceedings of The Twenty-First International Conference on Electronic Business

Volume 21

ICEB'21

Nanjing, China

3-7 December 2021

ISSN: 1683-0040





**Proceedings of
The Twenty-First
International Conference on
Electronic Business
*Volume 21***

“Corporate Resilience through Electronic Business in the Post-COVID Era”

Edited by

Eldon Y. Li

National Chung Cheng University

Haiwei Zhou

Hohai University Business School

Benjamin Yen

University of Hong Kong Business School

ICEB'21

Nanjing, China

3-7 December 2021

ISSN: 1683-0040

Reference to this book should be made as follows: Li, E.Y., Zhou, H.W. & Yen, B., Eds. (2021). *Proceedings of the Twenty-First International Conference on Electronic Business, Volume 21* (ISSN: 1683-0040). ICEB'21, Nanjing, China, December 3-7, xxx pages.

COMMITTEES

Conference Committees

Advisors:

International Consortium for Electronic Business, USA

International Journal of Electronic Business, UK

Journal of Business and Management, USA

Co-Organizers:

Faculty of Business and Economics, University of Hong Kong

Hohai Business School, Hohai University

Department of CIS, Northumbria University in Newcastle Upon Tyne, UK

College of Management, National Chung Cheng University

Global Electronic Business Research Center, National Chung Cheng University

Conference Co-Chairs:

Eldon Y. Li

National Chung Cheng University

Haiwei Zhou

Hohai Business School at Hohai University

Program Co-Chairs:

Albert Huang

University of the Pacific, USA

Benjamin Yen

University of Hong Kong

Honglei Li

Northumbria University, UK

Ravi S. Sharma

Zayed University, Abu Dhabi, UAE

Proceedings Co-Editors:

Eldon Y. Li

National Chung Cheng University

Haiwei Zhou

Hohai University Business School

Benjamin Yen

University of Hong Kong Business School

International Program Committee & Editorial Board:

Abbas Tarhini

Lebanese American University, Lebanon

Aijaz A. Shaikh

University of Jyväskylä, Finland

Albert Huang

University of the Pacific, USA

Benjamin Yen

University of Hong Kong

Cheng-Yuan (Cooper) Ku

National Yang Ming Chiao Tung University

Chengqi (John) Guo

James Madison University, USA

Chien-Ming Chen

Harbin Institute of Technology Shenzhen Campus

Chi-Ping Wei

National Taiwan University MIS

Chong Guan

Singapore University of Social Sciences, Singapore

Eldon Y. Li

National Chung Cheng University

Elena Vitkauskaite

Kaunas University of Technology, Lithuania

Honglei Li

Northumbria University, UK

Hsin-Lu Chang

National Chengchi University

Hu Xiong

University of Science and Technology of China

Ibrahim M. Al-Jabri

King Fahd University of Petroleum and Minerals, Saudi Arabia

Jao-Hong Cheng

National Yulin U. of Science and Technology

John Hamilton	James Cook University, Australia
Laddawan Kaewkitipong	Thammasat Business School, Thailand
Laurence F.K. Chang	Fang Chia University
Michael Chau	University of Hong Kong
Michel De Rougemont	University Paris II, France
Pei-Lee Teh	Monash University, Malaysia
Peter Ractham	Thammasat University, Thailand
Ramayah Thurasamy	Universiti Sains Malaysia
Ravi S. Sharma	Zayed University, Abu Dhabi, UAE
Savvas Papagiannidis	Newcastle University, UK
She-I Chang	National Chung Cheng University Accounting
Shih-Wei Liao	National Taiwan University CSE
Siriluck Rotchanakitumnuai	Thammasat University, Thailand
Timon C. Du	Chinese University of Hong Kong
Vandana Ahuja	Amity Business School, India
Wei-Hsi (Frank) Hung	National Chengchi University
Wenshin Chen	Fang Chia University
Xiaoyu Xu	Xi'an Jiaotong University
Xudong (David) Luo	Guanxi Normal University
Yan Li	ESSEC Business School, Singapore
Yichuan Wang	Sheffield University Management School, UK
Yue Guo	Southern University of Science and Technology

Best Paper Award Committee:

Chi-Ping Wei	National Taiwan University MIS
Ibrahim M. Al-Jabri	King Fahd University of Petroleum and Minerals, Saudi Arabia
Ramayah Thurasamy	Universiti Sains Malaysia
Ravi S. Sharma	Zayed University, Abu Dhabi, UAE
Savvas Papagiannidis	Newcastle University, UK
Stuart Orr	Deakin University Business School, Australia

PREFACE

Welcome to the 21st International Conference on Electronic Business (ICEB 2021) hybrid conference. Celebrating its 21st anniversary, the ICEB is held this year virtually again by the University of Hong Kong Business School and physically by the Hohai University Business School in Nanjing, China. The theme of this year's Conference is "Corporate Resilience through Electronic Business in the Post-COVID Era." We received 93 submissions and 78 papers were accepted into the final program that consisted of 26 sessions. The topic areas of the papers include artificial intelligence, big data, blockchain, COVID-19 issues, digital marketing, E-adoption, E-commerce, E-education, E-innovation, E-SCM, E-sustainability, healthcare issues, IoT, smart home, smart technologies, social commerce, technological issues, and user and consumer behaviors, etc. In this proceedings book, we have included 60 full papers and 9 work-in-progress papers. Among full papers, 3 received the "Best Paper Awards," and 5 received the "Outstanding Paper Awards." These papers were reviewed and selected by the Best Paper Awards Committee, consisting of six members: Prof. Chih-Ping Wei (National Taiwan University, Taiwan), Prof. Ibrahim M. Al-Jabri (King Fahd University of Petroleum and Minerals, Saudi Arabia), Prof. Ravi Sharma (Zayed University, Abu Dhabi, U.A.E.), Prof. Savvas Papagiannidis (Newcastle University, Newcastle upon Tyne, U.K.), Prof. Stuart Orr (Deakin Business School, Australia), and Prof. Thurasamy Ramayah (Universiti Sains Malaysia, Penang, Malaysia).



In the conference, we have scheduled three keynote speakers (in sequence of appearance): Prof. Chris Westland, the Chief Editor of Electronic Commerce Research. Prof. Patrick Y.K. Chau, the Chief Editor of Information and Management; and Prof. Christy Cheung, the Chief Editor of Internet Research. Because of the COVID-19 pandemic, all keynote speeches and presentations are delivered with the ZOOM software in two virtual meeting rooms. The keynote speeches this year are scheduled in two days considering the time zone differences of the speakers in the U.S. Presentation sessions are also scheduled in a way that authors on the other continents can attend the meetings between 9 AM and 9 PM time frame.



The annual conference of ICEB is an excellent opportunity for the scholars like you and me to share research ideas and get informed about the latest development in the fields. We could meet leading scholars from around the world to establish a research network and engage in future collaborations. In this conference, there are 79 registered scholars from 18 countries or regions, including Australia, China, Finland, Hong Kong, India, Indonesia, Iran, Malaysia, Morocco, New Zealand, Saudi Arabia, South Africa, Spain, Sri Lanka, Taiwan, Thailand, UAE, UK, USA. This year, the Best Paper Award Committee consisting of six members had selected three best-quality papers and five outstanding papers to receive the awards.

Finally, on behalf of the entire Conference Committee, we thank you all very much for participating in

ICEB 2021 hybrid conference, without your presence the conference cannot be successful. We also thank all the speakers, presenters, reviewers, the program committee members, Best Paper Award committee members, and session chairs, who all have contributed their time and effort to this conference. Special thanks go to our conference secretariat, Prof. Benjamin Yen and his conference team from the University of Hong Kong, who had provided the administrative and technical support to execute the ZOOM conference events tirelessly and flawlessly. Also, to our Treasurer, Dr. Honglei Li, and her team at Northumbria University, we thank them manage the payment gateway effectively. Finally, we thank you all for preparing and sharing your research findings in the meetings and look forward to seeing you again in ICEB 2022 at Thammasat University in Bangkok, Thailand.



Sincerely yours,

Eldon Y. Li

Eldon Y. Li
ICEB Honorary President
Chair Professor
National Chung Cheng University

Haiwei Zhou

Haiwei Zhou
ICEB 2021 Conference Co-Chair
Professor and Dean of Business School
Hohai University

Benjamin Yen

Benjamin Yen
ICEB 2021 Program Co-Chair
Associate Professor
The University of Hong Kong, S.A.R., China

December 2021 in Nanjing, China

TABLE OF CONTENTS

TITLE	PAGE
Preface <i>Eldon Y. Li, Haiwei Zhou & Benjamin Yen</i>	i
PART 1: Full Research Papers	
* indicates the corresponding author.	
1. A model on energy power management of air-recirculation in a clean room <i>Fu-Han Liu* & Woo-Tsong Lin</i>	I
2. A netnography of the social media presence of brand Netflix, India <i>Prerna Arora* & Vandana Ahuja</i>	xxx
3. A survey of cross-lingual sentiment analysis based on pre-trained models <i>Xudong Luo*, Sihan Yin & Pingping Lin</i>	xxx
4. A survey of customer service system based on learning <i>Sihan Yin & Xudong Luo*</i>	xxx
5. Addressing wealth inequality problem in blockchain-enabled knowledge community with reputation-based incentive mechanism <i>Yongjing Xie*, Zhihong Li & Xiaoying Xu</i>	xxx
6. An analysis on the formation and cultivation of environmental protection norms in the context of green gamification <i>Yixun Lin & Helen S. Du*</i>	xxx
7. An empirical analysis of consumer impulse purchases <i>Kaili Sun & Xudong Luo*</i>	xxx
8. Analyzing the impact of COVID-19 outbreaks on MIS students: A qualitative approach <i>Wei Hsiu Weng*</i>	xxx
9. Augmented reality applied in road excavation system of government <i>Yi Luen Lin* & Wei-Hsi Hung</i>	xxx
10. Automatic recognition of knowledge characteristics of scientific and technological literature from the perspective of text structure <i>Huan Ma*, Zhu Fu & Qiong Jia</i>	xxx
11. Customer segmentation using real transactional data in e-commerce platform: A case of online fashion bags shop <i>Zhouzhou Yan* & Yang Zhao</i>	xxx
12. Customer-centered and technology-enabled homecare service: Opportunities for value creation <i>Wei-Hsi Hung, Eldon Y Li & Yu-Hang Chen*</i>	xxx
13. Cybervetting perceptions of job seekers in Saudi Arabia <i>Omar Alzamel* & Ibrahim Al-Jabri</i>	xxx
14. Data governance in data mesh infrastructures: The Saxo Bank case study <i>Divya Joshi*, Sheetal Pratik & Madhu Podila</i>	xxx

15. Driving forces for digital transformation – Case studies of q-commerce
Minyi Huang & Benjamin P.-C. Yen* xxx
16. E-data utilization on national-health service performance assessment during Covid-19 in Bangladesh: New evidence using Data Envelopment Analysis (DEA) technique
A.B.M. Munibur Rahman, A.S.M. Towhid, Mohammad Abir Shahid Chowdhury & H.M. Jakir Hassan* xxx
17. Effect of leverage on firm value and how the contextual variables effect this relationship: A case of Pakistan
Alamgir Muhammad & Ming-Chang Cheng* xxx
18. Effect of managerial capability and organizational capability on digital innovation among organizations in Sri Lanka
Sanduni Senaratne & Dushyantha Kulatunga* xxx
19. Factors affecting the consumers' purchase intention and willingness-to-pay more for electric-vehicle technology
Maqsood H. Bhutto, Aijaz A. Shaikh & Ravishankar Sharma* xxx
20. Factors influencing continuance intention to use online learning management system platform
*Sirayos Mahakhant & Siriluck Rotchanakitumnuai** xxx
21. Factors influencing restaurants on selecting food delivery applications
*Norathep Petin & Siriluck Rotchanakitumnuai** xxx
22. Helping beginning vloggers to overcome cold start: The perspective of identity construction
Miyan Liao, Xiyang Sun, Jiaming Fang & Liangqiang Li* xxx
23. Herding behavior in online restaurant ratings: Moderating effects of reviewer popularity and observed review volume
Dapeng Xu & Hong Hong* xxx
24. How do consumers identify useful review information in a social media environment?
Qianwen Xu, Miaomiao Zheng, Cong Cao & Chunping Jiang* xxx
25. Influencing generation Z's kansei demand for new tea purchase decision and satisfaction — Research based on kansei engineering
Xin Ke Ye, Fei Li & Ya Ling Li* xxx
26. Information security and firms' market value: The preliminary analysis
*Runbo Ye & Xiong Zhang** xxx
27. Innovation quality, customer innovation and innovation culture: The relationship mediated by social media
Ningning Jing, Yaling Li & Ming Sheng* xxx
28. Is natural more beautiful? Research on natural product preference based on IAT
Xiaobei Liang, Yi Zhang & Hu Meng* xxx
29. Life-cycle building carbon emission management platform based on building information modeling technology
Chenhao Jin, Qinlin Huang, Xiaorong Sun, Yunxi Hao, Yuan Yao, Xin He & Liangshuo Wang* xxx
30. Motivations of user engagement in eWOM of Chinese microblog
*Shiyao Lu & Ming Tian** xxx
31. Multimodal sentiment analysis based on deep learning: Recent progress
Xudong Luo, Jie Liu, Pingping Lin & Yifan Fan* xxx

32. Navigational guidance – A deep learning approach xxx
*Benjamin Yen & Yu Luo**
33. Online learning vs. offline learning in an MIS course: Learning outcomes, readiness, and suggestions for the post-COVID-19 world xxx
Mathupayas Thongmak & Nopporn Ruangwanit*
34. Prioritizing critical cloud services for disastrous pandemics: A media richness perspective xxx
*Wei Hsiu Weng**
35. Research on credit evaluation system of e-business enterprises from the perspective of organizational resilience theory xxx
*Junhong Zhao & Sixuan Chen**
36. Research on image perception of luxury hotels in Dalian based on text analysis xxx
*Qiong Jia & Pan Jiang**
37. Research on the construction mechanism of consumers' trust intentions and behaviors in the context of live streaming shopping xxx
Cong Cao, Miaomiao Zheng, Qianwen Xu, Xiuyan Shao & Chunping Jiang*
38. Research on the development status and trend of smart home xxx
Jie Wang & Ya Jing Hou*
39. Research on the impact of information quality on educational WeChat official account users' continued use intention: Based on the ECM-IS model xxx
Meng Zhao, Liang Yang, Zixin Xu, Liangqiang Li & Xiaolin Li*
40. Research on the influencing factors of users' willingness to pay for knowledge in the context of virtual brand community. xxx
*Yun Tang & Yongzhong Yang**
41. Review of neural network algorithms xxx
*Meiying Liu**
42. Size does matter: How do micro-influencers impact follower purchase intention on social media? xxx
Gloria H.W. Liu, Ying Li & Neil Chueh-An Lee*
43. Study on the competency model construction for industrial designers under artificial intelligence technology xxx
Hou Jianjun, Mao Yichao & Xu Lijun*
44. Study on the influencing factors of health information sharing behavior of the elderly under the background of normalization of pandemic situation xxx
Chenyu Li, Chengxi Sun, Xiang Chang, Luoming Liang, Yao Ma & Fan Ke*
45. Success factors of chat commerce in Thailand: An emerging e-business platform in the post COVID era xxx
Pimmanee Rattanawicha, Sawitree Boonpatcharanon, Chaiyasut Jongtavornvitaya & Janjao Mongkolnavin*
46. Supporting learning and working in disastrous pandemics by smart technologies: A qualitative analysis xxx
*Wei Hsiu Weng**
47. Sustainable smart transportation system: Through the lens of a smart city in an emerging country xxx
Santha Vaithilingam, Pei-Lee Teh, Pervaiz K. Ahmed, Sui-Jon Ho, Mahendhiran S. Nair & Chee Pin Tan*

48. Technology-enabled innovations to combat Covid-19 pandemic: A case study between Thailand and Taiwan xxx
*Suangchanok Tangkomsaengtong**, *Peter Ractham*, *Eric Chiu* & *Smith Chutima*
49. Text mining-based patent analysis of blockchain technology applications xxx
*Roberto Louis Forestal**, *Su-Houn Liu*, *Shih-Ming Pi* & *Eldon Y. Li*
50. The effect of blockchain on customer-to-customer electronic commerce xxx
Nazeli Megerdichian, *Neda Abdolvand** & *Saeedeh Rajae Harandi*
51. The effect of digital literacy and external information on market competition fear: An empirical study on fresh food consumption in China xxx
Xiaobei Liang, *Diyue Zhang* & *Hu Meng**
52. The effect of motives on enterprise social network usage xxx
*Piruni Deyalage** & *Dushyantha Kulathunga*
53. The effect of transport amenities on customer satisfaction: An empirical study from the online travel community xxx
*Xiying Sun** & *Jiaming Fang*
54. The impact of digital marketing and customization on service innovation: Case of Moroccan healthcare services companies during COVID-19 xxx
*Soukaina Zaoui**, *Haiwei Zhou*, *Safae Ait Hamou-Ou-Brahim* & *Dechun Huang*
55. The impact of platform social responsibility on consumer trust xxx
*Yaqi Yang**, *Qiong Jia* & *Ya Zhao*
56. The more engaged, the more generous: Examining the influence of viewers' engagement on their gifting behavior in live streaming services xxx
*Yixuan Li** & *Benjamin Yen*
57. Toward the development of a revised technology acceptance model xxx
*Joshua Ebere Chukwuere**, *Onneile Juliet Ntseme* & *Aijaz A. Shaikh*
58. UML artefacts for a blockchain-enabled platform for Fairtrade xxx
*Ravishankar Sharma**, *Nir Kshetri*, *Stephen Wingreen* & *Aijaz A. Shaikh*
59. Understanding the sustainability factors in critical information systems for disastrous pandemics: A knowledge-based view xxx
*Wei Hsiu Weng**

PART 2: Work-in-Progress Papers

* indicates the corresponding author.

61. A case study of the application of digital technology in the fast-food breakfast industry to optimize consumer demand xxx
*Chia-Yu Jih** & *Wei-Hsi Hung*
62. An empirical study on consumption intention of virtual tour streaming xxx
*Chia-Shiang Hsu**, *Ming-Chia Hsieh*, *Junko Yang* & *Wen Chin Yeh*
63. Digital transformations in Taiwanese TV industry xxx
*Lisa Ci-Fan Ying** & *Wei-Hsi Hung*
64. Exploring crowdfunding success in cross-culture framework xxx
Qiong Jia & *Guanlin Wang**

65. Hospital as an asylum workshop to improve the disable people's resilience with working capability and to re-join our society xxx
Leo Fang & Wei-Hsi Hung*
66. How does word of mouth from different components systems influence product sales differently? xxx
*Qiong Jia & Juewen Chen**
67. Knowledge-based clubhouse adoption intention in the post-COVID-19 era in the hospitality industry xxx
Chia-Shiang Hsu, Shih-Wei Chou, Ming-Chia Hsieh & Emmanuel Kwame Opoku*
68. Research on the effects of youth personalities on impulse purchasing intention xxx
Qiong Jia, Anqi Zhang & Ziyu Wan*
69. Scares and stocks: Evidence from Twitter sentiments during Covid-19 xxx
Fu Xin, Senxiao Lai & Yue Miao*
60. Understanding user participation in online communities during COVID-19 pandemic: evidence from sentiment and semantic analysis on YouTube xxx
Chenyang Li, Mingze Xie & May Wang*