

**FACTORS AFFECTING THE ACCEPTANCE OF E-TICKETING
SERVICES FOR AIRLINE RESERVATION SYSTEM AMONG
UUM**

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FACTORS AFFECTING THE ACCEPTANCE OF E-TICKETING SERVICES FOR AIRLINE RESERVATION SYSTEM AMONG UUM

A thesis submitted to the Graduate School, College of Arts and Sciences partial

Fulfillment of the requirement for the degree Master of Science (ICT)

By

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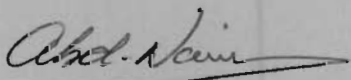
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ABSTRACT

The growth of the IT usage has been tremendous in the world of business today and no doubt it has been widely used in the area of airline industry. The e-ticketing system is one of the examples of such application of the technology. This study is a user-focused research that aims to identify the factors that determine acceptance of e-ticketing system by user. Adapting the technology acceptance model (TAM) as a theoretical framework, this study examines the variables perceived usefulness and perceived ease of use as antecedents of behavior intention to use the technology. Furthermore this study examines the effect of computer self-efficacy as determinant towards perceived usefulness and perceived ease of use. Finding will be expected to show the significant effect of computer self-efficacy in explaining behavior intention though perceived ease of use and perceived usefulness.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

Information technologies and the usage of e-ticketing have been widely used and spread throughout organizations locally and globally. It has expanded dramatically and now e-ticketing usage has become the attention of users in academic field, financial, businesses, traveling and many more. As far as the organizations are concern, it is estimated that about 50 percent of all new capital investment in organizations has been in information technology (Westland and Clark 2000) which shows the importance of it today. This includes the airline organizations which are moving and changing with information technology and cannot deny the rapid changes.

Hence, online airline reservation is introduced in Malaysia and other countries as well and now becoming a growing distribution channel for their product and services. The conventional way of airline reservation remains the most widespread method for conducting airline reservation in Malaysia and same goes for other countries. However, information and e-ticketing technology is rapidly changing the way airline reservation services are being designed and delivered.

The contents of
the thesis is for
internal user
only

The findings of this study have some important managerial implications. First, the positive relationship identified between e-ticketing usages supports a long-held proposition running through the various literatures which states that the attainment of organizational goals is determined by satisfying the needs of employees more efficiently and effectively in performing a task. E-ticketing usage emphasize the need to attain market position by developing quality employees specifically targeted to well-defined ICT segments and which are backed up by the management and peers support which will increase their positive attitude toward e-ticketing. Further research is needed to assess the differential effects e-ticketing usage among employees whose main task involves ICT.

References

- Adams D. A., Nelson R. R, and Todd P. A, (1992). Perceived usefulness, ease of use, and usage of information technology: A replication. *MLS Quarterly*, 16(2), 227-247.
- Agarwal, It., Sambamurthy, V. and Stair, R.M. (2000). Research report: the eVolving relationship between general and specific computer self-efficacy - an empirical assessment. *Information Systems Research*, 11(4), 418-430.
- Agarwal, K. and Prasad, J. (1998). A conceptual and operational definition of personal innovativeness in the domain of information technology. *Information System Research*, 9(2), 204-215.
- Agarwal, R. and Prasad, .I. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision Sciences*, 30(2), 361-391.
- 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.(1991) "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes* (50:2), pp. 179-211.
- Aladwani, A. (2003), Key E-ticketing characteristics and e-commerce issues in Arab countries. *Information Technology & People*, 16: 9-20.
- Alavi, M. and .Toachimsthaler E.A. (1992). Revisiting DSS implementation research: A meta-analysis of the literature and suggestion for researchers. *MIS Quarterly*, 16(1),95-116.
- Assael, H., (1983), *Consumer Behaviour and Marketing Action*, 3rd Ed, Boston: Kent Publishing Co.
- Azjcn, I_ and Fishbein M. (1980). *Understanding attitude and predicting social behavior*. Prentice Hall, Engelwood Cliffs, NJ.
- Bandura, A. (1986). *Social Foundations of Thought and Action*. Prentice-Hall, Enfilewood Cliffs, NJ.
- Bohmstedt, G. W. (1970). *Reliability and validiy assessment in attitude measurement in Summers, C'r.f. (Ed.), Attitude Measurement*. Rand-McNally, Chicago, IL, 80-99.
- Bourdeau, L., Chebat, J. and Couturier, C. (2002), E-ticketing consumer value of university students: E-mails vs. Web users, *Journal of Retailing and Consumer Services*, 9: 61-69.
- Chau P. Y. K (1996). An empirical assessment of a modified technology acceptance model. *Journal of Management Information Systems*, 13(2), 185-204.

- Chen, L., Gillenson, M. & Sherrell, D (2002). Enticing online consumers: an extended technology acceptance perspective. *Information & Management*, 39(8), 705-719.
- Chi-Fen, C –Chen, E. (2006). Development Of E-Mail Literacy: From Writing To Peers To Writing To Authority Figures . *Language Learning & Technology*. 35-55.
- Chin W. W. and Todd P. A. (1995). On the use, usefulness, and ease of use of structural equation modeling in MIS research: A note of caution. *MIS Quarterly*, 19(2), 237--246.
- Chou, C. & Hsiao, M.C. (2000). E-ticketing addiction, usage, gratification, and pleasure experience: the Taiwan college students' case. *Computers & Education*. 35 (1), 65-80.
- Compeau, D.R., and Higgins, C.A. (1995). Computer self-efficacy: Development of a measure and initial test. *MIS Quarterly*, 19(2), 189-211.
- Compeau, D.R.; Higgins, C.A.; and Huff, S. (1999). Social cognitive theory and individual reactions to computing technology: A longitudinal study. *MIS Quarterly*, 23(2), 145-158.
- Copland D.G. and McKenny, J.L. (1988). Airline reservation systems: lessons from history. *MIS Quarterly*, 352-370.
- David A. Fertell (2002). Cyber-slacking kills productivity. *National underwriter*, September 23, 2002.
- Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 318-339.
- Davis, F.D. (1998). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*. Retrieved April 3, 2007, from ACM database.
- Davis, L.D., Bagozzi, R.P. and Warshaw, P.R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- DeCoster, J. (1998). Overview of factor analysis. Retrieved <March 17, 2007> available from <http://www.stat-help.com/notes.html>
- Dillon, A., & Morris, M.G (1996). User acceptance of information technology: Theories and models. *Annual Review of Information Science and Technology*, 31, 3-32.
- Doll, W.J., Hendrickson, A. and Deng, X. (1998). Using Davis's perceived usefulness and ease-of-use instruments for decision making: a confirmatory and multi-group invariance analysis. *Decision Science*, 29(4), 839-69.
- Dunphy, D. (1985). The social structure of urban adolescent peer groups. *Sociometry*, 26, 230-246.

- Eastin, M., (2002). Diffusion of e-commerce: an analysis of the adoption of four e-commerce activities. *Telematics and Informatics*, 19(3), 251-267.
- Elisheva F. Gross. (2004). Adolescent E-ticketing use: What we expect, what teens report. *Journal of Applied Developmental Psychology*, 25(6), 633-649.
- Fertell D. (2002), *Cyber-Slacking Kill Productivity*, National Underwriter.
- Fishbein, M. and Azjen, I. (1975). Belief, attitude, intention and behavior: An introduction to theory and research. Addison-wesley, Reading, MA.
- Fishbein, Milton and I. Ajzen. (1976). Misconception about the Fishbein Model: Reflections on a study by Songer Nocks. *Journal of Experimental Social Psychology*. 579-584.
- Gasaway, L.N. (1998). Copyright, the E-ticketing, and Other Legal Issues. *Journal of the American Society for Information Science*, 49, 1003-1009.
- Gefen, D. & D.W. Straub. (2000). The Relative Importance of Perceived Ease-of Use in IS Adoption: A study of E-Commerce Adoption. *Journal of the Association for Information Systems*, 1(8).
- Ginzberg, M.J. (1981). Key recurrent issues in the MIS implementation processes. *MIS Quarterly*, 5(2), 47-59.
- Gitte I. (1994). Usability testing and system evaluation. Chapman & Hall, London.
- Gonzalez-Bueno, M. 1998. The Effects Of Electronic Mail On Spanish L2. *Language Learning & Technology*, 1(2), 55-70.
- Greenfield, D. & Davis, R. (2002). Lost in cyberspace: *the Web at Work CyberPsychology & Behavior*, 5, 347-353.
- Hair, J.T., Anderson, R.E., Tatham, R.L. and Black, W.C. (1992), *Multivariate Data Analysis with Readings*, 3rd ed., Macmillan, New York, NY.
- Hassini, E. (2006). Student-instructor communication: The role of email. *Computers & Education*, 47(1) 29-40.
- Hauser, J.R and S. M. Shugen (1980). Intensity measures of consumer preference. *Operation Research*, 28.
- Hill, T., and Smith, N.D. (1987). Role of efficacy expectations in predicting the decision to use advanced technologies: The case of computers. *Journal of Applied Psychology*, 72(2), 307-313.
- Hong, W., Thong, J.Y.L., Wong, W.M. and Tam, K.Y. (2001). Determinants of user acceptance of digital libraries: an empirical examination of individual

differences and system characteristics. *Journal of Management Information Systems*, 18(3), 97-124.

Hu, I.J., Chau, P.Y.K., Sheng, O.R.L. and Tam, K.Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems*, 16(2), 91-112.

Iarcker, D. F and V. P LeSSig (1980). Perceived usefulness of information: a psychometric information. *Decision Science*, 11, 121-134.

Igbaria, M. and Iivari, J. (1995). The effects of self-efficacy on computer usage. *Omega*, 23(6), 587-605.

Jackson, C.M., Chow, S. and Leitch, R.A. (1997). Toward an understanding of the behavioral intention to use an information system. *Decision Sciences*, 28(2), 357-389.

Jackson, L. (1998), Race/ethnicity and the E-ticketing: The vision-the reality-the vision, second International Harvard Conference on E-ticketing & Society, Cambridge, MA, May 26-29.

Johnson, R.D. and Marakas, G.M. (2000). Research report: the role of behavior modeling in computer skills acquisition - toward refinement of the model. *Information Systems Research*, 11(4), 402-417.

Karahanna, E., Straub, D. W., and Chervany, N.L.(1999). Information technology adoption across time: a cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly*, 23(2), 183-213.

Katz, J. and Aspden, P. (1997), Motivations for and barriers of E-ticketing usage: Results of a national public opinion survey, *E-ticketing Research*, 7: 170-188.

Keillor, B.D., Parker, R.S. and Schaeffer, A. (1996). Influence on Adolescents' Brand Preferences in the United States and Mexico. *Journal of Advertising Research*. 35,56.

Lavoie, J. & Pychyl, T. (2001). Cyber-slacking and the procrastination superhighway *A Web-based survey of online procrastination, attitudes, and emotion. Social science.Computer Review*, 19, 431-444.

Legris, P.,J. Ingham & P. Collette. (2003). "Why do people use information technology? A critical review of the technology acceptance model", *Information & Management*, 40(3), 191-204.

Li, N. and Kirkup, G. (2005). Gender and cultural differences in E-ticketing use: A study of China and the UK. *Computer and Education*, Article in Press, Corrected Proof

Lucas, H.C., Jr., (iin7berg, M.J. and Schultz, R.L. (1990). *Information system implementation. Testing a structural model*. Ablex publishing corporation, Norwood, NJ.

- Maignan, I. And Lukas, B. (1997), The nature and social uses of E-ticketing: A qualitative investigation, *Journal of Consumer Affairs*, 31: 345-371.
- Mathieson, K. (1991). Predicting user intentions: Comparing the technology acceptance model with the theory of planned behavior. *Information Systems Research*, 2(3), 173-191.
- Mathieson, K., Peacock, E., & Chin, W.W. (2001). Extending the technology acceptance model: The influence of perceived user resources. *Database for Advances in Information Systems*, 32, 86-112.
- Moore, G.C. and Benbasat, I. (1991). Development of instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, 2(3), 192-222.
- Moore, G.C. and Benbasat, I. (1996). Integrating diffusions of innovations and theory of reasoned action models to predict utilization of information technology by endusers. *Diffusion and adoption of information technology*, K. Kautz and J. PriesHeges (eds.), Chapman and Hall, London, 132-146.
- Mowen, John C. (1987). *Consumer Behavior*, New York: Mc Millan.
- Nagashima, A. (1970). A comparison of Japanese and U.S. Attitudes Toward Foreign Products. *Journal of Marketing*, 34, 68-74.
- Nagashima, A. (1977). A comparative "Made in " Product Image survey among Japanese Businessmen. *Journal of Marketing*, 41, 95-100.
- Nielsen, J. (1993). *Usability engineering*. Boston: Academic Press.
- Oblinger, D.G., & Rush, S.C. (Eds.).(1998). *The Future Compatible Campus: Planning, Designing, and Implementing Information Technology in the Academy*. Bolton, MA: Anker.
- Ong Fon Sim and Chan Yin Huei. (2000) Attitude and Purchase Behavior of Teenagers Towards "Made in Malaysia" Products. *Malaysian Journal of Consumer & Family Economics*. 118-128.
- P. Schumacher, P. & Morahan-Martin, J. (2001). Gender, E-ticketing and computer attitudes and experiences. *Computer and Education Journal*. Vol 33. Issue2.
- Pakiam, R (2007, March 27). *Finding a life on the e-ticketing*. The New Straits Times. p.6.
- Pallant, J. (2000). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 10)*. Allen & Unwin.

- Piccoli, G., Ahmad, R., & Ives, B. (2001). Web-based virtual learning environments: A research framework and a preliminary assessment of effectiveness in basic IT skills training. *MIS Quarterly*, 25, 401-427.
- Plouffe, C. R., Hulland, J. S., and Vandenberg, M. (2001). Research report: richness versus parsimony in modeling technology adoption decisions- understanding merchant adoption of a smart card-based payment system. *Information Systems Research*, 12(2), 208-222.
- Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: The Free Press
- Rogers, E. M. and Allbritton, M. M. (1995). Interactive communication technologies in business Organization. *Journal of Business Communication*, 32(2), 177-195.
- Roscoe, J. L. (1975). *Fundamental research statistics for the behavior: A systematic guide to method*. New York: Holt, Rinehart and Winston.
- Sadowski, B. M., Maitland, C. and Dongen, J.V. . (2002). Strategic use of the E-ticketing by small- and medium-sized companies: an exploratory study. *Information Economics and Policy*, 14(1), 75-93.
- Salancik, G.R., & Pfeffer, J. (1987). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23, 224-253.
- Schiffman, L.G. and Kanuk, L.L. (1997). *Consumer Behavior*, 6th ed. New Jersey; Prentice Hall International Inc.
- Sekaran, U. (2003). *Research methods for business: A skill building approach*, Fourth Ed. John Wiley & Sons, Inc.
- Straub D., Keil M., and Brenner VV. (1997). Testing the technology acceptance model across cultures: A three-country study. *Information and Management*,
- Surry, D. W. (1997). *Diffusion Theory and Instructional Technology*. Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AFCT), Albuquerque, New Mexico February 12 - 15, 1997.
- Swanson, E. B (1974). Management information system: appreciation and involvement. *Management Science*, 21, 178-188.
- Tait. P and Vassey, I (1989). The effect of user involvement on system success: A contingency approach. *MIS Quarterly*, 12(1), 91-107.
- Taylor, S. and Todd, P.A. (1995). Understanding information technology usage: a test of competing models. *Information Systems Research*, 6(2), 144-176.
- Teo, T. (2001), Demographic and motivation variables associated with E-ticketing usage activities, *E-ticketing Research*, 11: 125-137.
- Ting, Y and Grant, R. (2005). E-ticketing usage of local government employees: A study of the effect of individual preferences, group influences, and administrative factors . *The Social Science Journal*, 42(2)23-331.

- Tornatzky, L.G. and Klien, K.J.(1982). Innovation characteristics and innovation adoption-implementation: a meta-analysis of findings. *IEEE Transactions on Engineering Management*, 29(1), 28-45.
- Trevino, L. K., Lengel, R. 11., & Daft, R. L. (1987). Media symbolism, media richness, and media choice in organizations: A symbolic integrationist perspective. *Communication Research*, 14 (5), 553-74.
- Tsai, C., Lin, S. and Tsai, M. (2001), Developing an E-ticketing attitude scale for high school students, *Computers and Education*, 37: 41-51.
- Venkatesh, V, and Davis, F.D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Venkatesh, V. and Morris, M.G. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior. *MIS Quarterly*, 24(1), 115-139.
- Venkatesh V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research*, 11(4), 342-365.
- Venkatesh V. and Davis, F. D. (1996). A model of the perceived ease of use development and test. *Decision Sciences*, 27(3). 451-481.
- Venkatesh, V., and Morris, M. G. (2000). "Why Don't Men Ever Stop to Ask For Directions? Gender, Social Influence, and Their Role in Technology Acceptance and Usage Behavior," *MS Quarterly* 24(1), 115-139.
- Venkatesh, V., Morris, M., Davis, G., Davis, F. (2003). User acceptance of information technology: toward a unified view. *MIS Quarterly*, 27(2), 425-478.
- Ward, S. (1994), Consumer Socialization. *Journal of Consumer Research*, 1, 1-17.
- Weiss, E. (2002). *Making Computers People-Literate*. Jossey-Bass Publishers: San Francisco, CA.
- Westland, J_ C. and Clark, (2000). T. IE K Global *Electronic Commerce: Theory and Case Studies*, MIT Press, Cambridge, MA.
- Wood, Karen. (2003), Introduction to Mobile Learning(M Laerning). Retrieved April 3, 2007 from <http://www.becta.org.uk/>
- Zhang, Y. (2002), Comparison of E-ticketing attitudes between industrial employees and college students, *CyberPsychology & Behavior*, 5: 143-149.