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Chair's Message

The Committees of the International Conference on Innovation and Management (IAM2021 Summer) are pleased to welcome you to our Web Conference on July 6-9, 2021. Due to the pandemic, we are unable to host an in-person conference as originally planned. In any case, on behalf of the organizers, I express my delight in sharing the time with the delegates from all around the world to present your research results, although without the usual in-person networking.

With the rapid development in e-business and technology, enterprises are now facing escalating competitions and vague opportunities. How to assist enterprises in gaining competitive advantages through technological and managerial innovations has become a crucial issue for both academicians and practitioners. The main objective of IAM International Conference is to provide a venue where business stakeholders, researchers and experts worldwide can share cutting-edge innovative technologies and managerial theories, exchange valuable experience and form collaborative relationships to promote business innovation and management. We believe it is of immense significance to have an opportunity to share the knowledge from all participants.

Among 23 excellent manuscript submissions from 8 countries, 11 of them come from 5 countries have been further selected for presentation in the conference. These papers provide unique insights and are regarded as the research forefront of the key areas including applications of innovation and management in selected industries, innovative systems and knowledge management, contemporary business behavior and data. We would like to express our gratitude to all those who contributed in helping deliver quality content of IAM2021S.

Looking forward for your participation again in our next event.

Conference Chair

<u>Schedule</u>

July 6, 2021 (Tuesday)	
14:00-14:30	Rehearsal

July 7, 2021 (Wednesday)	
13:30-16:30	Session A

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<u>Agenda</u>

July 7, 2021   13:30-16:30 (UCT+08:00)

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National Central University, Taiwan

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Sui-Chiang Chu	National Chengchi University
Mu-Yen Hsu	National Chengchi University

Analysis of Decoupling of Economic Growth and CO_2 Emissions

Yeji Kim	Yonsei University
Hwa-Seong Na	Yonsei University

A Text Mining Approach to the Analysis of Bitcoin Community Postings

Ga-Hye Kim[*] and Da-Hyeon Jeong

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Abstract

This study aims to analyze which topics of information are shared in the Bitcoin community and how they affect the actual financial market. Using LDA topic modeling, we wanted to look at which information Bitcoin community users share the most and which keywords are frequently used. In Bitcoin Forum, the largest bitcoin community, 2,333 postings posted for about nine months from September 2020 to April 2021 were used. Four representative words were extracted from 13 topics, and the topics were interpreted based on the contents of the extracted words and posts, which accounted for the largest portion of the topics. As a result of checking the proportion of 13 topics per month, Topic 8, which discusses the value of Bitcoin, was published the most during the research period. This means that Bitcoin investors think importantly about the value of Bitcoin, which decides the price of Bitcoin.

Keywords: Bitcoin, social media, community online word-of-mouth, text mining, LDA topic modeling

Patent Effects on Higher Stock Price and Higher Return Rate - A Study in China Stock Market

Hong-Wen Tsai[1], Hui-Chung Che[1*] and Bo Bai[2]

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Abstract

Based on the valid patent data and stock price data of China A-shares, the patent effects of four patent species including the invention publication, the invention grant, the utility model grant, and the design grant, on the stock price and the stock price return rate were analyzed via ANOVA. It was proved that the A-shares having new patents of any patent species shown the higher stock price mean and the higher stock price return rate mean than those A-shares having no new patents did. The A-shares having new design grants were found to show the highest stock price mean among the A-shares having new patents of any patent species. The A-shares in the group of top 25% patent count of either the invention publication or the invention grant shown the highest stock price return rates mean than those A-shares in other groups of less patent count did. The invention grant, following the general concept, showed its excellent patent effect. The design grant, beyond the expectation, also showed patent effects on the higher stock price and the higher stock price return rate. The finding would improve the state of the art in the patent valuation and the listing company evaluation.

Keywords: Patent species, stock price, return rate, ANOVA, A-share

A Case Study of the All-in-One Platform for SNS and E-Commerce: Xiaohongshu in China

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Abstract

With 300 million registered users, 9% conversion rate and 500 million monthly GMV (Gross merchandise volume), RED (Xiaohongshu) has become one of the most successful social e-commerce platforms in China. To enter the China market, international corporations must have an in-depth understanding of the operating model, user behavior and preferences of RED. However, previous studies lack to understand the decisional factors of RED comprehensively. Thus motivated, this study seeks to find decisional factors of using RED and integrates the operational characteristic and the preferences of RED users to assist international corporations to enter China market. The study applies a case study approach with a user interview. This study expands the existing literature by understanding the user behavior on RED. Moreover, this study provides practical and executable advice for international corporations who want to start a business in China market.

Keywords: RED, Xiaohongshu, social network services, e-commerce service, case study

Travel Agent Performance in Airline Electronic Distribution Channels

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Abstract

This investigation applies Data Envelopment Analysis and Tobit Regression to analyze 28 years' operating data from 16 major airlines to understand whether airlines' disintermediation has reduced costs and increased efficiency. Results revealed, contrary to all predictions, relying on retailing intermediary still produces a positive impact on the distribution efficiency. This conclusion is drawn from the following findings: 1) a shorter chain produces better efficiency; 2) the more market transparency, the worse efficiency; 3) the more retailing locations, the better efficiency and 4) the direct distribution, the retailing agency's total sales and the commission removal has no impact on the distribution efficiency.

Keywords: DEA, Distribution Channels, Electronic Markets, Transaction Costs Theory

Anomaly Detection Using Two Parallel Models: Focusing on the Online Used Market

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Abstract

Recently, 8 out of 10 consumers in Korea have experience of buying used goods, so consumers' interest in used transactions is explosively increasing. However, with this rapid growth, various problems are occurring. Among them, the biggest problem is that the items prohibited for sale are continuously rising. Online used market platform companies have built and operated a system that filters prohibited items using AI, but this is aimed at filtering specific prohibited items, so it has a limitation in that it is not able to filter out items that did not exist well. In this study, we build a model that detects new outliers that does not appear in the past is developed by simultaneously using a model that detects anomaly through image data and an anomaly through text data by collecting actual online used market data. The evaluation criteria were evaluated based on TNR (True Negative Rate) among the confusion matrix that evaluates the performance of the classification problem.

Keywords: Anomaly detection, deep learning, used market, transfer learning, multimodal

Effects of Key Visual on Creativity in the Workplace

Rong-Hwa Huang[*] and Kei-Yee Feng

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Abstract

Numbers of studies forecasted that Artificial Intelligence (AI) technologies might replace human jobs. Large portions of employees were able to work remotely during the COVID-19 crisis. Under the threats of AI and the potential of teleworking in the post-COVID-19 world, it is essential to provide highly creative workplaces to enhance human competitiveness. This study applied key visual, emotional, and creativity theories to workplace management. Through an experiment of placing emotional images in the place as a key visual object, to explores whether people's creativity and emotions are affected by key visual objects. Also, investigate whether different sleeping habits will affect creativity. The results of the experiment demonstrate that people's creativity and emotions are affected by key visual objects. These results yield important implications regarding how to enhance creative performance at workplaces.

Keywords: Workplace, key visual, creativity, emotion, abbreviated Torrance test for adults (ATTA)

A Predictive Model for Employee Voluntary Turnover: An Empirical Study of a Manufacturing Company in Taiwan

Chen-Yu Wang[*], Chun-hung Lin, Lynn Qiao and Jihn-Chang Jehng

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Abstract

This study collects data from a manufacturing company in Taiwan to build a reliable predictive model of employee voluntary turnover. The results suggest that the random forest and extreme gradient boosting algorithms perform the best. Moreover, the results of a variable importance investigation indicate that the elementary level of managerial training hours, professional training hours, job tenure, average number of promotions, and age contribute the most in predicting employee voluntary turnover outcomes. Imbalanced classification, feature selection, and K-fold cross validation are introduced and tested in this study.

Keywords: Machine learning, employee voluntary turnover, feature selection

User Affordances in a Mediated Relationship Between Artefact or Tools and the Related Components Within an Activity System

D.L. van Staden and J. Cronje[*]

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Abstract

Yang (2016:256) states that "despite the positive prospects and functionality of wearable devices, little research has been done on user acceptance and behaviours concerning them". As part of a master's thesis, using Engestrom's second generation Activity theory (1983) we examined how wearable fitness devices influence and support a number of users' behaviour. This was done in an attempt to uncover the underlying user affordances that emerge when people interact with wearable fitness devices.

The focus of the study attempted to gain an understanding through the study of artefacts and tools, how human action is influenced by and becomes inseparable from a mediated relationship between artefacts or tools and the related components within an activity system.

Semi-structured interviews were conducted with 8 participants. These were coded and thematically analysed using Atlas Ti through the lens of Activity Theory. Several themes were identified as a result of analysing and coding participant interviews, as we will illustrate below.

Keywords: Internet of things, ubiquitous computing, pervasive computing, wearable technology, activity theory

The Effect of Elements of Color on the Perceived Price of Online Products

Rong-Hwa Huang* and Chih-Yin Lin

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Abstract

In recent years, online shopping has developed rapidly. COVID-19 broke out in 2020, further accelerating this change and increasing the proportion of online shopping significantly. So far, most research related to online shopping has discussed consumer behavior and perceived price through background colors of products, price, and gender. However, few studies are about returns and refunds due to the inconsistency between physical products and online pictures.

The purpose of this study is to explore whether elements of color have a significant impact on perceived price of online 3C products, and whether the results will be affected by gender and different product involvement. Elements of color include brightness, chroma, and hue. The variable hue is excluded by the study based on its clearly visible difference in color. The experiment is divided into five groups: brightness±30, chroma±30, and original.

Research shows elements of color can have an effect on the perceived price of 3C products. This study provides online sellers with recommendations for adjusting brightness and chroma for 3C products in order to increase consumers' perceptions of prices. Compared to a baseline of no difference in color, these changes can increase the perceived price of products held by consumers and increase sales of products.

Keywords: Elements of color, online shopping, perceived price

Whose Motivations Motivate Corporate Patenting?
- TMT's Influences on Corporate Patenting Motivations

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Abstract

As a result of the ongoing technology advancement, patenting has become one of the important means for all firms, regardless of scale, to win market competitions. Most scholars believed that protecting innovative technologies was what motivated corporate patenting. Subsequent studies found that delaying competitors, preventing suits, and improving corporate image were other patenting motivations in addition to technology protection. However, current literature considers firms (legal persons) as human beings with personal psychological motivations. In a firm, however, an inventor can be an employee at any level, while the application for patent is determined by the top management team (TMT). Hence, we may ask the following research questions: Whose motivations motivate corporate patenting? How do different members in TMT affect corporate patenting motivations? While no literature has answered these questions, this study attempts to fill these gaps in related academic research. After interviewing ten firms and clarifying the patenting process within these firms, this study found seven patenting decision scenarios with different key TMT, and analyzed the TMT influences on corporate patenting motivations.

Keywords: Patenting motivation, top management team (TMT), innovation strategy

Analysis of Decoupling of Economic Growth and CO$_2$ Emissions

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Abstract

There was a global agreement on greenhouse gas reduction through the Paris Agreement in December 2015. Since then, interest in reducing carbon emissions has never been higher with the arrival of pandemic due to Covid-19. The pandemic has increased interest in air pollution, which has strengthened the importance of reducing carbon emissions. This phenomenon emphasizes the importance of "decoupling" that can reduce greenhouse gases while maintaining economic growth. In this study, we analyzed which factors are affecting decoupling index by using 63 countries' decoupling index and its' tendency every three years from 1980 to 2015. According to the analysis, the proportion of exports and imports was found to have hindered decoupling, while the proportion of service industries, growth rate of service industries, and ratio of renewable energy were factors that strengthen decoupling. Furthermore, it has been found to be insignificant for urbanization rates introduced as distinctive factor that has not been used in previous studies.

Keywords: Economic growth, carbon emissions, demobilization, generalized linear model

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1. Please be in the session 10 minutes before the schedule.
2. Session chair should divide the available time equally among all papers to be presented and announce the same to the paper authors and audience. Each paper should be presented within allotted sparing 2 minutes for discussion.
3. The papers having more than one author will not get any extra time for making their presentations.
4. Session chair should remind the speakers about the time limit three minute before the time he or she is expected to finish the presentation. If a speaker goes beyond the allotted time, session chair should remind her or him to close the presentation.

Certificate

The certificate of attendance will be issue by email after finishing the presentation in the meeting room.

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About five to ten percent (5-10%) accepted papers will be select as Best Papers. The Best Paper Award will be presented at the end of each session in the meeting room. But the premise is that the session has the best paper award. And the **Best Paper Award Certificate** will be issue by email after the conference.

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