

編者的話

本期學報（23 卷 3 期）共收錄了四篇論文，各篇的主題簡述如下：

林淑瓊、張銀益、林衛國、王之廷之「以體驗行銷觀點探討網路商店促成購買衝動之影響因素」：近年來體驗行銷逐漸受到了重視，網路商店也希望能藉由塑造消費者整體瀏覽的愉快體驗，促使消費者有購買的衝動。該研究結合體驗行銷觀點與 Stimulus-Organism-Response (SOR) 理論探討網路商店提供的整體體驗與消費者的購買衝動之影響關係，其中以體驗行銷的感官、情感、思考、行動與關聯等五種體驗模組作為環境刺激的因子。研究中針對有網路購物經驗者進行資料蒐集，共得 343 份有效樣本，以最小平方法 (PLS) 進行實證分析。研究結果說明，消費者的購買衝動主要來自於內心的感情狀態影響，而感情會受到主觀的認知作用影響，同時情感體驗是主要影響內在感情的因素，思考、行動與關聯體驗則是影響內在認知的因素，其中又以思考體驗影響最大。該研究結果可提供網路商店行銷策略之經營與學術未來的研究方向。

胡雅涵、翁政雄、楊亞澄之「運用關聯規則及改變探勘技術於防火牆政策規則優化」：防火牆設備是企業最普遍的網路防護設施，隨著網路環境的改變，防火牆政策規則須不斷的更新，才能維持防火牆功能的正常運作。如何從防火牆日誌記錄中挖掘出有意義的規則，並且適時依據防火牆日誌記錄的變動篩選出不同樣式的規則，進而調整防火牆政策規則是一項有值得研究的議題。該研究嘗試整合關聯規則探勘 (Association rule mining) 及改變探勘 (Change mining) 技術，提出 Change-Based Association Rule Mining (CBARM) 方法。首先，從防火牆日誌記錄中挖掘出有意義的規則，進而運用改變探勘技術辨識出新興樣式 (Emerging patterns)、新增樣式 (Added patterns) 及消失樣式 (Perished Patterns) 等 3 種不同樣式的關聯規則。最後，將具有不同樣式的關聯規則運用於防火牆政策規則的調整，藉以提升防火牆效率。經實驗結果得知：CBARM 方法效能提升 (封包比對次數減少) 相較於 Apriori 方法約 95.19% 至 582.19%。平均而言，效能約提升 212.10%。

張益誠、劉妝君、張馨文之「企業採用雲端運算之因素」：資訊科技與網際網路日趨進步，許多知名資訊服務業大廠於近年積極佈局該市場，形成雲端運算蓬勃之勢。但對於企業而言，採用雲端運算實則是一項複雜之決策。該研究以創新擴散理論與過往相關學術研究文獻為基礎，探討影響企業對於雲端運算採用之因素，郵寄紙本問卷調查 2,100 間公司，共回收 294 份有效問卷，有效問卷回收率

為 14.07%。由區別分析之結果發現，顯著影響企業採用雲端運算之原因依序為下列八項因素—安全性、相對利益、成本、組織成員資訊能力、可攜性、組織領導者具備知識、政府支持、高階主管支持。此結果可提供未來欲導入雲端運算之企業，會計師事務所、資訊服務業者、政府機關等作為參考。

廖子賢之「行動虛擬社群感 (SOMVC)：「量表發展」與「前因後果模型建構」：該研究旨在發展 SOMVC 量表 (研究一)、及建構其前因後果模型 (研究二)。透過「社群感」與「虛擬社群感」文獻，並考慮行動上網特性，該研究發展 SOMVC 量表之構面與問項；透過整合「社會影響理論」與「社群忠誠」，該研究發展 SOMVC 整合模式。該研究進行四次問卷調查，以便利性抽樣，針對台灣地區 Facebook 之大學生使用者進行調查。研究一包含 304 份有效問卷 (第一次問卷調查：119 份；第二次問卷調查：185 份)；研究二包含 326 份有效問卷 (第三次問卷調查：123 份；第四次問卷調查：203 份)。研究一結果發展出 15 題「行動虛擬社群感」量表，並包含五個構面：成員身分、影響力、需求的整合與滿足、共享情感連結、行動連繫與溝通。研究二結果發現「社會影響因素」(即：群體規範、社會認同、主觀規範)正向顯著影響「行動虛擬社群感」；「行動虛擬社群感」正向顯著影響「社群忠誠」。「行動虛擬社群感」會「完全中介」「社會影響因素」對「社群忠誠」之影響。最後，在「社會影響因素」之間，「群體規範」正向顯著影響「社會認同」；「社會認同」正向顯著影響「主觀規範」。

總編輯

李有仁 講座教授

資訊管理學系

國立政治大學

台灣台北文山區

2016 年 7 月

Editor's Introduction

In this issue of *Journal of Information Management*, we are delighted to present four research papers. The summaries of these papers are as follows.

Recently, experiential marketing has gained much attention in the context of online shopping. Online stores motivate consumers to buy impulsively through creating the holistic experience of enjoyable browsing. Based on the integrated perspective of experiential marketing and Stimulus-Organism-Response (SOR) theory, Shu-Chiung Lin, Yin-Yih Chang, Wei-Kuo Lin and Chi-Ting Wang in their paper "Determinants of promoting the urge to buy in online store based on perspective of experiential marketing" embed experiential module in "Organism" of SOR model which precedes internal affect/cognition responses. It explores the mediation effects in customer's mind between external experience providers and internal responses. The study investigates how the impact of the holistic experience provided by e-store on consumers' impulse buying. The experiential marketing encompasses five dimensions (i.e., sense, feel, think, act, and relate) and each of them is regarded as an environmental stimulator. The 343 valid responds are collected through web questionnaire and analyzed by partial least squares (PLS). The findings show that the consumer's urge to buy is influenced by internal affect response which is impacted by internal cognition response. Meanwhile, the feel module of experiential marketing mainly influences internal affect response of consumers, while the think, act, and relate modules of experiential marketing influence internal cognition response of consumers. The result of the study can help online stores manage their marketing strategy and also be useful for future academic research. The sense module has become a "common sense" to customers. Relating feel module with internal affect response and think module with internal cognition response are first priority.

Ya-Han Hu, Cheng-Hsiung Weng and Ya-Cheng Yang in their paper "Applying association rule and change mining techniques for firewall policy optimization" are the first to extend association rule mining and change mining techniques to the domain of firewall log analysis, creating a new approach to optimizing firewall policy rules. A firewall is the network security system most frequently used by enterprises. Because of changes in the dynamic network environment, firewall policy rules must be constantly

updated to maintain efficient firewall operation. Thus, the aim of their study is to optimize firewall policy rules and improve firewall efficiency by using association rules discovered in firewall logs. The paper proposes change-based association rule mining (CBARM), which integrates association rule mining and change mining techniques, to discover meaningful firewall policy rules in firewall logs. Specifically, CBARM first determines pertinent association rules by using firewall logs from different time periods. Subsequently, the change mining technique is used to identify emerging, added, and perished patterns. Finally, the three types of patterns can be utilized to optimize the firewall policy rules and enhance firewall efficiency. The firewall logs were collected from a technology company in Central Taiwan. The total number of rules matched in the firewall was used as a performance measure. The experimental results revealed that the proposed CBARM outperformed the Apriori approach, reducing the number of compared network packets with firewall policy rules by approximately 95.19% to 582.19%. On average, the performance of the proposed CBARM was 212.10% more effective than that of the Apriori approach. The study investigated the firewall logs from one company only. Evaluating the logs from other companies is critical for confirming validity. In addition, future studies can integrate other data mining and machine learning techniques to refine the performance of the proposed method. Two practical implications are provided. First, the association-rule mining technique is proven to derive useful firewall policy rules in firewall logs. Second, using the change mining technique can facilitate evaluating the generated rules and applying such rules to optimize firewall policy rules.

I-Cheng Chang, Chuang-Chun Liu and Hsin-Wen Chang in their paper “Critical factors of cloud computing adoption” argue that, there has been limited empirical study on determining what factors influence the adoption of cloud computing. With advances in information technology and Internet, cloud computing has become more popular. Their study provides a comprehensive framework to facilitate decision makers to consider their cloud computing projects. The effort of many famous information technology service providers increasingly expands the market share of cloud computing industry and affecting the trend of cloud computing adoption. For a company, the decision of adopting cloud computing is complicated. In view of this new information technology trend, the main purpose of the study is to examine the critical factors of cloud

computing adoption based on Innovation Diffusion Theory and past research. The study collected quantitative data via questionnaire. The survey was conducted among 2,100 enterprises in Taiwan, 294 usable responses were obtained with the response rate of 14.07%. The study found that security, relative advantage, cost, employees' information technology skill, portability, leader's information technology knowledge, government support, and top management support have significant effect on cloud computing adoption. The study suggested future works could employ certain qualitative methods such as case study to explore more reasons of adopting cloud computing. The results shed light on various companies, CPA firms, information technology service providers, and government for cloud computing adoption. The non-adopting companies also could refer to the results when they plan to implement cloud computing technology.

Tze-Hsien Liao in his paper "Sense of mobile virtual community (SOMVC)": states that the sense of virtual community (SOVC) concept has been widely discussed and applied since the 2000s because of the growth of the Internet. With mobile Internet becoming increasingly popular, the study first introduced the concept of SOMVC and developed the SOMVC measurement and integrated model. In two studies, the study developed a measurement (Study 1) and an integrated model (Study2) of SOMVC. On the basis of the past literature on Sense of Community, SOVC, and Mobile Connection and Communication (i.e., the characteristics of mobile Internet), the study aimed to develop the dimensions and items of SOMVC. The integrated SOMVC model was developed by integrating Social Influence Theory and community loyalty. Four surveys were conducted through convenience sampling of college students who were also Facebook users participated in the study. Study 1 included 304 valid samples (119 from first survey; 185 from second survey) and Study 2 collected 326 valid samples (123 from third survey; 203 from fourth survey). First, the study developed a 15-item measurement of SOMVC that included 5 dimensions: Membership, Influence, Integration and Fulfillment of Needs, Shared Emotional Connection, and Mobile Connection and Communication. Second, the study found that Social Influence Factors (i.e., Group Norm, Social Identity, and Subjective Norm) significantly and positively influenced SOMVC, whereas SOMVC significantly and positively influenced Community Loyalty. SOMVC fully mediated the relationship between Social Influence Factors and Community Loyalty. Finally, within Social Influence Factors, the study found that Group Norms

significantly and positively influenced Social Identity, and that Social Identity significantly and positively influenced Subjective Norm. Future research can study other segments to retest the SOMVC measurement. In addition, future studies can compare the integrated model between different types of virtual communities (i.e., transactions, interest, fantasy, and relationship) and include moderators (e.g., susceptibility to interpersonal influence) in the integrated model. The study verified that SOMVC positively influenced members' Community Loyalty; hence, increasing the SOMVC is crucial in maintaining a virtual community. The study suggested 3 approaches to increase the SOMVC: strengthen specific topics, purposes, values, and the vision of the virtual community to internalize them as members' beliefs (i.e., Group Norm); design a feedback or recommendation mechanism in the virtual community to increase recommenders' Social Identity; assign leaders in the virtual community to establish common norms and rules, and then influence members to participate in the community (i.e., Subjective Norm).

Finally, on behalf of the editorial team, we would like to thank all the authors and reviewers for their collaborative efforts to make this issue possible. It is our sincere wish that this journal become a bilingual knowledge exchange platform among information systems researchers around the world.

Eldon Y. Li, Ph.D., CPIM, CDE

Editor-in-Chief

University Chair Professor and Chairperson
Department of Management Information Systems

College of Commerce

National Chengchi University

Taipei, Taiwan

July 2016