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Chair's Message

The committees of the International Conference on Innovation and Management (IAM2018 Winter) are pleased to welcome you to this meeting held at Fukuoka, Japan on Jan. 30-Feb. 2, 2018. On behalf of the organizers, I express my delight in sharing the time with the delegates from all around the world and hope you will have good stay here.

With the rapid development in e-business and technology, enterprises are now facing fiercer threaten and vague opportunity. How to assist enterprises in gaining competitive advantages through technological and managerial innovation has become a crucial issue to the industrial and academic societies. 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 110 excellent manuscript submissions from 7 countries, 82 of them come from 7 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 IAM2018W.

Looking forward for your participation again in our next event.

Conference Chair

Schedule

Jan. 30, 2018 (Tuesday)	
15:30-16:30	Registration (Lobby, 1F)

Jan. 31, 2018 (Wednesday) 07:30-17:00 Registration	
Room	**Olive I (3F)**
08:05-09:50	Session A
09:50-10:10	Social Time (Refreshments)
10:10-12:10	Session B
12:10-13:30	Lunch (Green House, 1F)
13:30-15:30	Session C
15:30-15:50	Social Time (Refreshments)
15:50-17:35	Session D

Feb. 1, 2018 (Thursday) 07:30-17:00 Registration	
Room	**Olive I (3F)**
08:05-09:50	Session E
09:50-10:10	Social Time (Refreshments)
10:10-12:10	Session F
12:10-13:30	Lunch (Green House, 1F)
13:30-15:30	Session G
15:30-15:50	Social Time (Refreshments)
15:50-17:35	Session H

Feb. 2, 2018 (Friday) 07:30-15:00 Registration	
Room	**Rupinasu (3F)**
08:05-09:50	Session I
09:50-10:10	Social Time (Refreshments)
10:10-12:10	Session J
12:10-13:30	Lunch (Green House, 1F)
13:30-15:30	Session K

Agenda

Jan. 31, 2018 (Wednesday)

Session A **08:05-09:50** **Room:** Olive I

Session Chair: Cheng-Kiang Farn
National Central University, Taiwan

Process Quality Improvement Based on the Application of Rectifying Sampling Inspection Plan

Chung-Ho Chen Southern Taiwan University of Science and Technology

Study of Problems of Entrepreneurs in the Small Ceramic Factories and Guidelines for Dealing with the Problems: Case Study of small ceramic factories participating in the Project No.2 of "Phee Liang Nong" in Lampang

Anurak Artitkawin Lampang Rajabhat University
Siwat Lawanwadeekul Lampang Rajabhat University
Thitima Khunyotying Lampang Rajabhat University
Soravich Mulinta Lampang Rajabhat University
Tamomwat Hirunchartanan Lampang Rajabhat University

Optimal Preventive Replacement Policy with Random Work-Time and Random Lead-Time

CHIN-CHIH CHANG Takming University of Science and Technology
YEN-LUAN CHEN Takming University of Science and Technology

Optimization of Scheduling Replacement for a Single System with Random Tandem Works

YEN-LUAN CHEN Takming University of Science and Technology
CHIN-CHIH CHANG Takming University of Science and Technology

Development of Design and Quality Ceramic Production for Higher Value: Case Study of Ceramic Factories Small and Medium-sized Enterprises (SMEs)

Kanokanya Ruammaitree Lampang Rajabhat University
Anurak Athitkawin Lampang Rajabhat University
Thitima Khunyosying Lampang Rajabhat University
Soravich Mulinta Lampang Rajabhat University

Agenda

Jan. 31, 2018 (Wednesday)

Session A **08:05-09:50** **Room:** Olive I

Session Chair: Cheng-Kiang Farn
National Central University, Taiwan

A Group Technology Application to Analyze Product Design Relationships – Electric Scooter as the Example

Tien-Lun Liu St. John's University
Jhih-Wei Chen St. John's University

Stock Index Forecasting Using A Novel Interval-valued Forecasting Scheme with Support Vector Regression

Chi-Jie Lu Chien Hsin University of Science and Technology
Wensheng Dai Renmin University of China
Wen-Lung Tsai Chien Hsin University of Science and Technology

Process Quality Improvement Based on the Application of Rectifying Sampling Inspection Plan

Chung-Ho Chen

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Abstract

In 1996, Pulak and Al-Sultan provided a rectifying sampling inspection plan for determining the optimal process mean. Assume that the quality characteristic is normally distributed with known process standard deviation and the larger-the-better characteristic (the conforming product with the lower specification limit). The 100% rectifying inspection is executed when the quality of the lot is rejected. Pulak and Al-Sultan (1996) obtained the optimal process mean under the maximum of the expected profit per item. Their model can be further applied in the output product control and process quality improvement for the production process.

There is a major research objectives in this work: this study considers the effect of quality investment on the expected profit per item. From the above-mentioned purpose, we address the modified Pulak and Al-Sultan's model which is different from the original model for comparing the effect on the expected profit per item. The numerical result show that the modified model has the larger expected profit per item than that of the original model. The result of this study reports that the policy of quality investment is available for enterprise's practical application.

Keywords: Rectifying sampling inspection plan, process mean, quality investment

Study of Problems of Entrepreneurs in the Small Ceramic Factories and Guidelines for Dealing with the Problems: Case Study of small ceramic factories participating in the Project No.2 of "Phee Liang Nong" in Lampang

Anurak Artitkawin[1], Siwat Lawanwadeekul[2], Jakkit Hunyala[3], Thitima Khunyotying[4], Soravich Mulinta[5], Tamonwat Hirunchart-a-nan[6], Patompong Prommaboon[7], Somporn Tipkad[8] and Suphawut Paka[9]

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Abstract

The objectives of this research were to study the problems of entrepreneurs of ceramic factories and to develop guidelines to deal with problems in small ceramic factories participating in the Project No. 2 of "Phee Liang Nong" in Lampang. This study was a method of qualitative research. The instruments used in this research were observation, in-depth interview, meetings, and seminars. The results found that at present small ceramic factories have overall problems which are divided into three areas: 1) the problem of the quality to improve productivity in manufacturing ceramics, 2) issues furnaces, machinery, and equipment used in production, lack of maintenance, custody systematically, and 3) business management, manufacturing, finance, and human resource management. Recommendations for dealing with the problems split into two guidelines for the implementation. The first guideline is the adaptability of the business of the new ceramic factory entrepreneurs. The second approach is to offer guidelines for business management and business plan to deal with the problem in the three aspects of smaller ceramic factories in Lampang.

Keywords: Industrial Factories, Ceramic Factories, Entrepreneurs of Ceramic Factories, Business Management and Productivity

Optimal Preventive Replacement Policy with Random Work-Time and Random Lead-Time

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Abstract

Most units or systems deteriorate with age and use, and eventually, fail form either or both causes in random environment. If their failure rates increase with age and use, it may be wise to make maintenance at periodic times. When some systems successively execute jobs and computer processes, it would be better to do some maintenance after it has completed its work and process. This paper proposes a preventive replacement policy that a system is replaced before failure at a planned time T or the completion of a working time, whichever occurs first, whereas the corrective replacement is performed immediately when the system fails. A random lead-time strategy delays in delivery of a replacement spare once it is ordered. Meanwhile, a mean cost rate model is developed based on the stochastic behavior of the assumed system, reflecting the costs of both storing a spare and system downtime. The main objective is to determine the optimal schedule T^* through minimizing the mean cost rate function. The existence and uniqueness of optimal replacement policy are derived analytically. It can be seen that the present model is a generalization of the previous models, and the policy with preventive replacement outperforms the one without preventive replacement.

Keywords: Inventory, lead time, replacement, random working time, optimization

Optimization of Scheduling Replacement for a Single System with Random Tandem Works

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Abstract

This paper addresses a scheduling replacement problem for a single operating system which works at random times for multiple jobs. The system is subject to stochastic failure which results the imperfect maintenance activity based on some random failure mechanism: minimal repair due to type-I (repairable) failure, or corrective replacement due to type-II (non-repairable) failure. The imperfect maintenance is carried out to improve the system failure characteristic. Two scheduling models for the system with multiple jobs are considered: a single work and N tandem works. To control the deterioration process, the preventive replacement is planned to undergo at a scheduling time T or the job's completion time of for each model. The objective is to determine the optimal scheduling parameters (T^* or N^*) that minimizes the mean cost rate function in a finite time horizon for each model. Because the framework and analysis are general, the proposed models extend several existing results.

Keywords: Scheduling replacement, random work, optimization, imperfect maintenance, minimal repair, reliability

Development of Design and Quality Ceramic Production for Higher Value: Case Study of Ceramic Factories Small and Medium-sized Enterprises (SMEs)

Kanokanya Ruammaitree[1], Anurak Athitkawin[2],
Thitima Khunyosying[3] and Soravich Mulinta[4]

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Abstract

The purpose of this research was to develop the entrepreneurs of small and medium-sized ceramic enterprises (SMEs) to be able to develop quality and form of ceramic products to increase value. The research methodology was divided into 3 phases. Step 1: The researchers conducted a study on the general context of small and medium enterprises (SME) participating in the project. Step 2: The researchers operated production process development, improving the quality of ceramic products, developing forms of the ceramic products and packaging for entrepreneurs to develop product designs to increase the value of the products. Step 3: The research team provides in-depth advice for development of ceramic products. The results of the research found that small and medium enterprises (SMEs) have the potential to develop themselves. However, there are some issues, such as quality control issues in the production process, the problem of applying for community product certification, and technical problems casting products and molds.

Keywords: Ceramic entrepreneurs, small and medium enterprises, community product standards, product design, packaging

A Group Technology Application to Analyze Product Design Relationships – Electric Scooter as the Example

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Abstract

Currently product development requires multi-person collaborative design, but the backgrounds of all involved team members are not similar so that the emergence of communication problem needs to be compensated. There were studies proposed of structural product design data, which included design purposes, design requirements, design parameters and engineering parameters, to reduce barriers of communication. Based on the hierarchical product design structure this research is intended to establish a correlation analysis model to provide product design and planning recommendations. By applying group technology to explore the relationships between various aforementioned levels, the outcomes of multi-dimensional grouping may assist the product design content analysis and identify the key design issues. The results of this research can be applied to the intelligent mechanism of product development to support design improvement, such as modular design, design simplification and other applications. Finally, an example of electric scooter is used to illustrate the feasibility of this research to provide as reference.

Keywords: Group technology, product development, product design relationship, TRIZ

Stock Index Forecasting Using A Novel Interval-valued Forecasting Scheme with Support Vector Regression

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Abstract

Stock index forecasting is regarded as a challenging task of the prediction problem since the stock market is a complex, evolutionary, and nonlinear dynamic system. Interval-valued time series forecasting exhibits possible future outcomes for upper and lower bounds of interval-valued data. It has the advantage to reduce the variability and uncertainty relative to that found in point forecasting/ single-valued forecasting model. The upper and lower bounds (UL) and/or center and radius (CR) methods are two most used methods to represent the bounds of interval-valued data. However, when constructing interval-valued time series forecasting model based on UL and CR methods, the data distribution information of the interval-valued data did not be considered in both of CR and UL methods. In this study, we propose a new MSL scheme (mean, standard deviation and level) to describe the bounds of interval-valued data and then integrate the MSL and support vector regression (SVR) to construct interval-valued time series forecasting model for stock price forecasting. Experimental results on Dow Jones closing cash index show that the proposed interval-valued stock index forecasting scheme outperforms the two competing models and hence is an effective alternative for interval-valued forecasting of stock index.

Keywords: Interval-valued time series forecasting, stock index forecasting, time-interval information, support vector regression

Agenda

Jan. 31, 2018 (Wednesday)

Session B **10:10-12:10** **Room:** Olive I

Session Chair: Ya-Fen Chang
National Taichung University of Science and Technology, Taiwan

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Board Diversity and Innovation Performance: The Case of New Product Introduction Announcements

Li-Yu Chen — Soochow University
Jung-Ho Lai — National Taipei University of Business

Exploring Technology Diffusion and Technological Change: The Case of Asia-Pacific Countries

Hsin-Yu Shih — National Chi Nan University
Hung-Chun Huang — National Chi Nan University

Comments on a Provably Secure Biometrics-based Multi-cloud-server Authentication Scheme

Ya-Fen Chang — National Taichung University of Science and Technology
Wen-Hsin Huang — National Taichung University of Science and Technology
Wei-Liang Tai — Chinese Culture University

Fog Computing for Improving IoT Data Management

Chen-Yu Hung — National Taichung University of Education
Yen-Wen Lin — National Taichung University of Education

Application of Technology Acceptance Model to Explore the Intention of Taiwan's Shipping Industry Using Blockchain Technology

ho-chuan Chen — National Taiwan Ocean University
Taih-Cherng Lirn — National Taiwan Ocean University

The Thematic Analysis of Perceived Value in the Health-Care Context

Shu-Ling Cheng — Far East University

Agenda

Jan. 31, 2018 (Wednesday)

Session B **10:10-12:10** **Room:** Olive I

Session Chair: Ya-Fen Chang
National Taichung University of Science and Technology, Taiwan

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The Human-Robot Interaction: A Case Study of Smart Walkers

Shu-Ling Cheng	Far East University
Chun-Hsu Ko	I-Shou University
Kuu-Young Young	National Chiao Tung University

Effects of Psychosocial Factors on Online Game Addiction: The Mediating Role of Avatar Identification

SUKKYUNG YOU	Hankuk University of Foreign Studies

Board Diversity and Innovation Performance: The Case of New Product Introduction Announcements

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Abstract

While prior studies reveal that innovation is influenced by board heterogeneity arising from differences in board demographic variables such as gender, ethnicity, age, tenure, and so on, their empirical results are inconclusive. It seems that these explicit measures thus cannot capture the diversity from board human and social capital, nor directly bring significant benefits to the value of innovation. Rather, knowledge and information diversity is necessary in order to reduce the problems often faced in innovation projects and thereby successfully create firm value through innovation. This current study therefore extends the literature by examining the effect of board knowledge and information diversity on the value of innovation by using cases of new product introduction (NPI) announcements. We find that board knowledge diversity influences the value creation of NPI announcements, thus reminding governance researchers of a bias that exists when board heterogeneity is neglected. We also find that the effect of board knowledge diversity on the performance of NPI announcements is affected by two moderators—new-product newness and firm size. These findings can help us to understand the conditions under which boards are more effective as decision-making groups, and identify the contingencies that strengthen or attenuate the influence of board diversity.

Keywords: Board diversity, new product introduction announcements, value creation, corporate governance

Exploring Technology Diffusion and Technological Change: The Case of Asia-Pacific Countries

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Abstract

Global outsourcing, global design and global supply chains carry out international science and technology diffusion. International technology diffusion is an important channel to acquire advanced technology. On the base of connection between Taiwan and Pan Asia development, to precisely posited the regional technological embeddedness of Taiwan in Asia-Pacific is critical issue for policy initiation as well as the multilaterals cooperation and mutual reciprocity. Thus, this study utilizes the technological network to investigate international technology diffusion in Asia-Pacific region. The study result indicates the rapid development of ASEAN and South Asia, which can provide authorities to strategize the technological influence in these areas.

Keywords: Asia-Pacific, ASEAN, technology spillover, technological embeddedness, technology diffusion

Comments on a Provably Secure Biometrics-based Multi-cloud-server Authentication Scheme

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Abstract

Cloud computing, a new and widely-applied concept, makes hardware, software and information shared. It provides low-cost services for business and improves efficiency. In order to ensure the security of communications between a user and cloud-servers to realize Cloud of Things, Kumari et al. proposed a biometrics-based authentication scheme and claimed their scheme ensured user anonymity. After analyzing Kumari et al.'s scheme, we find that one weakness exists in their scheme such that user anonymity is not ensured as claimed. In this paper, we will explicitly indicate how this weakness damages Kumari et al.'s authentication scheme and make further discussions to show the possible modification.

Keywords: Cloud computing, authentication, anonymity, biometrics, the Internet of Things (IoT), Cloud of Things (CoT)

Fog Computing for Improving IoT Data Management

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Abstract

As the popularity of Internet of Things peaks, these connected objects produce large amount of data. Cloud computing emerges to process those data into useful information for users. However, for such large amount of generated data, data centers may be overloaded and networks may be congested. To remedy the problems of cloud computing, fog computing is proposed. In this paper, a fog node is deployed for filtering collected sensory data and forwarding filtered data to the cloud data center. The experiment results show that the fog node is able to effectively lessen the number of times uploading sensory data to the cloud data center. Specifically, only the pre-determined data will be uploaded to the cloud data center. Consequently, the network bandwidth and the cloud storage can be significantly reduced.

Keywords: Internet of things, cloud computing, fog computing, filtering, intelligence

Application of Technology Acceptance Model to Explore the Intention of Taiwan's Shipping Industry Using Blockchain Technology

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Abstract

The purpose of this study is to explore the intention of shipping industry using blockchain technology in Taiwan's shipping industry. There were 92 valid responses were collected from shipping professionals. The research model was evaluated by structural equation modelling (SEM) technique. The results show that the perceived ease of use of blockchain has a positive and significant effect on the perceived usefulness of the blockchain. The perceived usefulness of the blockchain has a positive and significant effect on the attitude toward using the blockchain. The perceived usefulness of the blockchain and attitude toward using it both have positive and significant impacts on the intention to use the blockchain. Because the shipping industry in Taiwan has not actually adopted the blockchain technology, thus respondents have less concerned with the challenges of a new technology and whether the blockchain technology is easy to use or not. Therefore, the relationship between perceived ease of use the blockchain techonology and attitude toward use it is not significant.

Keywords: Blockchain, technology acceptance model, SEM, shipping industry

The Thematic Analysis of Perceived Value in the Health-Care Context

Shu-Ling Cheng

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Abstract

As the advent of aging societies around the world, new smart product development for the elderly population has attracted much attention due to its economic and social contribution. Due to the risk of failure, it is imperative to explore the perceived value of new smart product to ensure the long-term viability of technological innovation. This article discusses the concept of perceived value, the customers' perceptive benefits toward a smart product via interview in the health-care context. In particular, this study defines the construct of perceived value as a three-component conceptualization (i.e., usable, emotional, and social) from the elder's perspective. This exploratory study provides the foundation for future work to test its impact on the new product development.

Keywords: Perceived value, smart product, elder's perspective

The Human-Robot Interaction: A Case Study of Smart Walkers

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Abstract

With the advent of an aging society, the elderly face the problem of mobility. Thus, how to assist their mobility via walking helper becomes the focus of robotic research today. In addition to the functionality of walking helper, human-robot interaction is a crucial issue to enhance the performance of walker helper. A case study of smart walkers is developed to gain deep insight of human-robot interaction in terms of detecting human's intention. The proposed scheme first detects user walking intention via their forces applied on the developed force-sensing grips, which can be transformed into the driving force/torque via a learning scheme. Along with the selected path and driving force derived from the measured applied force, the receding horizon passive control strategy will derive the braking torques and then guide the user to the desired target. The effectiveness of the proposed system is verified by experiments.

Keywords: Walking helper; human-robot interaction; human's intention

Effects of Psychosocial Factors on Online Game Addiction: The Mediating Role of Avatar Identification

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Abstract

This study examined the relationship between psychosocial factors and online game addiction. To uncover the factors that influence middle school students' online game addiction, structural equation modeling was conducted using data from a sample of 163 middle school students in South Korea. Specifically, this study examines the relationship of various psychosocial variables to online game addiction, and the mediation effect of avatar identification on the relation. Results indicated (a) that self-esteem and social skills had a significant negative correlation with game addiction, while depression had a significant positive correlation with game addiction, (b) that depression had indirect effects on game addiction via avatar identification, and (c) that social skills had both indirect (via avatar identification) and direct effects on game addiction. Policy implications for educators and administrators are discussed.

Keywords: Game addiction, self-esteem, depression, social skills, avatar identification

Agenda

Jan. 31, 2018 (Wednesday)

Session C **13:30-15:30** **Room:** Olive I

Session Chair: Lin-Hui Yu
National Taiwan University, Taiwan

Fair Value and Economic Consequences of Financial Restatements

HUA-WEI HUANG National Cheng Kung University

The Relation between Innovation Efficiency, Institutional Ownership, and Meeting the Earnings Benchmarks

Chunlai Ye Texas A&M International University
Lin-Hui Yu National Taiwan University

The Effect of Prior Net Income (Loss) and Zero Earnings Benchmark on Cost Asymmetry - Evidence from Taiwan Hospitals

Hsieh Pei-chen Cardinal Tien Junior College of Healthcare and Management
Lee Shu-Hua National Taipei University

Information Transmission in the Onshore and Offshore RMB Markets

Yu-Lun Chen Chung Yuan Christian University

Capital Structure Adjustment Speed

An-Sing Chen National Chung Cheng University
Che-Ming Yang National Chung Cheng University

Study the Effects of the User-Centric, Innovative Design with Integration of Scenario-Based Design and TRIZ

Chun-Ming Yang Ming Chi University of Technology
Thu-Hua Liu Ming Chi University of Technology
Yan-Lin Lee Ming Chi University of Technology

A Study of Medical Insurance with Big Data in Taiwan

Jhih-Ling Chiu Ming Chuan University
Chun-Ya Chang Ming Chuan University

Agenda

Jan. 31, 2018 (Wednesday)

Session C **13:30-15:30** **Room:** Olive I

Session Chair: Lin-Hui Yu
National Taiwan University, Taiwan

Evaluate Serious Games of Non-Profit Organizations in Taiwan

Jiunn-Woei Lian	National Taichung University of Science and Technology
Ji Li	National Taichung University of Science and Technology
Yi-Zhen Chen	National Chung Cheng University

Fair Value and Economic Consequences of Financial Restatements

Hua-Wei Solomon Huang

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Abstract

This study finds that negative market reaction to restatement announcements is more severe if firms disclose higher ratios of Level 3 fair values. The results indicate that when announcing financial restatements, the use of less reliable fair values such as Level 3 is likely to trigger punishment of stock price from market participants. These findings should be of interest to U.S. and global regulators.

Keywords: SFAS No. 157, financial restatements, market reactions

The Relation between Innovation Efficiency, Institutional Ownership, and Meeting the Earnings Benchmarks

Chunlai Ye[1] and Lin-Hui Yu[2]

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Abstract

This paper examines the ongoing debate on (1) whether institutional holders encourage myopic behavior or monitor corporate activities and (2) whether firms' managing earnings around thresholds when they are under pressure from capital markets represents opportunism or a credible signal of superior future performance. We examine these issues by focusing on innovative efficiency, which considers both inputs and outputs of R&D projects.

Keywords: Innovation efficiency, institutional ownership, earnings management

The Effect of Prior Net Income (Loss) and Zero Earnings Benchmark on Cost Asymmetry - Evidence from Taiwan Hospitals

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Abstract

Since 1995 Taiwan's National Health Insurance system (NHI) has been instituted, the prices for medical services have been highly regulated since the institution of the Taiwan's National Health Insurance system (NHI) in 1995. There is also greater supervision for the hospital reported loss by the regulatory authorities after the implementation of the NHI. Consequently, Taiwan hospitals may have the incentive to meet or beat the specific zero earnings benchmark. This study investigates the applicability of different cost asymmetry models and address three research objectives. First, using the asymmetric cost behavior model, which is based on the moderating effect of prior sales changes (Banker, Byzalov, Ciftei and Mashruwala. 2014), we discuss the asymmetry cost issue by examining cost components of Taiwan hospitals. Second, we further examine this issue by using the asymmetric cost behavior model based on the moderating effect of prior net incomes (losses). Third, we study how the incentive to meet or beat the specific zero earnings benchmark affects the discretionary decisions of costs and its components.

Keywords: Cost asymmetry, zero earnings benchmark, Taiwan hospitals, Taiwan's national health insurance system

Information Transmission in the Onshore and Offshore RMB Markets

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Abstract

The study investigates the impact of the improved central parity quotation on price discovery between onshore (USD/CNY) and offshore (USD/CNH) markets. We find that USD/CNH market provides greater contribution to RMB price discovery and the relatively rising contribution of USD/CNH is attributed to improved quotation policy. After implement the policy, central parity could incorporate more USD/CNH market information and transmit the information to USD/CNY market.

Keywords: Price discovery, USD/CNY, USD/CNH, quotation of the central parity
JEL classification: F31; F38; G15

Capital Structure Adjustment Speed

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Abstract

This paper applies the integrated dynamic partial adjustment capital structure model and quantile regression method to estimate the impact of several potential variables on the adjustment speed of capital structure toward target leverage. Our results show that PPI and TCU (total industry capacity utilization) perform well in describing the adjustment speed of the capital structure, regardless of whether leverage is defined as book leverage or market leverage. We also find evidence that ex-ante market state variables used in the momentum literature are useful in further delineating adjustment speed regimes. Finally, we find that low leveraged firms adjust their leverage toward target faster than high leveraged firms.

Keywords: Capital structure, quantile regression, leverage, target leverage ratios, adjustment speed

Study the Effects of the User-Centric, Innovative Design with Integration of Scenario-Based Design and TRIZ

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Abstract

To study the effects of applying this user-centric, new product development process on product design and development personnel, a questionnaire survey was developed to serve this purpose. Industrial design majored college students were recruited to join an experiment and respond to a set of questions. Data collected were analyzed qualitatively. The study results show positive effects on applying this integrated product design process, which can help the product design and development team develop the user-centered and innovative product design in a structured and systematic way.

Keywords: TRIZ, scenario-based design, user-centered design

A Study of Medical Insurance with Big Data in Taiwan

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Abstract

The development of technology has changed the structure of many industries. The Insurance industry is no exception; it is at the state of technology transformation. The big data has its advantages in its part in the Insurance industry. One, Insurance runs based on big data. Second, insurance company has its own numeric database. And finally, the Bureau of National Health Insurance established an Information Integration Application Service Center, qualified institutions will be able to send applications and when accepted they can analyze disease data according to regulations. Therefore, insurance companies can improve their ways of operations through big data analyzation. This contains the different strategies used to respond to the changes in the environment, such as marketing methods, product services, product pricing, and administrative management.

This study is based on two aspects, literature review and survey. Discussing the impact that big data analyzation brings to Medical Insurance and also the changes that would bring to the consumers if operating medical insurance using big data. Then designing a survey through the points discussed above, asking consumers whether they know about the impact. The results were; 1. There are obvious differences of the two concepts in population statistic variables 2. There are obvious differences of the two concepts in Insurance purchasing variables. 3. There are obvious differences of the two concepts in the level of understanding big data.

Keywords: Big data, medical insurance

Evaluate Serious Games of Non-Profit Organizations in Taiwan

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Abstract

The purpose of this study attempts to understand the design components of the serious games which belonging to non-profit organizations in Taiwan. Using the framework proposed by Aldemir et al. (2018), this study evaluates seven cases in Taiwan. Based on the results, three major findings or recommendations are proposed for future study and development regarding the related topic. First of all, we suggest that a more suitable framework for this kind of game is required. Second, novel methods for the gaming "feedback" can be designed. Finally, we suggest that additional efforts which invest in the development of the serious game are becoming a critical issue for the non-profit organizations in Taiwan.

Keywords: Serious game, non-profit organization, evaluation framework

Agenda

Jan. 31, 2018 (Wednesday)

Session D **15:50-17:35** **Room:** Olive I

Session Chair: Nobuaki Namiki
Rikkyo University, Japan

A Quantity Discount Inventory Model for the Stationery Industry

Peng-Sheng You Chiayi University
Ta-Cheng Chen Asia University
Yi-Chih Hsieh National Formosa University

Bayesian Inference for Testing Process Yield

Mou-Yuan Liao Providence University

A New Perspective for Predicting the Patient Arrival with Affinity Set

Yuh Wen Chen Da-Yeh University
Chao Wen Chen Kaohsiung Medical University

Optimal Ordering and Investment Polices with Defective Items and an Advance-cash-credit Payment

Chih-Te Yang Chien Hsin University of Science and Technology
Liang-Yuh Ouyang Tamkang University
Chien-Hsiu Huang Tamkang University

The Role of Slack Reduction on Performance Turnaround during the Great Recession: The Case of U.S. Machinery Companies

Nobuaki Namiki Rikkyo University

An Analysis of the Hierarchical Correlation in Macro-Economic Market - Take Taiwan Stock Market as the Example

Kuo-Chen Li Chung Yuan Christian University

Network Science Approach to Modelling the Topology of Supply Chain Networks: S-Electronics Case

Kyounghwan Chin SungKyunKwan University
HeeSang Lee SungKyunKwan University

A Quantity Discount Inventory Model for the Stationery Industry

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Abstract

Many stationery stores face the problems of when to make an order and how many to orders. They may also face the problem whether it is necessary to return the purchased items to their suppliers if the sales aren't in good condition. Due to each ordering cost follows a corresponding skip function and suppliers will cancel stationery stores' quantity discount, the proposed problem belongs to the polynomial concave problem. A constrained mathematical programming model was proposed and a hybrid evolution computational approach was developed to solve this problem. Sensitivity analysis was also conducted to investigate the impacts of the variation in ordering costs, demands, return cost to profits.

Keywords: Stationery stores, mathematical programming, ordering, return

Bayesian Inference for Testing Process Yield

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Abstract

The process yield index S_{pk} is widely used to measure process performance because it can directly reflect the process yield. As sampling data are considered to estimate the index S_{pk}, a normal approximation is provided to obtain the sampling distribution of the estimator of S_{pk}; however, the accuracy of this approximation is difficult to investigate because there are two unknown parameters that have to be further estimated. Therefore, this study provides the Markov chain Monte Carlo technique, which incorporated with a Bayesian model, for testing S_{pk}.

Keywords: Bayesian, Markov chain Monte Carlo, process yield

A New Perspective for Predicting the Patient Arrival with Affinity Set

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Abstract

As the data collection is much easier and faster than before, predicting the time series of emergent patient arrival is critical to keep doctors alarmed/response in advance by big data. Traditionally, such a problem is analyzed by moving average method, regression method, exponential smoothing method or some existed evolutionary methods. A new affinity model is explored in this study to accomplish this goal. Our data of time series is actually recorded from hour to hour (hourly data) for three days from the emergency room (ER) of hospital: the data of the first two days are used to generate/train prediction model; after that, the data of the final/third day is used to test our prediction results. Only two types of model: affinity model and neural network model are used for comparing their performances. Interestingly, the affinity model performs better prediction results. This hints there could be a special pattern within the time series generated by actual arrival of emergent patient. This study is valuable for building an intelligent hospital for alerts of congestion of emergency room in the very near future.

Keywords: Prediction, time series, affinity, emergency room, intelligent hospital

Optimal Ordering and Investment Polices with Defective Items and an Advance-cash-credit Payment

Chih-Te Yang[1], Liang-Yuh Ouyang[2] and Chien-Hsiu Huang[3]

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Abstract

This paper investigates the impacts of investment and inspection policies on an EOQ model with defective items and advance-cash-credit payment provided by the supplier. In turns, the retailer also offers customers a downstream credit period of N years, where $N \leq M$. The objective of this study is to obtain the optimal order quantity and investment policy for maximizing the retailer's total profit per year. An algorithm is developed to find the optimal solution. A numerical example is presented to demonstrate the proposed model and solution procedure, and then management insights are obtained from the numerical example.

Keywords: EOQ, defective items, capital investment, non-inspect, advance-cash-credit payment.

The Role of Slack Reduction on Performance Turnaround during the Great Recession: The Case of U.S. Machinery Companies

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Abstract

This study investigates the relationship between slack reduction and performance turnaround for U.S. firms that have substantially decreased profit performance during the latter stage of the Great Recession. The earlier period extends from the summer of 2008 to the middle of 2009, when many companies dramatically have lowered their performance. The latter period extends from the middle of 2009 to the middle of 2011, when many firms gradually have improved their performance. This study's sample consists of 111 U.S. machinery companies that have significantly declined their performance at the earlier period of the Great Recession.

This study finds that there is a negative relationship between absorbed slack and performance, and a positive relationship between absorbed slack reduction and performance turnaround. It means that, if firms have maintained high levels of absorbed slack resources (i.e., selling, general and administrative expenses over sales) (SGA) at the onset of the Great Recession, they are more likely to decrease their subsequent performance than are their counterparts. Moreover, companies, which have decreased their absorbed slack resources at the beginning of the Great Recession, are more likely to decrease their subsequent performance during the latter part period of the Great Recession. The above findings tend to make absorbed slack a "bad thing" to have, when hit by an economic recession.

On the other hand, unabsorbed slack (i.e., a current ratio) and potential slack (i.e., equity to debt ratio) are found to have no relationship with performance turnaround. The findings of this study have implications for managers affected by deep recessions.

Keywords: slack, recession, performance, machinery, U.S.

An Analysis of the Hierarchical Correlation in Macro-Economic Market - Take Taiwan Stock Market as the Example

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Abstract

In stock market, it is important for investors to make proper and appropriate investments. Investors use fundamental analysis based on the impact of the macro-economic variables or other technical indicators. According to the previous researches, it is pointed out that there is a considerable degree of volatility between the macro economy and stock prices. The macro economy has a certain degree of predictive power. Therefore, the macro-economic variables are used as the subject of this study. Nowadays, the international stock markets have more and more cross-relations. The global market has significant effect on regional and local markets. Since the change on global market leads to the changes of the related markets, the study uses the macro-economic variables to explore the three-tier hierarchical associations of local, regional and global areas. This study uses the association rules in data mining to discuss the connections among Taiwan stocks, and macro economies in Taiwan, Japan, China and the United States. The outcome shows the hierarchical rules to help investors as a reference while investing in the stock market.

Keywords: Stock market, macro economy, technical indicator analysis, association rule

Network Science Approach to Modelling the Topology of Supply Chain Networks: S-Electronics Case

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Abstract

Manufacturers who receive supplies from the world countries in complex supply chains are confronted with discontinuous materials and components, which increase the risk of natural disasters such as hurricane, earthquakes, explosions of factories and wars. There are many such occasions and one disaster may cause disruption throughout the entire supply chain of the company. Therefore, a comprehensive risk management strategy should include procedures for identifying, analyzing and implementing risk mitigation tactics that address the potential confusion of multiple countries. To manage the risks of the international supply chain, we must first identify those types of risks. In this paper, we have studied extant methodologies used in the literature to model the robustness of supply chain network (SCN). We choose the network science methodology as a most useful method to identify the increasing complexity and interconnected nature of the SCN of S-electronics, a leading global semi-conductor manufacture. We study the topological characteristics of the chemical gas SCN of S-electronics by using network science methodology. We also discuss on the weakness of existing SCN for the case company and suggest risk mitigating tactics of the SCN of the company.

Keywords: Supply chain network, chemical gas, risk management, network science

Agenda

Feb. 1, 2018 (Thursday)

Session E **08:05-09:50** **Room:** Olive I

Session Chair: Syming Hwang
National Chengchi University, Taiwan

The Development of Food Local Database System for Communities in Phetchabun, Thailand

Panana Tangwannawit	Phetchabun Rajabhat University
Kanita Saengkrajang	Phetchabun Rajabhat University

How Can the Brand Get Benefit from Online Social Interactions?

Shu-Chen Yang	National University of Kaohsiung
Wei-Ting Chang	National University of Kaohsiung

Construct a Monitoring System of Voice Frequency via the Selection of Intrinsic Mode Functions

CHIH-HUNG JEN	Lunghwa University of Science and Technology
Chien-Chih Wang	Ming Chi University of Technology
Yu-Ming Lu	Lunghwa University of Science and Technology
Sheng-Yu Yu	Lunghwa University of Science and Technology

Internet of Things Technology and Open Data: Application of Indoor Air Control

Hung-En Kao	Chung Yuan Christian University
Shih-Ming Pi	Chung Yuan Christian University

Social Recommendation Framework based on Context Information and Sentiment Analysis

Kuo-chen Li	Chung Yuan Christian University
Shih-Ming Pi	Chung Yuan Christian University
Kuan-Hsing Wu	Chung Yuan Christian University
Sheng-En Lin	Chung Yuan Christian University

Applying Deep Belief Network with Restricted Boltzmann Machines for Forecasting Concentrations of Air Pollutants

Kuo-Ping Lin	Lunghwa University of Science and Technology

Agenda

Feb. 1, 2018 (Thursday)

Session E **08:05-09:50** **Room:** Olive I

Session Chair: Syming Hwang
National Chengchi University, Taiwan

Discovery of Probabilistic Information Process Based on Bayesian Networks

Seohyun Choi Netmarble Company

Jae-Yoon Jung Kyung Hee University

The Development of Database System of Thai Food Local for Communities in Phetchabun, Thailand

Kanita Saengkrajang[1] and Panana Tangwannawit[2]

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Abstract

There were three objectives of this research: 1) to develop the Thai Food Local Database System in Phetchabun, 2) to evaluate the developed FSDB system via users and 3) to develop the infographic for Thai Food Local.

This research methodology is divided into three parts: 1) A synthesis of food local database system model. 2) Development of the infographic for Thai Food Local and 3) Development of the FSDB, analysis, design, development and evaluation of the analyzed data Development of the infographic for Thai Food Local. For the research processes we studied the related information, selected the application prototype based on studied criteria, and developed the prototype selected. Black-box test was chosen to evaluate and assess results obtained from the experts.

The analysis of the evaluation of system efficiency by the experts, chairmen and people from the Phetchabun Province found that the system efficiency was at the high level over five aspects with a mean of 4.61 and a standard deviation of 0.49. Usability Test tested in the good rating threshold ($\bar{x}$ = 4.47, S.D. = 0.52), Functional Requirement Test was at very good ($\bar{x}$ =4.58, S.D. = 0.50) Security Test was at very good level ($\bar{x}$ =4.93, S.D. = 0.26). Output Validation Test was at very good ($\bar{x}$ =4.67, S.D. = 0.50) and Functional Test was at good ($\bar{x}$ = 4.38, S.D. = 0.5)

Keywords: Food local; database system; infographic

How Can the Brand Get Benefit from Online Social Interactions?

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Abstract

In the generation of web 2.0, consumers become as the information provider and the social network sites become popular, which changes the way of interaction between consumers and brands/enterprises. Social network sites offer a good platform for customers to gather into a variety of brand communities easily. Frequent interactions in online brand communities drive a new way to measure the brand value, which implies that the more important thing is how customers talk about brands rather than brands market themselves initiatively. Thus, this study discussed how the social currency, a new framework for managing brands in network era, influences the brand loyalty. A control variable, prior experience, was also included to exclude the effect of consumer's original loyalty toward the brand. The social currency consists of social interaction and social benefit. The prior one includes conversation, information and advocacy, and the second one includes utility, affiliation and identity. The relationships among those constructs were also investigated in this study. This study also investigated the moderating effect of community type on the relationship between the social benefit and brand loyalty. The results showed that most relationships among the dimensions of social interaction and the dimensions of the social benefit are significant. Second, social benefit fully mediated the relationship between social interaction and brand loyalty. This is, members exchange the information with each other through the online brand community will lead to their trust and identity formation toward the community. The trust and identity can further promote the loyalty toward the brand. Finally, the data also showed that social interaction could significantly influence brand loyalty in both company-initiated community and consumer-initiated community.

Keywords: Social currency, social interaction, social benefit, brand loyalty

Construct a Monitoring System of Voice Frequency via the Selection of Intrinsic Mode Functions

Chih-Hung Jen[1], Chien-Chih Wang[2], Yu-Ming Lu[3] and Sheng-Yu Yu[4]

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Abstract

With the development of network technologies in recent years, cloud computing and big data analysis have been applied to industrial automation. Nevertheless, many problems still need to be addressed in terms of process monitoring. For instance, it is often too late to detect process problems with the traditional statistical process control (SPC). Therefore, this study aims to construct an abnormality monitoring system with the voice frequency signals of automated facilities during production. First, the empirical mode decomposition (EMD) is combined with the intrinsic mode functions (IMF) to construct different voice frequency combinations and differentiate the voice frequency with process abnormalities. Then, linear discriminant analysis (LDA) is adopted to classify the abnormal and normal voice frequency signals to construct a process control line to monitor voice frequency.

Keywords: Statistical process control, empirical mode decomposition, intrinsic mode functions, linear discriminant analysis

Internet of Things Technology and Open Data: Application of Indoor Air Control

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Abstract

Home is a place for people to relax and to feel secure. However, there are some external factors, such as temperature and humidity, may make living conditions uncomfortable. With the development of Internet of Things (IoT) technology, the research issue of smart home becomes more important. The purpose of this study is to explore the application of IoT technology in indoor air monitoring and control, combined with the analysis of outdoor air quality data. This study develops a prototype system and tests and evaluates the performance of the system through user trial reports. The results show that (1) Air comparison of indoor and outdoor are practical for users. (2) Through the transmission of Bluetooth, restrictions on the practicality, should be achieved through the WiFi remote monitoring effect. (3) It can receive multiple sensors at the same time, to achieve multiple indoor space monitoring effects. (4) It can be combined with other home appliances, if the integration of home appliances control will be more practical. (5) The current database is only a record, has not developed other applications, the future can develop predictive applications. We hope that through this study, we will provide some suggestions for the application of innovative technology in smart home.

Keywords: Internet of things, open data, smart home, mobile applications, sensor

Social Recommendation Framework based on Context Information and Sentiment Analysis

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Abstract

Recommendation systems have been researched for the past decades. Emerging with the novel mobile computing technologies and social networks, context-aware recommendation system opens up new perspectives of services. Based on the context information, the recommendation system can catch better outline of user profiles. In addition, the sentiment analysis on social network provides the opinion trends of discussion groups. This research proposes a hybrid recommendation framework based on context information and sentiment analysis in order to provide more accurate recommendations to fulfill different user preferences. The hybrid system adopts context information for content-based filtering and sentiment analysis for collaborative filtering. A preliminary system is developed and used to validate the proposed framework.

Keywords: Recommendation system, context-aware, sentiment analysis, content-based filtering, collaborative filtering

Applying Deep Belief Network with Restricted Boltzmann Machines for Forecasting Concentrations of Air Pollutants

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Abstract

The need to minimize the potential impact of air pollutants on humans has made the accurate prediction of concentrations of air pollutants a crucial subject in environmental research. Deep belief network (DBN) models have been successfully employed to forecast problem. This study use a 3-layer deep network of restricted Boltzmann machines (RBMs) to capture the feature of input space of time series data, and after pre training of RBMs using their energy functions, gradient descent training. The pollutants, namely carbon monoxide (CO), is collected and examined to determine the feasibility of the DBN. Experimental results reveal that the DBN model can accurately forecast concentrations of air pollutants.

Keywords: Air pollutants, deep belief network, restricted Boltzmann machines

Discovery of Probabilistic Information Process Based on Bayesian Networks

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Abstract

Social network services (SNS) are generating huge data everyday on the Web. SNS can be utilized for effective means of marketing. Since information in the SNS is rapidly propagated over the world, it is important to understand how information propagates in the network. In this paper, information diffusion is analyzed based on the event logs in Twitter, which includes the traces of friends' responses, such as retweets and replies to each tweet. In particular, we propose to discover information diffusion process based on Bayesian networks and figure out influential users who mainly deliver the information. We collected one-year data through Twitter Open API from a specific user's tweet site. It is expected that the proposed method can be applied to marketing such as advertisements and viral marketing, targeting influential and active users.

Keywords: Social network services, information diffusion, Bayesian network, process mining

Agenda

Feb. 1, 2018 (Thursday)

Session F **10:10-12:10** **Room:** Olive I

Session Chair: Su-Houn Liu
Chung Yuan Christian University, Taiwan

A Study on the Factors Affecting Customer Satisfaction in Used-Car Market

Jongkun Jun	Hankuk University of Foreign Studies
Sangsik Han	Hankuk University of Foreign Studies

Estimating Tourists' Preferences for Grassland Ecotourism in Inner Mongolia

Chun-Hung Lee	National Dong Hwa University

Market Orientation to Innovation Performance: The Moderating Role of Corporate Social Responsibility

William Robert Shiue	New York University

An Empirical Study of Social Identity and Usage Continuance Intention in Social Media Communities

Shih-Chih Chen	National Kaohsiung First University of Science and Technology
Shu-Ling Hsu	Southern Taiwan University of Science and Technology
Jo-Yu Chang	Tatung University

Understanding the Formation of Mobile Payment Trust: A Review

Ji Li	National Taichung University of Science and Technology
Jiunn Woei Lian	National Taichung University of Science and Technology
Mianxiong Dong	Muroran Institute of Technology

Why Am I So Angry?: The Rule of Receivers' Emotional Status under Reputation Warfare

Shu-Ting Liu	National Central University
Su-Houn Liu	Chung Yuan Christian University
Hsiu-Li Liao	Chung Yuan Christian University

Agenda

Feb. 1, 2018 (Thursday)

Session F **10:10-12:10** **Room:** Olive I

Session Chair: Su-Houn Liu
Chung Yuan Christian University, Taiwan

Innovation in Dairy Farming as an Emerging Application for Dairy System Sustainability: UV-C Technology to Improve the Quality and Safety of Raw Milk in Thailand

David Makarapong	Chulalongkorn University
Supawan Tantayanon	Chulalongkorn University
Chaidate Inchaisri	Chulalongkorn University

The Application and Development of Material Flow Cost Accounting (MFCA) in Taiwan and Japan

Xie Jianglong	Kobe University
Kokubu Katsuhiko	Kobe University
Shen Hwa-Rong	Industrial Develpoment Bureau, Ministry of Economic Affairs

A Study on the Factors Affecting Customer Satisfaction in Used-Car Market

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Abstract

This study analyzed the offline market of B2C transactions in the used car market where information asymmetry and uncertainty prevail. This study analyzed how auto malls and dealers in the used car market have implemented measures to solve information asymmetry and uncertainty and how these factors affect customer satisfaction. The structural equation modeling (SEM) analysis was conducted to test the hypotheses and the quality of information and reputation of the auto malls were set as factors affecting customer satisfaction towards auto malls. Customer orientation of dealers, perceived product quality, and reputation of dealers were regarded as factors affecting customer satisfaction towards dealers. Also, customer satisfaction towards auto malls and customer satisfaction towards dealers were considered as mutual influences. In addition, respondents' purchases of used cars were added as a moderating variable.

The results of empirical analysis show that the quality of information and reputation of auto malls have a significant effect on customer satisfaction towards auto malls. Customer orientation and perceived product quality of dealers have a significant effect on customer satisfaction towards dealers. However, dealer reputation has shown a negative relationship with customer satisfaction towards dealers. Customer satisfaction towards auto malls had a positive effect on customer satisfaction towards dealers, but the opposite was negative.

Keywords: Information asymmetry, uncertainty, customer satisfaction, used car, auto malls, dealers

Estimating Tourists' Preferences for Grassland Ecotourism in Inner Mongolia

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Abstract

The development of natural-based ecotourism (NBE) would request the integration of local cultural experience, ecology, and accommodation elements for sustainable development. This study using choice experiment to establish a NBE preference model integrating aspects of cultural & ecological experience and interpretation in a Hulunbuir grassland ecotourism in Inner Mongolia, test the tourists' heterogeneity, and estimate the values of verity NBE attributes. The empirical results reveal that: (1) Tourists' preferences for grassland ecotourism would increasing based on multiple folk-custom and cultural experience, verities ecological experience, grassland ecotourism interpretation, and with a specific accommodation experience; (2) The best scenario regarding NBE were a multiple culture, ecological, and depth experiences activities in Inner Mongolia. The study summarizes useful evidence by conducting potential NBE programs in a grassland ecotourism site.

Keywords: Ecotourism preference, natural-based ecotourism, Inner Mongolia

Market Orientation to Innovation Performance: The Moderating Role of Corporate Social Responsibility

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Abstract

This study aims to advance the understanding of market orientation (MO) literature by proposing a conceptual model and testable hypotheses that both responsive and proactive MOs have inverted U-shape impacts on innovation performance, that organizational ambidexterity of both MOs positively affect innovation performance, and that their respective effects on innovation performance are moderated differentially by corporate social responsibility (CSR). Using survey data of high-tech firms in the European Union (EU), structural equation modeling will be employed to test the hypotheses. This study will provide valuable insight into how the two different views of MO complement with each other in strengthening a firm's innovation. Further, this research is of particular relevance in today's business environment by incorporating CSR activities from the stakeholder theory.

Keywords: Market orientation, innovation performance, corporate social responsibility

An Empirical Study of Social Identity and Usage Continuance Intention in Social Media Communities

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Abstract

Virtual communities have become an interactive platform between web users or businesses. In highly competitive community websites, increasing usage continuance intention can bring further value and benefits to such virtual communities. This study applies the concept of social influence and integrates the ideas of group norms, perceived critical mass, image, social identity theory, and expectation-confirmation model to investigate the usage continuance factors of virtual communities. After reviewing the expectation-confirmation model and determinants of social media adoption, the integrated model in this study is verified via empirical data. Compared with the original expectation-confirmation model, the findings of this study show the integrated model may offer an ameliorated way to clarify what factors and how they influence the continuous intention towards social media. Finally, we provide a discussion of the results and recommendations for social media communities based on our empirical findings.

Keywords: Social influence, social identity, Expectation-Confirmation Model (ECM), Structural Equation Model (SEM)

Understanding the Formation of Mobile Payment Trust: A Review

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Abstract

Many studies confirmations mobile payments trust are the success key factor that significantly affects users' intention to transactions through mobile devices. However, the past researches have used the same term (i.e., Trust) to examination the user's overall trust in mobile payment environment, but we find that every single research have the different trustee(s). Therefore, the purpose of this study collection the researches focus on trust in mobile payment environment in the past 15 years, and review these articles to understand the formation of mobile payment trust. In our results, we classification 6 kinds trustees in mobile payment and some components of trust which examination by these researches. Finally, we find that each trustee has different components. Therefore, we propose a combined formwork of each kind trustee and their components of trust in the conclusion.

Keywords: Mobile payment, trust, trustee, review

"Why Am I So Angry?"
The Rule of Receivers' Emotional Status under Reputation Warfare

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Abstract

There is more and more misinformation on social media in recent years. They may mislead people by delivering the incorrect news. The reputation of those who were targeted by fake news may be severely affected. This is known as "reputation warfare." This study examined how the consumers' emotions and locus of control impact their judgment of the authenticity of online news, corporate reputation and behavior. The motivation of this study was to gain a better understanding on the influences of environment on consumers' perceptions and decision making. This study is based on experimental method. A total of 100 university students were recruited for this study. In this exploratory study, our results support the observations of past research on the influence of fake news. Furthermore, our results also show that consumers who receive rewards that meet their expectations will not discontinue their patronage of the company in dispute. Consequently, when consumers feel that the reward is below their expectations, online news will have an impact on their consumer behavior. The data examined in this study indicates that companies must pay attention to ongoing changes in their customers' emotional status. Even if the economic conditions or remuneration are unrelated to the company, consumers' reactions to that fake news are still subjected to the influence of these factors.

Keywords: Social media, fake news, misinformation, reputation warfare, anchoring effect

Innovation in Dairy Farming as an Emerging Application for Dairy System Sustainability: UV-C Technology to Improve the Quality and Safety of Raw Milk in Thailand

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Abstract

Thailand's climate is hot all year round with rains. This tropical climate enables bacteria to grow rapidly, affecting the quality of cow milk. At the same time, the dairy supply chain in Thailand is so unique that it expresses strong needs for industrial innovation to elevate the management of dairy farms in Thailand. This article reviews research on the application of ultraviolet C (UV-C) which has higher energy than UV-A and UV-B. UV-C can be absorbed by DNA and RNA, causing bacteria to die; therefore, it was later used for medical and curative purposes and it is being used in food industry to reduce the number of bacteria. However, to use UV-C with cow milk is very challenging since milk is opaque; therefore, there is a possibility that the light cannot pass through it all. However, if the milk receives too much light, there will be fat oxidation which produces rancid smell. This article demonstrates the possibility of developing technology to reduce bacteria in cow milk suitable for Thailand's dairy industry. One previous study on the use of UV-C in the milk treatment method has suggested a design of UV-reactor that is appropriate to raw milk processing; however, it did not emphasize on engineering system design to fit the context of dairy industry in Thailand which may lead to the commercial technology development. Finally, from the literature review, the article offers some recommendations on the design model that is suitable for the application of UV-C technology for milk processing in dairy farms.

Keywords: Ultraviolet processing, dairy processing, raw-milk processing, UV-C, pathogen inactivation

The Application and Development of Material Flow Cost Accounting (MFCA) in Taiwan and Japan

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Abstract

MFCA is a tool for quantifying the flows and stocks of materials in processes or production lines in both physical and monetary units (ISO14051: 2011, p.3). While management methods focusing on the cost of waste such as MFCA and environmental management accounting have been promoted, such methods have been standardized from the perspective of MFCA. However, MFCA is easily understood as a useful business tool to realize resource productivity improvement and cost reduction in the manufacturing industry, it is necessary to accumulate case examples of adoption and diffusion in each country company like Japan. For this purpose, this research investigates the development circumstances and examples of MFCA in Japan and Taiwan.

Keywords: MFCA, environment, productivity

Agenda

Feb. 1, 2018 (Thursday)

Session G **13:30-15:30** **Room:** Olive I

Session Chair: Cheng-Kiang Farn
National Central University, Taiwan

The Association between Financial Activity and Self-Perceived Health for Middle-Aged and Older Adults in Taiwan

Yueh-Ping Li — Chung Hwa University of Medical Technology

An Innovative Model for Analyzing the Interactions between Cash and Material Flows

Ta-Hui Yang — National Kaohsiung First University of Science and Technology

Chen-Cheng Chen — National Kaohsiung First University of Science and Technology

Effects of Urbanization Levels on Health Care Utilizations

Ying-Chun Li — National Sun Yat-sen University

Ching-Wen Chang — National Sun Yat-sen University

Analysis of Human Injury from Traffic Accidents through the Decision Tree Method

Yi Wen Kuo — Shu-Te University

Treatment Outcome Analysis of Stage IV Lung Cancer of Elderly Patients

CHIN-HSIU YU — I-Shou University

Yu-Lung Wu — I-Shou University

Ru-Yih Chen — Kaohsiung Veterans General Hospital

Ya-Ai Cheng — I-Shou University

Chao-Yen Wu — I-Shou University

The Study of between Expenses Control while Medical Service Quality

I-Ting Cheng — I-Shou University

Yu-Lung Wu — I-Shou University

Agenda

Feb. 1, 2018 (Thursday)

Session G **13:30-15:30** **Room:** Olive I

Session Chair: Cheng-Kiang Farn
National Central University, Taiwan

The Effect of Working Experience of Part-time Worker in Restaurant Industry on Stress and Its Brand Images

Seungha Lee Hanyang University
MINHO CHO Hanyang University

Heavy-Impact Sound Insulation Performance According to the Changes of Dry Flooring Structure in Wall Structure

moonseo park Seoul National University

The Association between Financial Activity and Self-Perceived Health for Middle-Aged and Older Adults in Taiwan

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Abstract

This study finds that engaging in financial activity can improve self-perceived health for middle-aged and older adults in Taiwan. The results further indicate that saving financial activity benefits self-perceived health for middle-aged adults and stocks investment financial activity advanced self-perceived health for older adults. These findings should be of interest to worldwide health regulators and caregivers.

Keywords: Self-perceived health, financial activity, older adults

An Innovative Model for Analyzing the Interactions between Cash and Material Flows

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Abstract

This study addresses the interactions between material flow and cash flow inside a company. The exchanging behavior between single material commodity and cash flow were first captured and analyzed. A novel model based on time-space network was then proposed to describe the trading movements between cash flow and material commodity in a company. The proposed model could help companies to manage their cash flow and material inventory in a better way. The model is also expected to be able to enhance the integration between the cash flow and material flows which are usually handled separately in business logistics and supply chain.

Keywords: Material flow, cash flow, time-space network, network optimization

Effects of Urbanization Levels on Health Care Utilizations

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Abstract

Different urbanization levels have various health care resources and thus imply health care market competition. High urbanization level leads to high health care market competition. Competition may lead to better quality of care and efficient resource use. How urbanization levels affect health care utilizations is an important research question. However, limited studies exist in Taiwan. This study aims to apply nationally representative dataset to explore associations between urbanization levels and health care utilizations, and evaluate the probability and frequency of health care use.

This study used 2009 National Health Interview Survey to conduct detail analyses. Urbanization levels were defined based on previous study and categorized into high, moderate, and low urbanization level. Health care utilizations include outpatient visits, hospitalizations, and emergency room use. A theoretical framework of Behavioral Model for Health Services Use was incorporated into study.

There were 19,181 sample observations in the final analyses. Bivariate analyses indicated that people lived in the higher urbanization levels had more number of self-paid items on outpatient visits in last year ($p<0.001$). People lived in low urbanization level had more hospitalizations in last year ($p<0.001$). Multivariate logistic regression model revealed that, compared to high urbanization level, people lived in moderate urbanization level (OR=1.283) or low urbanization level (OR=1.549) had higher probabilities of hospitalizations. Multiple linear regression models showed that people lived in the low urbanization level had significant fewer self-paid items on outpatient visits ($p<0.001$) and hospitalization ($p<0.05$) in last year.

Study results indicated that urbanization levels will affect the health care utilizations. Not efficient health care utilizations may lead to health inequality. To improve potential health inequality existing within different urbanization levels, innovative health policies and managements are in great needs in Taiwan.

Keywords: Urbanization levels, health care utilizations, behavioral model for health services use

Analysis of Human Injury from Traffic Accidents through the Decision Tree Method

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Abstract

The rate of private vehicle usage in Kaohsiung now exceeds 80%, and traffic accidents are a frequent occurrence whether resulting from human error, driving against the regulations, cognitive biases, lack of defensive driving skills, and so on. This gives rise to human injuries of varying degrees of severity, with Kaohsiung having the highest rate of fatal traffic accidents in Taiwan. In order to understand which accident scenarios result in the most serious injuries, this study reviewed 1,251 cases of accident appraisals. Four attribute categories are considered (the characteristics of the interested parties, road conditions, traffic conditions, and the situation at the time of the accident) as the major causes of traffic accidents. The Data mining technique, such as the decision tree method, is applied to construct a forecasting model and analyze the rules for related factors producing injuries with different degrees of severity as a consequence of traffic accidents. The results of this study could be used as a reference for improving road traffic safety for agencies responsible for traffic management and traffic law enforcement.

Keywords: Traffic accident, human injury, accident appraisal, data mining, decision tree (DT)

Treatment Outcome Analysis of Stage IV Lung Cancer of Elderly Patients

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Abstract

Purpose: To understand the survival outcome of different treatment intentions after initial diagnosis of stage IV non-small-cell lung cancer of the elderly patients.

Method:We utilizedthe cancer registry database of a medical center in southern Taiwan to analyze the survival outcome of stage IV non-small-cell lung cancer patients according to the initial treatment intentions. Chi-square test and Cox regression analysis were carried out with PASW version 18.0 data tool.

Result: There are 333 non-small-cell lung cancer patients aged equal or over 65 years old enrolled in the database from 2011 to 2014.Comparison between anti-cancer treatment and supportive treatment groups, Cox regression analysis for survival showed significant differences in hazard ratio (HR), including female gender (HR 0.614, $p < 0.001$), age group (75-84HR 1.339, $p = 0.041$)and 85-99 (HR 2.262, $p < 0.001$), and supportive treatment group (HR 2.863, $p < 0.001$).

Conclusion: Survival outcome of anti-cancer treatment group was significant better thanthe supportive treatment group. The result can be used as reference for treatmentplanning for the oncologyspecialists and shared decision making for the elderly lung cancer patients.

*Keywords:*Elderly, non-small-cell lung cancer, stage IV, treatment, database

The Study of between Expenses Control while Medical Service Quality

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Abstract

With increasing medical expenses the current issue to be solved is how to expenses control while maintain quality medical services. Based on the professional review mechanism of National Health Insurance Administration Ministry of Health and Welfare, this study used medical records to produce retrospective professional judgments, and interviewed doctors for their opinions on the medical records with high outpatient quantity with low deduct rate. This study aims to provide references for increasing quality index of outpatient medical records and reducing medical expenses deduction. This study used secondary data of professional review of the National Health Insurance Administration Ministry and primary data from doctors' interview for analysis. Subjects were 186 doctors of a hospital's outpatient service sampled for review by the National Health Insurance Administration Ministry.

This study analyzed the 3126 cases of the hospital sampled for review, including 186 doctors showed that cases deduct rate accounted for 40%, medical expenses deduct rate accounted for more than 10%. In the deduct expenses, medicine fees (52.39%) and examination fees (29.10%) accounted for nearly 80% of the total expenses deduction, suggesting that medicine fees and examination fees can be listed as the control target. The study found that the medical expenses deduction of sample doctors are significantly correlated with career seniority, cases quantity, application expenses, and sampling quantity, indicating that doctors serving longer in the hospital have more outpatient cases ($p < .001$), application more cases and contribute more samplings ($p < .001$).

Keywords: Medical records, medical expenses control, deduct rate

The Effect of Working Experience of Part-time Worker in Restaurant Industry on Stress and Its Brand Images

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Abstract

The purposes of this study were 1) to analyze the effect of working experience of part-time worker on stress and the influence of working experience of part-time worker on brand image, 2) to analyze causal relationship between the part-time worker's stress and the brand image that part-time worker feels, 3) to identify the sub factors (work environment, relationship with coworker, customer badness behavior) on working experience of part-time worker. The model was empirically tested via structural equation modeling analysis using data collected from college students, graduate student part-time worker who have worked for as part-time workers in food service companies for more than 3 months. This study supports that 1) working environment and customer badness behavior affect stress. However, relationship with coworker does not affect stress. Only part-time worker's environment influences its brand image. As a result, part-time mediating role of part-time work experience and brand image, 2) part-time workers stress to brand image, so there's a connection between stress and brand image, 3)) to found that the sub factors(work environment, customer badness behavior) on working experience of part-time worker.

Keywords: Working experience, working environment, relationship with coworker, customer badness behavior, stress, brand image, restaurant industry

Heavy-Impact Sound Insulation Performance According to the Changes of Dry Flooring Structure in Wall Structure

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Abstract

The floor heating method generally uses a wet construction method including the installation of resilient material, lightweight foam concrete, heating piping, and finishing mortar. Such a wet construction method not only delays other internal finishing processes during curing period for two mortar pouring process, but also has a disadvantage that it is difficult to replace the floor heating layer when it deteriorated because it is integrated with the frame. Dry floor heating construction method can be a good alternative in that it can solve these defects. Conversely, when it applied to the wall structure that is vulnerable to the interlayer noise compared with the column-beam structure, the question about the heavy-impact sound (HIS) insulation performance is raised. Therefore, conventional dry floor heating method is hard to apply to the wall structure apartments.

Therefore, for the purpose to improve the applicability of dry floor heating method in wall structure apartments, this study investigated the change of floor impact sound, especially HIS insulation performance which is one of the required performance for the floor structure. This study tried to examine whether the change of heavy-impact sound pressure level (SPL) shows a tendency at the significant level according to the shape and mass of the floor structure.

Through filed experiments on wall structure apartment, this study confirmed that the form of the raised floor shows better HIS insulation performance than the fully-supported form. In addition, it was also confirmed that the HIS insulation performance increases with the mass on the upper part. Moreover, this study found the fact that a mass of about 30 kg/m^2 or more should be placed on the upper structure to reduce the heavy-impact SPL according to the bang machine measuring method. Although this study has a limit due to insufficient experiment samples, if the accuracy of this study is increased, it will contribute to the diffusion of dry floor heating by setting the HIS insulation performance target and designing the dry floor heating structure that meets the target.

Keywords: Dry floor method, heavy-impact sound, sound insulation performance, wall structure

Agenda

Feb. 1, 2018 (Thursday)

Session H **15:50-17:35** **Room:** Olive I

Session Chair: Chia-Pao Chang
National Chin-Yi University of Technology, Taiwan

Application of Possibilistic Linear Programming Approach for Remanufacturing Planning Decisions

Tai-Sheng Su	National Pingtung University of Science and Technology
Jyi-Chang Tsai	I-Shou University
Chin-Chun Wu	I-Shou University

Solving an Optimal Inventory Policy with Supply Disruption Using Dynamic Programming

Pattarawet Tharawetcharak	Silpakorn University
Choosak Pornsing	Silpakorn Universirt

On the Promotion of Core Functions of Medical Center by Two Stage Grouping Method

Kuei-Hsing Lo	Chung Yuan Christian University
Wen-Tsann Lin	National Chin-Yi University of Technology
Yung-Tsan Jou	Chung Yuan Christian University
Ber-han Su	National Chin-Yi University of Technology
Shu-wei Lin	The University of Melbourne

Two-Stage Clustering Method of Exploration for Workers' Group Turnover Rates in Semiconductor Production Plants

Kuei-Hsing Lo	Chung Yuan Christian University
Wen-Tsann Lin	National Chin-Yi University of Technology
Yung-Tsan Jou	Chung Yuan Christian University
Shu-Wei Lin	The University of Melbourne

Agenda

Feb. 1, 2018 (Thursday)

Session H **15:50-17:35** **Room:** Olive I

Session Chair: Chia-Pao Chang
National Chin-Yi University of Technology, Taiwan

A Study on the Relationship between Farmers' Associations and Organizational Performance with the Evaluation of Education and Training System, and Environmental Uncertainty

Chun-Hung Lin	Chung Yuan Christian University
Wen-Tsann Lin	National Chin-Yi University of Technology
Yung-Tsan Jou	Chung Yuan Christian University
Yu-An Lin	National Chin-Yi University of Technology
Jyun-Wei Lin	National Chin-Yi University of Technology

A Survey on Factors Affected Intentions to Purchase Catalog Printing

Shu-Hui Yeh	Chung Yuan Christian University
Wen-Tsann Lin	National Chin-Yi University of Technology
Chia-Pao Chang	National Chin-Yi University of Technology
Yung-Tsan Jou	Chung Yuan Christian University
Hui-Min Hu	National Chin-Yi University of Technology
Yu-An Lin	National Chin-Yi University of Technology

A Study of Household Sewing Machine Purchase Intension and Satisfaction

Chun-Hung Lin	Chung Yuan Christian University
Wen-Tsann Lin	National Chin-Yi University of Technology
Chia-Pao Chang	National Chin-Yi University of Technology
Yung-Tsan Jou	Chung Yuan Christian University
Min-I Lai	National Chin-Yi University of Technology
Yu-An Lin	National Chin-Yi University of Technology

Application of Possibilistic Linear Programming Approach for Remanufacturing Planning Decisions

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Abstract

This work applies a possibilistic linear programming (PLP) approach to the integration of purchasing, manufacturing and assembling of production planning decisions with multiple suppliers, multiple components and multiple machines in remanufacturing systems. The developed PLP model minimizes total costs with reference to customer demand, due date, supplier/manufacturer capacity, lot-size release and machine yield. The analytical results demonstrate the potentials for improving cost-effectiveness of production planning in applications for the recoverable manufacturing decisions.

Keywords: Recoverable manufacturing, production planning, possibilistic linear programming

Solving an Optimal Inventory Policy with Supply Disruption using Dynamic Programming

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Abstract

Recently, the disruption of supply side in supply chain has become more severe. Terrorist attacks, severe weather, labor strikes, and unplanned machine breakdowns are some examples of this disruption. The disruption usually halts the production or delivery of supplier. Accordingly, inventory control managers must account for this kind of uncertainty to their decision making. In this study, the optimal order quantity is solved by using dynamic programming on the situation of unreliable supply side. The uncertainty of the supplier is modeled as Markov chain with two states. The recursion functions are presented. The evaluation function is also described. The dynamic programming is written in VBA and executed on sample data in order to compare the performance with Wagner-Whitin model which is the most similar to our model. The results show that the proposed model is similar to the Wagner-Whitin model on the situation of reliable supply and backorders are not allowed. However, on the situation of unreliable supply and backorders are allowed, the proposed model works well by giving the (s, S) policy which is an optimal guarantee.

Keywords: Inventory policy, economic order quantity, Wagner-Whitin model, supply chain management, uncertainty

On the Promotion of Core Functions of Medical Center by Two Stage Grouping Method

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Abstract

Core functions help identify the competence and behaviors required from the employees in order for them to generate high performance. Medical industry is a highly specialized industry, which is significant in hospital operation. The Labor Development Bureau of Labor Department drafts the Taiwan Talent Development Quality Management System (TTQS) to ensure the reliability of the training process and establishes the TTQS evaluation database as the research basis.

To begin with, the results obtained from the preliminary examination shows that the "Analysis Results" in the review materials have significant differences. Subsequently, this study adopts a two-stage clustering method (i.e., SOM and K-means) to carry out scientific and confirmatory comparison among groups of physicians, nurses and general administrative. This study aims to determine the most discriminative levels between different levels of groups and to use them as the basis for the analysis of research objectives. Furthermore, the results are adapted to verify and compare the various reviews to confirm the consistency of the differentiated groups. This study hopes that the analysis of the related factors affecting the performance of the core functions in medical industry can effectively enhance the quality of the human resources in medical industry.

Keywords: Core functions, two-stage clustering, Talent Quality-management System (TTQS), K-Means

Two-Stage Clustering Method of Exploration for Workers' Group Turnover Rates in Semiconductor Production Plants

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Abstract

Cases of involuntary leave of absence of professionals increase in times of economic downturn. Conversely, during economic growth, there is an increased tendency for workers to voluntarily leave their positions.

In the electronics industry, although there are a high entry threshold and a relatively low turnover rate, some employees still choose to resign due to the pressure of maintaining the effectiveness and stability of production process. This circumstance also makes the firm stuck in the vicious cycle of recruitment.

This study applies a two-stage clustering method which includes self-organizing maps (SOM) and the k-means clustering method developed from the framework of data mining theory to verify the comparison of data. The study investigated two databases from two different clusters within the objective to understand the differences between subjects who choose to leave their positions, and those who remain employed. This study can serve as a reference for future recruitment planning, and it is expected that this study will alleviate worker turnover rates and manpower shortage.

Keywords: Electronic industry, self-organizing maps, K-means method

A Study on the Relationship between Farmers' Associations and Organizational Performance with the Evaluation of Education and Training System, and Environmental Uncertainty

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Abstract

This study explores the relationship between farmers' associations and organizational performance with the evaluation of education and training system and environmental uncertainty. The subject of the study is the members of the farmers' associations. The research includes "environmental uncertainty", "education and training system" and "organizational performance", which are compiled based on the literature review and survey on the relationship between farmers' associations and organizational performance with the evaluation of education and training system, and environmental uncertainty. A total of 450 questionnaires were handed out and 366 valid ones were returned, with a response rate of 66.667%. The valid returned questionnaires were analyzed by means of SPSS and AMOS statistical software. The major statistical methods implemented in this study are the mean, standard deviation, independent-samples t-test, one-way analysis of variance (ANOVA), Pearson product-moment correlation analysis, multiple regression, and structural equation modeling (SEM).

Lastly, according to the research results, suggestions are proposed for the subsequent study on the farmers' associations for the benefit of their administrative and executive units.

Keywords: Farmers' associations, environmental uncertainty, education and training system, organizational performance

A Survey on Factors Affected Intentions to Purchase Catalog Printing

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Abstract

Printing is a process of reproducing images or texts on a master form or template. Amid printing, the images and texts to be reproduced are ink-coated on the template, and the ink is transferred to the paper or other kinds of substrates with pressure. The printing industry is a place wherein a manufacturer can reproduce a large number of any manuscript's original copies. The printing quality is one of its critical dimensions that affect the level of customer's satisfaction.

To discover the factors that affect the willingness to buy printing products, this study will approach four dimensions: namely, the knowledge of printing products, the awareness of printing quality, consumers' satisfaction with printing products, and consumers' willingness to buy printing products. Based on the four dimensions, a conceptual cause-effect structured diagram is created to study the levels of consumers' consideration among the four different dimensions. In this study, SPSS 22 and AMOS 24 software were used to design and analyze the questionnaire for the research. In addition, to validate the questionnaire, the structural equation modeling (SEM) analysis method was used. Lastly, the suggestions are provided based on the research results to the printing industry to formulate a marketing strategy that promotes the sales of printed catalogs.

The result shows that providing different clients with diverse after-sales services is conducive to promote the repurchase rate and to meet the consumer's demand for printed products. The result also validates that printing product knowledge, awareness of printing quality, consumers' satisfaction with printing products and consumers' purchase intentions are positively correlated.

Keywords: Catalog printed matter, consumer satisfaction, purchase intention, structural equation modeling

A Study of Household Sewing Machine Purchase Intension and Satisfaction

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Abstract

It is popular to use household machine for DIY in Europe and United States and Japan have been for many years. This popular slowly spread to China and Southeast Asian markets due to China and Southeast Asia economic growth and the improvement of local people's life style. Plus the full implementation of the two-day weekend in Taiwan, the increase in the average income and household sewing machine prices civilian, more and more people will buy household sewing DIY objects into the ranks of such as home accessories, bags, patchwork and change clothes.

This research based on household sewing machine user concept to study consumer use satisfaction, consumer purchases conveniently satisfaction, consumer attitude for after-service satisfaction and consumer purchases intention facet to make causal model structure to know what difference for each factor. This method gets data from survey to use Structure equation model(SEM)analysis through AMOS. The expected effect of this study, according to use of household sewing machine consumer behaviour in order to analyze the above aspects to understand the degree of recognition for consumer use of household sewing machine to provide marketing strategy suggestion for the household sewing machine manufacture and then to own brand sales. Manufacture in accordance with the analysis of information, and further to provide practical household sewing machine products and different after-service and comfortable buying environment to meet consumer need.

Keywords: Consumer knowledge, purchases conveniently, consumer attitude, purchase intention, household sewing machine

Agenda

Feb. 2, 2018 (Friday)

Session I **08:05-09:50** **Room:** Rupinasu

Session Chair: Chun-Hua Hsiao
Kainan University, Taiwan

Opportunities and Challenges of Smart Retail Services in Taiwan

Tsung-Sheng Chang	Da-Yeh University
Yung-Yi Li	National Taiwan University
Yun-Wei Hung	Industrial Technology Research Institute
Wei-Hung Hsiao	Industrial Technology Research Institute
Feng-Chen Huang	Da-Yeh University

Employee Scheduling Optimization for Railway Signal Maintenance

Chen Kun Yu	Chung Yuan Christian University
Lin Chih Hao	Chung Yuan Christian University

Employee's Service Innovation Behavior in the Workplace: Customer Orientation, Psychology Influence, and Social Influence

Ching-Yi Chen	National Taipei University
Ting-Ling Lin	National Taipei University

How do Green Message Influences on Purchase Intention: The Mediating Role of Perceived Personal Contribution

Ming-Yi Chen	National Chung Hsing University

Exploring the Synergy Effects of Online-Offline in the Context of Self-Service System

Chun-Hua Hsiao	Kainan University

The Optimal Experience of Virtual Reality - Effects of Flow Experience on User's Behavior Intention

Lin Pay Yi	National Taipei University
Hsieh Chin Tang	National Taipei University

Agenda

Feb. 2, 2018 (Friday)

Session I **08:05-09:50** **Room:** Rupinasu

Session Chair: Chun-Hua Hsiao
Kainan University, Taiwan

Ant Colony Optimization for Storage Recombination Problem

Cheng Chia Hui Chung Yuan Christian University

Pi Shih Ming Chung Yuan Christian University

Opportunities and Challenges of Smart Retail Services in Taiwan

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Abstract

Smart retail services (SRSs) help enhance customer shopping experience in retail by means of information communication technology applications. There are many smart retail solutions, but which one is effective and will be applicable remains the question. To compete effectively, businesses must focus on the correct SRSs. This study has explored the current states and attitudes of retail industries in Taiwan. We observe 417 samples. It is found that retailers are willing to accept programs such as shopping navigator (assistant), mobile pay, and mobile marketing. The results show the benefits and problems of these applications and provide a few significant improvement suggestions in SRSs. Possible contributions are also discussed.

Keywords: Smart retail services (SRSs), retail industries attitude, information communication technology (ICT), customer behavior, Taiwan

Employee Scheduling Optimization for Railway Signal Maintenance

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Abstract

This research focuses on the scheduling problem of railway signal maintenance personnel in Taiwan's Railway Administration. Due to the revision of the Labor Standards Law and the shortage of railway maintenance personnel, the traditional manual scheduling method cannot accurately arrange the required maintenance tasks. In this study, a mathematical optimization model was proposed to deal with personnel dispatch in the maintenance of railway signals, in order to minimize the total cost and balance the workload of all employees. We think the scheduling problem is a constrained integer linear programming problem. Compared with manual scheduling, the experimental results greatly reduce the cost. Based on an accurate forecast of the manpower required to maintain each railway pit, the results can also serve as a guide for maintenance personnel at different stations. Especially if the maintenance work is longer than expected, the maintenance work should automatically adapt to the regular maintenance requirements and arrange the relevant technicians. The proposed employee dispatch mode can not only meet the rights and interests of employees, meet the quality requirements of maintenance, but also balance the workload of all employees and minimize the overall employment cost of employees.

Keywords: Scheduling, Labor Standards Act, Cost Optimization, Integer Programming

Employee's Service Innovation Behavior in the Workplace: Customer Orientation, Psychology Influence, and Social Influence

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Abstract

In the last decade, the service industry has gained an increasingly higher status both socially and economically. For businesses, innovation has become a key to corporate growth. Based on previous literature, this study investigated service innovation behavior in hair salon shops of Taiwan from the perspectives of group level (group norm, is social influence) and individual level (customer orientation and self-efficacy, is psychology influence), that can really encourage and prompt stylists to make their innovation behavior carry out or not.

In empirical analysis, a questionnaire was administered to employees, customers, and managers of chained hair salons located in northern areas of Taiwan using a questionnaire. 425 valid responses were obtained (94%). The responses were analyzed using SEM model in three stages. The proposed model was empirically supported. Results show that the customer orientation, self-efficacy and group norms among the hair designers positively affect their "Innovation We-Intention", which in turn contributes positively to their service innovation behavior. The paper investigates an interesting topic and provides a thorough empirical analysis of how selected psychological antecedents affect service innovation behavior. This finding has an important managerial implication as far as innovation performance of employees in the service industry is concerned.

Keywords: Service innovation behavior, self-efficacy, customer orientation, social influence

How do Green Message Influences on Purchase Intention: The Mediating Role of Perceived Personal Contribution

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Abstract

This research elucidates on how green messages are most effective in influencing purchase intention by examining the moderating role of visual stimuli and environmental consciousness. This study further considers a mechanism of perceived personal contribution underlying the interaction between three variables on purchase intention. The results show that for more environmentally-conscious individuals, when presented with a cold visual stimulus in combination with an environmentally friendly message, they will recognize higher perceived personal contribution and will have a higher purchase intention than they will for a product effectiveness message. In contrast, for less environmentally-conscious individuals, when presented with a warm visual stimulus in combination with an environmentally friendly message, they will recognize higher perceived personal contribution and will have a higher purchase intention than they will for a product effectiveness message. Furthermore, the perceived personal contribution mediates the interaction between three variables for predicting purchase intention. Research on this topic has the potential to provide a more comprehensive and meaningful account of green advertising than currently exists.

Keywords: Construal level theory, green message, visual stimulus, environmentally-conscious, perceived personal contribution, purchase intention

Exploring the Synergy Effects of Online-Offline in the Context of Self-Service System

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Abstract

Self-service technology provides a competitive advantage for service delivery. In convenience store, 7-Eleven introduced a user-friendly and multi-function kiosk, ibon. Immediately, it has gained great popularity among customers. In the meantime, many firms attempt to incorporate multi-channels to access consumer from different aspects. Accordingly, online to offline (or reverse) (O2O) plays a key strategy, such as including the mobile application (or app).

The author tried to develop an O2O research model of self-service technology (i.e., ibon kiosk) to test the interaction of technological influence processes and their impact on offline/online behavioral intention. Essential attributes are selected, including system service quality, perceived convenience, and perceived ubiquity. The impacts of SST's satisfaction and the above attributes on the app adoption will also be examined.

A structural equation modeling (SEM) analysis will be used to analyze data collected from real users of ibon. Results are expected to show that technological attributes will have impacts on both online and offline service systems. The synergy effects of online-offline exist. Implications for management and theory are discussed.

Keywords: Self-service technology, system service quality, perceived convenience, perceived ubiquity

The Optimal Experience of Virtual Reality - Effects of Flow Experience on User's Behavior Intention

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Abstract

VR is one of the important subjects that have received much attention recently. However, we have known little about VR user's inner experience characteristics in the previous researches. This study uses flow theory as the basic framework to discuss the impact of flow's antecedents and experience itself on the consequences of users' behavior intentions. In the empirical analysis, this study uses questionnaires to collect data. And the concept model was developed and tested using SmartPLS 3 with data collected from 36 experienced users both from Taiwan and China mainland. Firstly, we introduce the new technology "VR" and its application. Secondly, this study has revealed three important factors of flow construct: enjoyment/intrinsic interest, concentration/focus attention (r=0.888, 0.867 and 0.562). Results of this study have shown the effects of flow on user's patronage intention (β=0.608) and exploratory behavior (β=0.484). Finally, the findings have also shown that telepresence (β=0.456), control (β=0.373) and interactivity/speed (β=0.313) could increase VR user's flow (R^2=0.681) and result in more user behavior intentions. In summary, our results can be used as the basis for future researches and would provide more knowledge of VR experience for practical implications. It could be a good reference for future VR activities and VR contents development.

Keywords: Virtual reality, immersive, flow theory, flow, optimal experiences, user's behavior intentions

Ant Colony Optimization for Storage Recombination Problems

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Abstract

In a company, warehousing accounts for 20% of the operating costs, and picking operations account for 50% of storage costs. Therefore, storage through the reorganization can be effectively reused these spaces, thereby affecting the follow-up operation of the warehouse staff picking operation time. In this study, after the rearrangement of storage spaces, the optimal spatial applications are sorted out. By constructing the mathematical programming model of problems and using the ant algorithm to solve the storage and the reconstruction path problem. Within a reasonable range of costs, a systematic solution method is developed to solve the "minimizing the moving distance" and find the optimal path by applying the mathematical model of the distance of storage and reorganization moving. There are two stages in this study, the first phase is based on the existing data, to calculate the ratio and the distance of the storage space, according to the calculation and reconstruction of storage after the reorganization of data to make adjustment of the storage area of all storage status of the empty state of storage increased in the second stage, the storage location that needs to be stored and rebuilt is solved by the ant algorithm to find the shortest path. The simulation results suggest that this method is compared with the existing storage location reorganization mode. After the algorithm is actuated to (1) The method can increase the number of storage spaces and (2) the storage and reconstruction of the shorter moving distance, and the results of this study can provide some reference for the warehouse staff.

Keyword: Ant colony optimization, storage recombination problem, path planning

Agenda

Feb. 2, 2018 (Friday)

Session J **10:10-12:10** **Room:** Rupinasu

Session Chair: Tung-Hsiao Yang
National Chung Hsing University, Taiwan

Do Auditor Audit Quality Improve Market Quality of Clientele Firms? Evidence from Taiwan

Ming-Chang Wang	National Chung Cheng University
Yu-Jia Ding	National Defense University
Chia-Chi Hsieh	National Chung Cheng University

Does Non-intermediation Activity Tell us more in the Finance-Growth Nexus?

Su-Yin Cheng	Kainan University
Han Hou	Lunghwa University of Science and Technology

The Information Advantage of Insiders and Institutional Investors in Diversification Process

Tung-Hsiao Yang	National Chung Hsing University
Chung-Hua Shih	National Chung Hsing University

RiShare: An Application of FinTech and Blockchain Technology to Sharing Economy – A Case of Ridesharing Service

Shuchih Ernest Chang	National Chung Hsing University
Chi-Yin Chang	National Chung Hsing University

Angel: A Distributed Angel Financing/Investing Platform Based on Permissioned Blockchain

Shuchih Ernest Chang	National Chung Hsing University
Siao-Yin He	National Chung Hsing University

Agenda

Feb. 2, 2018 (Friday)

Session J **10:10-12:10** **Room:** Rupinasu

Session Chair: Tung-Hsiao Yang
National Chung Hsing University, Taiwan

Impact of Multidisciplinary Team Care on Survival and Risk of Recurrence after Complete Resection in Non-small Cell Lung Cancer Patients

Yau-Lin Wang	Nantou Hospital
Pei-Tseng Kung	Asia University
Yueh-Hsin Wang	China Medical University
Wen-Chen Tsai	China Medical University

Risk, Relevant Factors and Preventive Methods of Hypothermia among Patients Undergoing Spine Surgeries

Huei-Ying Huang	Chung Shan Medical University Hospital
Wen-Chen Tsai	China Medical University
Pei-Tseng Kung	Asia University

Create a Smart Amusement Park with a Virtual Queuing Mechanism

Yung-Hui Chou	Ministry of Transportation and Communications
Wen-Chien Yeh	Ministry of Transportation and Communications

Do Auditor Audit Quality Improve Market Quality of Clientele Firms? Evidence from Taiwan

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Abstract

The paper tries to examine the relation between auditor audit quality and market quality of clientele firms. Based on the samples of companies listed on the TWSE, the empirical results reveal that bid-ask spread and intraday volatility are lower and market depth is higher when audit quality is higher. Overall, audit quality will be reflected in financial statements and will have an impact on information asymmetry, thereby changing market investment decisions and market quality.

Keywords: Audit quality, market microstructure, market quality

Does Non-intermediation Activity Tell us more in the Finance-Growth Nexus?

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Abstract

This paper provides new evidences on traditional finance-growth nexus via dividing financial services into intermediation and non-intermediation services and examines their relationships with economic growth. Applying time series cointegration techniques and Granger causality tests for eight OECD countries, several results are expected. First, there exists a long-run equilibrium relationship among economic growth, intermediation activities, and non-intermediation activities in Austria, France, and Korea. Second, we find that financial intermediation services promote long-run economic growth in France and Korea, whereas non-intermediation services impede Austria's long-term economic growth. Third, weak exogeneity tests and Granger causality tests indicate that causality patterns vary across countries, financial services, and time period. Finally, the development of non-intermediation activities leads the development of intermediation activities in France and the Netherlands in the short-term. This paper emphasizes the importance of non-intermediation activities in the growth process and in the development of intermediation services as well.

Keywords: Intermediation, non-intermediation, economic growth

The Information Advantage of Insiders and Institutional Investors in Diversification Process

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Abstract

We analyze the information advantage of insiders and institutional investors from the efficiency of internal capital market defined in Billett and Mauer (2003). There are three major findings in this paper. First, the inefficient subsidies to constrained firms have significantly negative impact on the firm's long-term performance. In addition, the diversified firms with transfer segments, both efficient and inefficient transfer, have significantly positive effect on the firm's performance. Second, the insiders and institutional investors of diversified firms may use similar information regarding the internal capital market because they show the similar trading behavior with respect to efficient subsidies to both constrained and not constrained segments. Their reaction to the transfer segments, however, exhibits different patterns. Finally, the insiders play a more important role in the future market performance. Even though some types of internal capital market have significant impact on both the change of institutional holding and insider trading, the long-term market performance is significantly determined by insider trading. In sum, we conclude that both institutional investors and insiders have some information advantage of internal capital market. Insiders, however, have stronger impact on the diversified firms' future performance.

Keywords: Diversification, information advantage, internal capital market

RiShare: An Application of FinTech and Blockchain Technology to Sharing Economy – A Case of Ridesharing Service

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Abstract

As breaking news about Bitcoin quickly spread all over the world, the discussion about its underpinning technology, the blockchain, has also become more and more prosperous. The decentralized ledger enabled by the blockchain is widely considered to be in line with the concept of shared economy, because it allows users to directly contact and interact with each other without a third party's help as intermediary. This paper hopes to develop a new model of the ridesharing system by using the blockchain. By designing the system with the blockchain-based architecture to make it different from the current existing systems, our proposed service system, named as RiShare, could bring new features to ridesharing, such as the features of prearranged plan and automatic execution. The proposed service architecture of RiShare may not only improve the data storage process with more flexibility and lower cost, but also enhance the security through the distributed consensus-based protocol. Ultimately, the blockchain-based architecture demonstrated by RiShare may help implement the decentralized organization by adopting the blockchain technology and smart contracts, thus moving closer to the ideal sharing economy spontaneously.

Keywords: Blockchain, smart contract, sharing economy, ridesharing, decentralized organization, FinTech

Angel: A Distributed Angel Financing/Investing Platform Based on Permissioned Blockchain

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Abstract

The access to finance is one of the main challenges in the way of SMEs' growth and development. What's worse, the 2007-2008 global financial crises devastated trust of financial institutions and public toward financial systems. In term of compliance needs, the regulations of financial activities have become more strictly after the financial crises, but facts have shown that rigid regulations do not efficiently boost the investors and financial institutions' confidence toward investment. In this paper, we propose Angel, a distributed angel financing/investing platform based on permissioned blockchain. Blockchain technology creates trust among untrusted entities. It allows untrusted parties to interact without the involvement of middleman so as to reduce transaction costs and promote efficiency and transparency of transactions. Furthermore, we utilize smart contracts deployed on the blockchain to reduce agency problems caused by third party matching service providers.

Keywords: Permissioned blockchain, smart contracts, angel investors, angel fund, SMEs finance

Impact of Multidisciplinary Team Care on Survival and Risk of Recurrence after Complete Resection in Non-small Cell Lung Cancer Patients

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Abstract

Objectives*:** Lung cancer is the leading cause of cancer-related mortality worldwide. The effect of multidisciplinary team (MDT) care was developed to improve the survival of patients with cancer. The study to analyze the impact of MDT care on survival and risk of recurrence in complete resection non-small cell lung cancer patients. ***Methods*:** The data of this retrospective longitudinal study were retrieved from the Taiwan Cancer Registry and Taiwan National Health Insurance Research Database during the period from year 2004 to 2010. Patients with new diagnosis of non-small cell lung cancer (NSCLC) were enrolled as study population. All participants were observed until the end of 2013. We performed the propensity score matching with a ratio of 1:1 to avoid the selection bias. A Cox proportional hazard model was used to calculate the hazard ratio (HR) of risk of recurrence and death. ***Results: After we performed propensity score matching, there were 836 people in both MDT and non-MDT participation group. The recurrence rate of non-MDT participation is 14.11%, which is higher than MDT participation (13.52%).The results of Cox proportional hazards model showed MDT participation had a significantly lower adjusted hazard ratio of lung cancer recurrence (HR=0.72; 95%CI: 0.55-0.94), as compared with the non-MDT group. Based on stratification analysis of cancer stages, the adjusted Cox cumulative recurrence curve shows significantly lower recurrent risk in MDT participation than non-MDT participation at stage IIIa (HR=0.63; 95%CI: 0.40-0.99). The adjusted HR of mortality for MDT participation is 0.81-fold that of non-MDT participation (95%CI: 0.68-0.97). ***Conclusions*:** We determined MDT participation can lower 28% risk of recurrence after complete resection in NSCLC patients. MDT care also lower 19% risk of mortality. Based on our findings, implementation of MDT care should be actively proposed in the standard policy of non-small cell lung cancer therapy.

Keywords: Non-small cell lung cancer, multidisciplinary team care, recurrence, survival

Risk, Relevant Factors and Preventive Methods of Hypothermia among Patients Undergoing Spine Surgeries

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Abstract

Objective: Hypothermia is a common problem during surgeries. Statistics indicate that 50%–90% of patients undergoing surgeries experience hypothermia (i.e., core body temperature <36°C). Hypothermia increases the probabilities of wound infection and myocardial hypoxia, hinders the normal functioning of the respiratory system, causes coagulation dysfunction, and prolongs postoperative recovery time. This study investigated factors influencing the probability of intraoperative hypothermia occurrence and the effectiveness of preventive methods. **Methods:** This retrospective cohort study included inpatients in the department of neurosurgery who underwent spine surgeries at a medical center in central Taiwan from January 2013 to December 2014. Logistic regression analysis was adopted to investigate the probability and relevant factors of hypothermia occurrence among the patients and the effectiveness of preventive methods. **Results:** This study recruited 476 patients undergoing spine surgeries. The hypothermia occurrence rate was 58.4% among these patients. The patients with an operation time of >180 minutes had a higher probability of hypothermia occurrence than those with an operation time of <180 minutes. A per 1°C increase in the postinduction body temperature decreased hypothermia occurrence probability by 91.1%. A per 1-unit increase in packed red blood cell transfusion volume increased hypothermia occurrence probability by 27%. A per 1-mg increase in cisatracurium dosage reduced hypothermia occurrence probability by 6.5%. A per 1°C increase in the operation room temperature decreased hypothermia occurrence probability by 91.6%. The hypothermia occurrence probability of the patients receiving warmed fluid infusion, forced-air warming, and cotton roll covering was lower than that of the patients who did not receive these measures, respectively. **Conclusions:** The hypothermia occurrence rate increases with age and operation time. The relevant factors of intraoperative hypothermia occurrence are operation time, cisatracurium dosage, postinduction body temperature, blood transfusion product used, operation room temperature, and warming measures applied.

Keywords: Hypothermia, spine surgery, preventive method, low body temperature

Create a Smart Amusement Park with a Virtual Queuing Mechanism

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Abstract

Queuing in an amusement park is helpless for rising visitors' satisfaction and operator's revenue. Therefore, the Taiwan Tourism Bureau cooperated with a Taiwanese startup in launching a mobile App with virtual queuing mechanism. This service was officially launched on September 19, 2016, at Leofoo Village Theme Park which is the most popular amusement park in Taiwan. The implementation results show that plenty queuing time of visitors is saved and the satisfaction ratio in effortless queuing for rides, and the brand image of the Park are both higher than before. This new service indeed solves the queuing problem and raise the potential consumption.

Keywords: Smart tourism, virtual queuing, amusement park

Agenda

Feb. 2, 2018 (Friday)

Session K **13:30-15:30** **Room:** Rupinasu

Session Chair: Wenchieh Wu
St. John's University, Taiwan

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The Relationship between Functional Diversity and Team Creativity/Team Performance: The Mediating Effect of Relationship Conflict and Team Identification, and the Moderating Effect of Social Identity Threat and Workplace Spirituality

Younghee Rhee Sungkyunkwan University
Yong Won Suh Sungkyunkwan University

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St. John's University, Taiwan

Transformational Leadership Effectiveness Across Individual Differences – The Mediated Effect of Leader's Justice

Yunsung Jung Sungkyunkwan University
Soeun Yoo Sungkyunkwan University
Yongwon Suh Sungkyunkwan University

Ethical Leadership and Follower Helping Behavior and Performance: The Role of Follower Affective Trust and Affective Commitment

Tzu Shian Han National Chengchi University
Tzu Hsiang Chen National Chengchi University

Perceptions of Social Responsibility: A Comparative Study of Purchasing Professionals in Taiwan and China

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Abstract

Social responsibility in purchasing affects purchasing decisions, business reputations and consumer evaluations. The main purpose of this study is to take purchasing professionals in Taiwan and China as research subjects to investigate the difference in purchasing professionals' perceptions of social responsibility between these two areas. Data were collected through a questionnaire survey of purchasing professionals across a broad spectrum of industries in Taiwan and China. Research findings reveal that there are significant differences in perceptions of responsibility between Taiwanese and Chinese purchasing professionals.

Keywords: Social responsibility, purchasing professionals, Taiwan, China

What Do We Learn from Investigation of Students' Reaction of Classroom Learning in Different Countries?

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Abstract

This study focus on investigation on sources of stress among higher education of university students in different area as Taiwan, NZ, USA and China. The study was a cross sectional survey and the population comprised convenient samples. The data collected were analyzed using mean, standard deviation, and ANOVA for the research questions. The results indicated extracted factors are different in four places, the degree of attention according to communication with teacher, socialization, anxiety, part-time work, personality, future expectation.

Students feel depressed when they confront with stress and that will deter their learning. From the comparison among three countries, we found that there is difference in 4 places; Students care about extracted factors, these stress need to be eliminate, but there are also some differences in different countries, we figure out the possible solution and giving some suggestions for the future curriculum design.

Keywords: Classroom assessment, psychological measurement, pressure, teachers

The Effects of Challenge and Hindrance Stressors on Work Engagement and Emotional Exhaustion through Psychological Detachment - Moderating Effect of Perceived Controllability

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Abstract

This paper examines psychological detachment from work during non-work time as a partial mediator between two stressor types (i.e., challenge and hindrance stressors) and work engagement on the one hand emotional exhaustion on the one hand. Survey data were collected from 284 employees in general companies. Analyses showed that two stressor types were related to poor psychological detachment. Perceived controllability was a moderator between the stressors and psychological detachment. Only Hindrance stressors negatively affected work engagement through psychological detachment, and each stressor type positively affected emotional exhaustion through psychological detachment. Furthermore, the effects of each stressor type on work engagement and emotional exhaustion through psychological detachment depend on the perceived controllability.

Keywords: Challenge and hindrance stressors, perceived controllability, psychological detachment, work engagement, emotional exhaustion

Effects of Functional Diversity on Team Performance via Information Sharing: A Moderated Mediation Model of Leader Openness

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Abstract

The present study concentrates on two important aspects influencing team dynamics: diversity and leadership. Functional diversity is expected to facilitate exchange of diverse perspectives and opinions, fostering emergence of productive team processes, which will in turn increase team performance. In addition, the current study proposes that leader openness will encourage team information sharing in homogeneous team, where information is less actively shared. A leader who sincerely listens to subordinates will allow team members to perceive less threat in voicing out thoughts and opinions, leading to active communication and exchange of information.

The results show that functional diversity was positively related to team performance, and information sharing partially mediated this relationship. Leader openness moderated the relationship between functional diversity and information sharing. Lastly, a moderated mediation index of leader openness on functional diversity, information sharing, and team performance was statistically significant. The results indicate that information sharing is crucial for team performance, and in order to facilitate information sharing, organizations should diversify team composition in terms of members' functional background and leaders should show openness towards subordinates. The findings of the present research have both theoretical and practical implications for organizations in terms of effective team management.

Keywords: Functional diversity, information sharing, leader openness

The Relationship between Functional Diversity and Team Creativity/Team Performance: The Mediating Effect of Relationship Conflict and Team Identification, and the Moderating Effect of Social Identity Threat and Workplace Spirituality

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Abstract

Creativity is critical in an ever-changing environment where technology is developing in such a rapid pace. In order to meet such demands, teams with diverse workers who perform various functions within an organization are emphasized as those workers can provide various information and perspectives based on their jobs, which can facilitate team creativity. However, social-categorization perspective of diversity suggests otherwise. According to social-categorization perspective, functionally diverse teams could negatively affect teams' creativity and performance through relationship conflict and degradation of team identification, especially in the face of social identity threat. However, this study suggests workplace spirituality can moderate the negative effects of social categorization, therefore; workplace spirituality can decrease the detrimental effects of diversity on team creativity and team performance.

Keywords: Functional diversity, relationship conflict, team identification, social identity threat, workplace spirituality, team creativity, team performance

Transformational Leadership Effectiveness Across Individual Differences – The Mediated Effect of Leader's Justice

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Abstract

Many researchers refer that transformational leadership is one of the effective leadership. However, in the meta-analysis, transformational leadership effectiveness has decreased. To examine the reason, we suggest that individual differences have an effect on the perception of transformational leadership effectiveness. This study suggests that people who show collectivist think transformational leader as an effective leader to compare with individualist. To be specific, when people work with the transformational leader, collectivist perceived more justice than individualist. Then, followers who perceived more justice will show a positive with organizational citizenship behavior (OCB). To analyze this study, we used hierarchical analysis to measure moderated effect and PROCESS Macro to measure the mediated effect and moderated mediation effect. The result reveals that the collectivist perceived more leader's justice, and it also predicts more OCB. Also, only collectivist gruop reveal significant on mediated effect.

Keywords: Transformational leadership, individualism, collectivism, perceived leader's justice, organizational citizenship behavior, OCB

Ethical Leadership and Follower Helping Behavior and Performance: The Role of Follower Affective Trust and Affective Commitment

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Abstract

The purpose of this study is to investigate the mediating effects of affective commitment and affective trust on the relationship between ethical leadership and employees' helping behavior and task performance. Drawing on social exchange theory, ethical leadership is found to positively relate to employees' helping behavior and task performance. Besides, this relationship is mediated by affective trust and affective commitment. Theoretical and practical implications are discussed and future research possibilities have also been suggested.

Keywords: Ethical leadership, affective trust, affective commitment, helping behavior, task performance

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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 three 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 presented by session chair after finishing the presentation in the meeting room.

Best Paper Award

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.

Voucher

After finishing the presentation, the attendee/presenter will get a US$100 voucher on site. The voucher can be redeemed for US$100 cash, in one of our next two events at the conference on-site registration desk.

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During the conference, an LCD projector, screen and laptop (notebook) computer will be provided for each meeting room. Any additional equipment needed is at the discretion of the presenter, and it will be his or her responsibility to provide the extra equipment.

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Pre-conference registration desk will be open from 15:30 to 16:30 Jan. 30, 2018 on lobby.
The conference registration desk will be open from 07:30 to 17:00 Jan. 31-Feb. 1, 2018 and 07:30 to 15:00 Feb. 2, 2018 on 3F.

Lunch

Refreshments and three lunches are included in the conference registration fee. Lunch would be provided for registered (paid) participants only. The lunch time is 12:10-13:30 at Green House (1F).
And please note that:
1. Each lunch ticket is only valid for the current day.
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