

兩性採用自助服務科技路徑比較

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摘要

本研究以「科技接受模型」為基礎，將媒體豐富性當外部變數，並依據社會角色理論中兩性行為模式不同，將「性別」做為調節變數納入考量，來探討兩性使用自助服務科技行為上之差異。本研究針對現場使用 7-11 ibon 使用者為主，採攔截抽樣方式回收問卷。問卷有效樣本 445 份，分析工具採 SPSS 17.0 與 AMOS 5.0 進行結構方程模式的測量與結構模式分析，研究結果顯示：(1) 媒體豐富性對知覺有用性與知覺易用性呈正向的影響關係，且男性大於女性；(2) 知覺易用性對知覺有用性與使用態度呈正向的影響關係，且女性大於男性；(3) 知覺有用性對使用態度與行為意圖呈正向的影響關係，且男性大於女性；(4) 使用態度對行為意圖呈正向的影響關係，且女性大於男性。最後，依據研究結果提供討論意見外，更提供實務上的建議。

關鍵字：自助服務科技、科技接受模型、媒體豐富性、社會角色理論

A Path Comparison of Self-Service Technology Adoption between Gender

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Abstract

Based on the technology acceptance model (TAM), media richness and the social role theory, this research proposes a model to investigate the factors affecting the adoption of SST and how the gender effect influences the attitude toward the adoption of self-service technology. To test the model, we collected data from 7-Eleven ibon users. A total of 445 valid responses were obtained. We used AMOS 5.0, a structural equation modeling (SEM) tool, to validate the measurement and structural models. The results are as follows: (1) the influence of media richness on perceived usefulness (PU) and perceived ease of use (PEOU) was significant and positive. And the gender effect showed that males were higher than females; (2) the influence PEOU on PU and attitude was significant and positive. And the gender effect showed that females were higher than males; (3) the influence of PU on attitude and behavioral intention was significant and positive. And the gender effect showed that males were higher than females; (4) Attitude had a positive influence on behavioral intention. And the gender effect showed that females were higher than males. Implications for academics and practitioners are discussed.

Key words: Self-service technology、Technology Acceptance model、media richness、Social role theory

第一章 緒論

第一節 研究背景與動機

自助服務科技 (Self-Service Technology, SST) 所帶來的方便和效率是現代人所不能缺少的一環，銀行的自動提款機 (ATM)、交通系統的自動售票機與公共場所的資訊查詢站都是自助服務科技的一種。自助服務科技可以降低勞動成本、提高工作效率、增加生產量與替企業帶來績效 (Bitner, Zeithaml & Gremler, 2010; Dabholkar, 1996)。Meuter et al. (2000) 認為自助服務科技創造新的服務且提供越來越多功能，並改變了顧客與企業互動。銀行透過網路提供產品與服務越來越多，銀行也透過網路提供顧客網路銀行 (Chau & Lai, 2003)。也替企業提供多樣的銷售通路 (Grewal & Levy, 2009)。換句話說，自助服務科技是一種替企業與顧客創造不同關係，企業可以透過自助服務科技的特性來提升利潤，而顧客可以打破時間與空間限制來使用企業提供的服務，不管是對企業或顧客都是有利。然而，近年來台灣零售業便利商店也導入了自助服務科技中的互動式 Kiosk 來提供顧客更多的服務。

從台灣零售產業來看，大型量販店或購物中心所設置的自助服務科技都以提供資訊查詢為主，例如：家樂福、好市多、夢時代...等，主要提供商品查價、紅利積點查詢與空間導覽等服務。台灣便利商店的應用則以電子商務為主，其中以萊爾富 Life-ET 的導入時間最早，7-11 ibon 居次，而全家 FamiPort 則是最後導入便利商店市場。便利商店透過互動式 Kiosk 提供的功能更多元及連接更多機構，有售票、購買商品與兌換紅利...等許多綜合性功能，且顧客更可以透過系統向高鐵訂定車票或是查詢停車費。自助服務科技已轉變不只是單一企業對單一顧客，而是自助服務科技提供一個平台，讓眾多企業增加新管道提供顧客服務。基於以上論述，我們瞭解自助服務科技隨人們需求而不斷變化，自

助服務科技提供多功能服務已然成為一種趨勢。

根據行政院公平交易委員會對全國主要連鎖便利商店業者進行產業調查，據 2010 年 12 月調查資料，截至 2010 年底主要 3 家連鎖便利商店營業據點數合計逾 9,000 店。另依據調查資料顯示，其每店平均服務人數，台北市 1,870 人，高雄市 2,856 人、台中市 1,956 人，足見連鎖便利商店在大都會區競爭甚為激烈。行政院公平交易委員會調查，自 1999 年至 2009 年間台灣連鎖便利商店門市總店數均呈增加趨勢，由 1999 年 4950 店增加為 2009 年 9245 店，十年的平均年增率為 6.45%。綜觀近十年來淨展店數，以 1999 年的 1002 家最高，之後逐漸減少，2007 年降至 42 店，雖 2008 年增為 133 店，惟 2009 年又再降為 41 店。亦顯示便利商店受到台灣面積的影響已趨近於飽和狀態。

現階段便利商店大多放緩展店計畫，除販賣商品外，也積極推出各種代收費用、宅配服務、預購商品及互動式 kiosk 等更多元化之服務。截至 2011 年 1 月底 7-11 店數達 4,790 家，市占率超過 50% 穩站便利商店龍頭寶座，而 7-11 ibon 功能至今結合 7-11、企業與政府相關業務，已提供達 6 萬多服務功能，統一企業亦指出由於 7-11 ibon 推出「ibon 量販便利購」更帶動門市日常生活用品成長 4 成。從 2009 年 8 月出爐的東方線上資料來看，三個月內有去便利商店之消費者中，97.2% 皆有去過 7-11，其中使用 ibon 相關服務者達 85.1%。7-11 指出每日使用 ibon 的人數更高達 30 萬人次。從以上數據可以瞭解雖然展店數降低，但營收卻透過 ibon 而蒸蒸日上，且到店大多數的顧客皆使用過 ibon，故 ibon 可以提升 7-11 坪效並創造業績。

Rowley (1995) 認為早期的 Kiosks 是一種索然無味，有著單調的介面、設計，僅允許顧客進行簡單的交易 (Rowley & Slack, 2000)。猶如早期的自動販賣機與公共電話亭僅能提供顧客較為單一與簡易的服務。但隨科技不斷提升 kiosks 也不斷進步。21 世紀的 kiosks 可透過網路提供即時訊息與溝通功能 (Slack & Rowley, 2002)。另一方面，kiosks 也被當做政府、政府部門和地方政府能讓人民處理相關事務的科技 (Slack & Rowley, 2004)。因此 kiosks 隨

時間演變至今已具有網路外部性與溝通平台特性的 kiosks，顯然有別於早期簡單且枯燥無味的 kiosks。7-11 ibon 被稱為多媒體事務機 (Multi-Media Kiosk, MMK) 亦為 kiosks 的一種。綜合上述，7-11 ibon 特色是受到網路的外部性影響，能有效透過整合機制且具有公信力，放置在 7-11 門市內建立起虛實整合的 kiosk。因此，面對不同以往的 kiosk 有必要再進行研究。

21 世紀的 Kiosks 是具有多功能的，包含：提供資訊、提供消費者一個客製化資訊的介面、交易、或透過忠誠計畫與其他的溝通管道來跟消費者建立關係 (Slack & Rowley, 2002)。經由上述論述中，不難發現 21 世紀的 kiosks 是一種嶄新的媒體，消費者透過它連結企業與政府來處理更多元的事務，且不只能提供單一的資訊，更能提供多樣化的訊息與功能。然而，當人們遭遇困難的、具疑問性質的訊息會選擇豐富性較高的媒體來傳遞 (Daft & Lengel, 1986)。當消費者遭遇到困難與問題時，便可透過新式 kiosks 來解決所遭遇的窘境，而 7-11 ibon 亦提供許多服務來解決消費者所遭遇到的問題，例如：繳停車費、購買票務、列印與掃瞄…等，只需透過 ibon 便可解決許多問題，因此媒體豐富性便是 7-11 ibon 的重要特色。

豐富性高的媒體有助於減低模糊性，當透過該媒體取得更多資訊時，便可降低不確定性產生 (Daft & Lengel, 1986)。因此，豐富性較高的媒體亦對決策品質有正向影響 (Kahai & Cooper, 2003)。換句話說，豐富性較高的媒體可以讓消費者面對問題時降低不確定，且經由該媒體提升決策品質，亦即媒體豐富性對於消費者的決策過程與結果是有影響的。然而，許多媒體豐富性的研究都會探討媒體配適性的知覺 (perception of media fit)，而非該媒體真實的使用效果，但後者應是主要的關注焦點 (Dennis & Kinney, 1998)。因此，本研究探討媒體豐富性如何影響消費者的持續使用行為，並關注 7-11 ibon 所能提供給消費者的使用效果來進行研究。

Mcgrath and Hollingshead (1993) 將媒體豐富性由低至高排序分別為文字、

聲音與影像。因此媒體所能傳達給使用者豐富程度較高的是影像，廣告也是一種影像的傳遞。然而，在一些相關研究中發現兩性對於接受廣告資訊行為不同。張卿卿（2004）探討兩性對於廣告效果的反應，其研究結果發現女性較男性易受到廣告影響。Harris et al.（1993）探討兩性對於廣告真實度的反應，研究結果亦發現男性較女性對廣告訴求方式抱持負面態度。兩性受到不同社會結構影響，在資訊編碼及資訊處理上決定或引導其知覺因素有所不同（Bem, 1981）。綜合上述，兩性對於影像傳遞確實會受到社會結構不同，而產生不同的解讀方式進而影響其知覺，本研究情境下 7-11 ibon 其使用介面亦為影像傳遞方式，性別不同亦會造成知覺上有所差異，因此將性別納入影響使用者行為關鍵要素考量。

回顧過去探討科技採用相關理論。Davis et al.（1989）針對資訊科技採用提出科技接受模型（Technology Acceptance model, TAM）。被多數學者採用來解釋與實證許多科技接受的行為（Hu et al., 1999）。然而，Venkatesh et al.（2003）亦提出科技接受與使用統一理論（Unified Theory of Acceptance and Use of Technology, UTAUT），並將人口統計中的性別納入考量。因此，從實證研究中亦發現性別在科技採用行為研究已被學者所重視。Kotler and Armstrong（2010）認為人口統計變數中的性別是重要的市場區隔變數之一。因此透過瞭解兩性採用自助服務科技行為的差異，便可進行差異化行銷（differentiated marketing）來制定不同行銷手法讓兩性增加持續採用自助服務科技行為。然而，過去研究在探討科技採用行為從性別角度切入的相關文獻並不多（Gefen & Straub, 1997）。因此，本研究將性別視為重要的關鍵要素考量，透過釐清性別效應對採用自助服務科技行為影響，來瞭解兩性採用自助服務科技行為差異之處。

綜合以上論述，本研究試圖從科技接受模型來探討本研究主題之適用性，然而除了考量使用者自身的對 7-11 ibon 使用感受外，亦將 7-11 ibon 的媒體豐富性與使用者性別的調節效果納入考量，以提供更深入與全面觀點來瞭解自助服務科技使用行為。

第二節 研究目的與研究問題

國內三大便利商店皆有提供多媒體事務機，但關於探討多媒體事務機的相關研究仍然相當少，且從性別行為差異觀點來進行研究又更少，便利商店的多媒體事務機漸漸成為人們依賴的工具，如果能夠更有效的推廣更多消費者來使用，亦是在便利商店數飽和中的另一個出路，因此便利商店自助服務科技如何加強顧客接受度是業者所需正視的重要課題。本研究欲採用 Davis et al. (1989) 針對資訊科技採用提出科技接受模型 (Technology Acceptance model, TAM) 為基礎。此外，豐富性較高的媒體亦對決策品質有正向影響 (Kahai & Cooper, 2003)。因此將媒體豐富性視為外部變數考量，輔以社會角色理論 (Social role theory, SRT) 性別行為差異的觀點，來探討消費者使用自助服務科技之行為，並瞭解各構念間的關係，因此本研究主要研究目的為「以科技接受模型為基礎並結合媒體豐富性與社會角色理論來探討影響消費者使用 7-11 ibon 之因素。」。另外，本研究試圖透過文獻探討與研究結果來回答以下研究問題：

- 一、媒體豐富性如何影響知覺有用性與知覺易用性？
- 二、性別效用是如何去影響使用者的行為？
- 三、在兩性行為差異的前提下，男性與女性採用自助服務科技行為不同之處是什麼？

第三節 預期貢獻

透過探討媒體豐富性與科技接受行為之間的關係，將研究結果應用在科技管理上，例如：企業在導入資訊系統、開發系統介面或功能性的建構時，皆需思考使用者的易用性與有用性，藉以提升使用態度，達成持續使用的目的。此外，探討兩性在採用科技行為上的差異，藉由釐清性別效應的影響，可以建構更完善的系統建置與行銷模式，來讓消費者接受採用或持續使用。

第四節 研究流程

本研究首先擬定研究方向，並根據研究動機與目的來蒐集相關參考理論與文獻，來建構研究架構與假說。接著透過文獻探討來進行問卷設計，並透過前測結果來修正問卷內容，確認無誤後，隨即進行正式問卷的發放與回收，最後根據回收之資料進行整理、歸納與統計分析，再根據分析結果提出研究結論與建議。研究流程如下圖 1-1 所示：

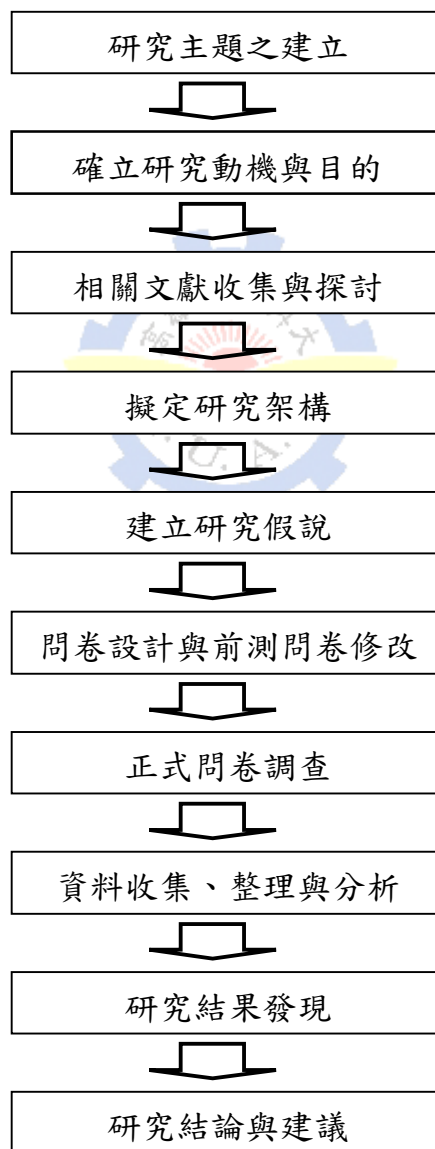


圖 1-1 研究流程圖

資料來源：本研究整理

第五節 論文架構

本研究之內容結構可分為以下五章：

第一章 緒論

說明本研究之研究背景、研究動機、研究目的與問題、預期貢獻及研究流程。

第二章 文獻探討

蒐集與討論自助服務科技的定義及發展，整理及回顧科技接受模式、媒體豐富性與社會角色理論相關文獻。

第三章 研究設計與研究方法

提出本研究之架構及假說，並說明各構念之操作性定義與衡量方式、設計問卷、決定抽樣方法、問卷回收、樣本結構，並說明資料分析方法。

第四章 研究結果分析

包括樣本基本分析、敘述統計分析、信效度分析、相關分析、線性結構模式分析、調節分析與路徑分析並進行研判及彙總。

第五章 結論與建議

包括研究結論、研究貢獻、管理意涵、研究限制與建議。

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