

A Study of Smart Phone User's Determinants on Switching from Mobile Phone Call to Mobile Instant Message

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ABSTRACT

Mobile apps development has widely driven by the rapid growth of smart phones and mobile networks. When smart phone users communicate with others using mobile instant message (MIM) they confront a choice of switching from mobile phone call to MIM. In order to understand why smart phone users switch from mobile phone call to MIM, this study aims to investigate smart phone user's determinants on adoption of MIM. Distinct from prior studies adopting the social-psychological models to analyze user's intention toward new technology, this study took a migration viewpoint in human geography to examine the pushing, pulling, and mooring factors influencing smart phone user's adoption of MIM. Based on the validated scales reported by the previous studies, the instrument was developed to test the hypotheses. A total of 549 effective samples were collected from the Internet. The research model and hypotheses were tested by a structural equation modeling (SEM) approach. Results showed that smart phone user's determinants on switching from mobile phone call to MIM included pushing factors (i.e. relative advantage, compatibility, trialability, and service satisfaction), mooring factor (i.e. switching costs), and pulling factors (i.e. subjective norm and alternative attractiveness). Among that, pushing factors were emerged as the major determinants, particularly for the MIM's advantages. The second and third factors were pulling and mooring factors respectively. According to the findings, it is suggested that telecommunication service providers need to enhance their communication and service quality of the mobile phone call in order to prevent losing customers. To expend the MIM population, developers should continuously improve interactivity and usability of MIM software.

Keywords : mobile instant message、push-pull-mooring model、switching intention

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REFERENCES

一、中文部分 Lifewin(2011), 台灣民眾最常下載的App類型[線上資料], 來源: <http://life.trendgo.com.tw/epaper/2824> Pollster波仕特線上市調(2011), 簡訊能不能被代替? [線上資料], 來源: <http://www.pollster.com.tw/Default.aspx> 資策會MIC(2011), 全球智慧型手機銷售量[

線上資料], 來源: <http://mic.iii.org.tw/aisp/default.asp> 資策會FIND(2011), 我國行動上網觀測[線上資料], 來源: <http://www.find.org.tw/find/home.aspx?page=many&id=288> 國家通訊傳播委員會NCC(2011), 台灣行動上網數據[線上資料], 來源: <http://www.ncc.gov.tw/> 資策會MIC(2011), 台灣行動應用軟體市場發展概況[線上資料], 來源: <http://mic.iii.org.tw/aisp/default.asp> 創市集市場研究顧問公司(2012), 網路電話篇[線上資料], 來源: <http://www.insightxplorer.com/index.html> 維基百科, 即時通訊軟體[線上資料], 來源: <http://zh.wikipedia.org/wiki/%E5%8D%B3%E6%99%82%E9%80%9A%E8%A8%8A> 維基百科, 行動即時通訊[線上資料], 來源: http://en.wikipedia.org/wiki/Mobile_instant_messaging 李正文, 陳煜霖(2005), 服務品質、顧客知覺與忠誠度間關係之研究-以行動通訊系統業為例, 顧客滿意學刊, 1(1), 51-84。 廖焜熙(2012), 服務品質、顧客滿意度、顧客忠誠度關係之實證研究 - 以行動電信業為例, 中華理論結構模式 LISREL 學會, 5(1), 50-70。 翁振銘, 王舒民, 林娟娟(2010), 影響行動即時通訊服務採用行為因素之研究, 電子商務研究, 8(4), 521-544。 陳煒煌, 陳世智, 林俊佑(2011), 科技準備度與消費者轉換成本對轉換作業系統意圖關係之研究 - 以微軟作業系統為例, 電子商務研究, 9(2), 133-156。 莊懿妃, 林宗延(2009), 行動電話服務滿意度、轉換障礙與競爭吸引力影響轉換意願之研究, 行銷評論, 6(1), 127-148。 徐純慧, 王董文(2011), 轉換成本之內涵及其對顧客忠誠的影響-以線上購物平台為例, 行銷評論, 8(3), 295-314。 林秀芬, 趙時樑, 王誠熙(2011), 即時通訊軟體使用意願影響因素之研究-以海運承攬業為例, 電子商務研究, 9(1), 35-60。 巫昌陽, 顏財發, 蔡淑娟(2009), 休閒農場遊客滿意對承諾的影響:以轉換成本替代吸引力為干擾變項, 人文社會科學, 3(3), 158-174。 江仲偉(2005), 建構網路電話服務之關鍵成功因素, 國立中央大學資訊管理研究所碩士論文。 唐錦超(2006), 創新的擴散, 台北:遠流出版事業股份有限公司。 張紹勳(2001), 研究方法。 台北:滄海書局。 二、英文部分 Agarwal, R., and Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences*, 28(3), 557-582. Ajzen, I., and Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. New Jersey: Prentice-Hall. Anderson, E., and Weiss, A. M. (1992). Converting from independent to employee salesforces: The role of perceived switching costs. *Journal of Marketing Research*, 29(3), 101-115. Anderson, E.W., Fornell, C., and Lehmann D. R. (1994). Customer satisfaction, market share, and profitability: Finding from Sweden. *Journal of Marketing*, 58, 53-66. Anderson, J. C., and Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423. Avus, Y. H., and Ching, C. C. (2011). Cyberspace Migration': Exploring Social Network Sites Switching through Human Migration Theory. *Journal of Information Management*, 19(1), 105-132. Bansal, H. S., and Taylor, S. F., and James, Y. S. (2005). Migrating to new service providers: toward a unifying framework of consumers' switching behaviors. *Journal of the Academy of Marketing Science*, 33, 96-115. Bogue, D. J. (1969). *Principles of demography*. New York: John Wiley. Bogue, D. J. (1977). A migrant ' s-eye view of the costs and benefits of migration to a metropolis. In *Internal Migration: A Comparative Perspective*. New York: Academic Press, 167-182. Bolton, R. N., and Drew. J. H. (1991). A Longitudinal analysis of the Impact of service changes on customer attitudes. *Journal of Marketing*, 55, 1-9. Bourdieu, P. (1984). *Distinction:A social critique of the judgment of taste*. Cambridge, Mass: Harvard University Press. Boyle, P., and Halfacree, K. (1998). Migration and gender in the developed world. Longman, New York. Burnham, T. A., Frels, J. K., and Mahajan, V. (2003). Consumer Switching Costs: A Typology, Antecedents and Consequences. *Journal of the Academy of Marketing Science*, 31(2), 109-126. Caruana, A. (2004). The impact of switching costs on customer loyalty: A study among corporate customers of mobile telephony, *Journal of Targeting, Measurement and Analysis for Marketing*, 12(3), 256-268. Champion, T., and Tony, F. (1992). Editorial Introduction. In *Migration Processes and Patterns*. London: Belhaven Press, 1-14. Cohen R. (1996). *Theories of migration*. London: Cheltenham Publish. Crespo, A. H., and Bosque, I. R. (2008). The effect of innovativeness on the adoption of B2C e-commerce: A model based on the theory of planned behavior. *Computers in Human Behavior*, 24(6), 2830-2847. Deng, Z., Lu, Y., Wei, K. K., and Zhang, J. (2010). Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. *International Journal of Information Management*, 30, 289 – 300. Dick, A. S., and Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework, *Journal of the Academy of Marketing Science*, 22(2), 99-113. Fornell, c., and Larcker, (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. Ganesh J., Mark J., and Kristy E. R. (2000). Under standing the Customer Base of Service Providers: An Examination of the Differences Between Switchers and Stayers, *Journal of Marketing*, 64(3), 65-87. Gardner, R. W. (1981). Macro-level Influences on the Migration Decision Process. In *Migration Decision Making: Multidisciplinary Approaches to Microlevel Studies in Developed and Developing Countries*. New York: Pergamon. Ho, S. H. and Yang, T. Y. (2009). Understanding consumer acceptance of Internet banking-from stayers and switchers' perspectives. *Chiao Da Management Review*, 29(2), 1-20. Hoffer, J. A., and Alexander, M. B. (1992). The diffusion of database machines, *ACM SIGMIS Database*, 23(2), 13-19. Hsu, C. L., Lu, H. P., and Hsu, H. H. (2007). Adoption of the mobile internet: An empirical study of multimedia message service (MMS), *Omega*, 35(6), 715-726. Hu, A. W-L., and I-S. (2006). Hwang, Measuring the effects of consumer switching costs on switching intention in Taiwan mobile telecommunication services, *The Journal of American Academy of Business*, Cambridge, 9(1), 75-85. Ilie, V., Van S. C., Green, G., and Lou, H. (2005). Gender Differences in Perceptions and Use of Communication Technologies: A Diffusion of Innovation Approach, *Information Resources Management Journal*, 18(3), 13-31. Jackson, J. A. (1986). *Migration-In aspects of modern sociology: social processes*. London and New York: Longman. Jones, M. A., David L. M., and Sharon E. B. (2000). Switching Barriers and Repurchase Intentions in Service, *Journal of Retailing*, 76, 259-274. Jones, M. A., David L. M., and Sharon, E. B. (2002) Why customers stay: Measuring the underlying dimensions of services switching costs and managing their differential Strategic Outcomes. *Journal of Business Research*, 55, 441-450. Kaiser, H. F. (1974), An index of factorial simplicity, *Psychometrika*, 39(1), 31-36. Keaveney, S. M. (1995). Customer switching behavior in service industries: An exploratory study. *Journal of Marketing*, 59, 71-82. Kim, M. K., Park, M-C., and Jeong, D. H. (2004) The effects of customer satisfaction and switching barrier on customer loyalty in Korean mobile telecommunication services. *Telecommunications Policy*, 28, 45-159. Kim, H. S., & Yoon, C. H. (2004). Determinants of

subscriber churn and customer loyalty in the Korean mobile telephony market. *Telecommunications Policy*, 28, 751 – 765. Klemperer, P., (1987). The competitiveness of markets with switching costs. *Rand Journal of Economics*, 18(1), 138-150. Klemperer, P.D. (1988). Welfare effects of entry into markets with switching costs. *Journal of Industrial Economics*, 37(2), 159-165. Klemperer, P. D. (1995). Competition when consumers have switching cost: An overview with applications to industrial organization, macroeconomics, and international trade. *Review of Economic Studies*, 62(4), 515-539. Lee, E. S. (1966). A theory of migration. *Demography*, 3, 47-57. Lee, M., and Cunningham L. F. (2001). A cost/benefit approach to understanding service loyalty. *The Journal of Service Marketing*, 15(7), 113-128. Lee, J., Lee, J., and Feick, L. (2001). The impact of switching cost on the customer satisfaction-loyalty link: Mobile phone service in france. *Journal of Service Marketing*, 15, 35-48. Lee, K. C., Chung, N. and Lee, S. (2011). Exploring the influence of personal schema on trust transfer and switching costs in brick-and-click bookstores. *Information & Management*, 48(8), 364-370. Liao, S., Shao, Y. P., Wang, H., and Chen, A. (1999). The adoption of virtual banking: an empirical study. *International Journal of Information Management*, 19, 63-74. Longino, C. F., Jr. (1992). The forest and the trees: micro-level considerations in the study of geographic mobility in old age. *Elderly Migration and Population Redistribution*, 23-34. Lucas, H. C., and Spitzer, V. K. (2000). Implementation in a world of workstations and networks. *Information and Management*, 38(2), 119-128. Michael A. J., David L. M., and Sharon, E. B. (2000). Switching barrier and repurchase intention in service. *Journal of Retailing*, 76(2), 259-274. McDade, S. R., Oliva, T. A., and Pirsch, J. A. (2002). The organizational adoption of high-technology product for use effects of size, preferences, and radicands of impact. *Industrial Marketing Management*, 31(4), 441-456. McDonald, R. R., and Ho, M. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods*, 7(1), 64-82. Moon, B. (1995). Paradigms in Migration Research: Exploring 'Mooring' as a Schema. *Progress in Human Geography*, 19(4), 504-524. Nilssen, T. (1992). Two kinds of consumers switching costs. *Rand Journal of Economics*, 23(4), 579-589. Nunnally, J. C., (1978) *Psychometric Theory*. (2nd ed). New York:McGraw-Hill. Oliver, R. L., and Wayne S. D. (1988). Response determinants in satisfaction judgments. *Journal of Consumer Research*, 14, 495-507. Oliver, R. I. (1997). *Satisfaction: A Behavior Perspective on the Consumer*. NY: McGraw-Hill. Oliver, R. L. (1999). Whence consumer loyalty. *Journal of Marketing*. 63, 33-45. Olsen, S. O. (2007). Repurchase Loyalty: The Role of Involvement and Satisfaction, *Psychology & Marketing*, 24(4), 315 – 341. Pavlou, P. A., and Fygenson, M. (2006) Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly*, 30(1), 115-143. Park, S. Oh, D., and Lee, B. G. (2011). Analyzing user satisfaction factors for instant messenger-based mobile SNS. *Communications in Computer and Information Science*, 185, 280 – 287. Parasuraman, A., Zeithaml, V., and Berry, L. (1994). Reassessment of expectations as a comparison standard in measuring service quality: implications for further research. *Journal of Marketing*, 58, 111-124. Pelling, E.L, and White, K.M. (2009). The theory of planned behavior applied to young people 's use of social networking web sites, *Cyberpsychology and Behavior*, 12(6), 729-733. Ping, R. A. (1993). The effects of satisfaction and structural constraints on retailer exiting, voices, loyalty, opportunism, and neglect. *Journal of Retailing*, 69(3), 321-349. Ping, R. A. (1994). Does satisfaction moderate the association between alternative attractiveness and exit intention in a marketing channel. *Journal of the Academy of Marketing Science*, 22(4), 364-371. Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: The Free Press. Ruyter, K., Bloemer, J., and Peeters, P. (1997). Merging service quality and service satisfaction: An empirical test of an integrative model. *Journal of Economic Psychology*, 18(4), 387-406. Shirley, T., and Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International Journal of Research in Marketing*, 12(2), 137-155. Shin, D. H and Kim, W. Y. (2008). Forecasting customer switching intention in mobile service: An exploratory study of predictive factors in mobile number portability. *Technological Forecasting and Social Change*, 75(6), 854-874. Stimson, R. J., and Minnery, J. (1998). Why people move to the sun-belt ' : A case study of long-distance migration to the gold coast, australia. *Urban Studies*, 35(2), 193-214. Taylor, S. and Todd, P. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144-176. Takacs, S. J., and Freiden, J. B. (1998). Changes on the electronic frontier: Growth and opportunity of the world-wide web. *Journal of Marketing Theory and Practice*, 6(3), 24-37. Walmsley, D. J., Epps, W. R., and Duncan, C. J. (1998). Migration to the New South Wales north coast 1986-1991: Lifestyle Motivated Counterurbanisation. *Geoforum*, 29(1), 105-118. Wixom, B. H., and Watson, H. J. (2001). An empirical investigation of the factors affecting data warehousing success. *MIS Quarterly*, 25(1), 17-41. Zhou, T. and Lu, Y. (2011). Examining mobile instant messaging user loyalty from the perspectives of network externalities and flow experience. *Computers in Human Behavior*, 27, 883-889.