THE IMPACT OF EXPLANATION ON SENSE OF CONTROL AND PERCEIVED POWER RELATIONSHIP TOWARDS ONLINE ADVISORY SYSTEM

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< CERTIFICATE OF PROJECT PAPER
(PINK FORM BEFORE HARD COVER BINDING)>

Abstrak

Khidmatpenasihatanatastaliantelahwujud di mana-manadanmerupakansatukeperluandalamkehidupanmasakini.Pelbagaiagensikerajaank inimenawarkanperkhidmatansebeginisebagaisatucarauntukmenyediakanbantuantanp ahalangankepadapihak orang awamdalammemenuhikeperluanmerekakepadamaklumatdanperkhidmatan. Projekinimenilaikesanpenyediaanperkhidmatanpenasihatanatastalian, terutamanya yang dilengkapidenganfungsipenerangan, kepada orang awam.Projekinimenggunakankaedahtinjauanuntukmengkajisecara empirikal peranan yang dimainkanolehfungsipenerangandalamalatanpenasihatanatastalian.Tiga laman web kerajaan yang mempunyai alatanpenasihatanatastalian yang diselidikiadalah*e-Filing*, *e-Quit Rent*dan*e-Assessment*; kesemuanyamenyediakanperkhidmatanberkaitantaksirancukai. 100 respondenterlibatdalamprojekberskalakecilini; pandanganmerekadikumpulmenerusisoalselidik yang dibinadaripadaempatkonstrukutamaiaitukepuasan proses maklumat, ketelusan proses maklumat, rasa mengawaldanpersepsihubungankuasa. Fasaanalisismelibatkanpenggunaan SPSS versi 19.0 yang menyokongpelbagaiteknikanalisis data termasuk statistik deskriptif, silangdankorelasi.Hasilkajianbagi*e-Filing*menunjukkan rasa mengawaladalahlebihbaikbagikepuasan proses maklumat. Manakala*e-Quit Rent*dan*e-Assessment* pula menunjukkanpersepsihubungankuasaadalahlebihbaikbagikepuasan proses maklumat. Bagiketelusan proses maklumat*e-Filing*dan*e-Quit Rent*, rasa mengawaladalahlebihbaikberbandingpersepsihubungankuasasebaliknyabagi e-Assessment. Rumusandaripadaprojekiniialahfungsipenenganalatanpenasihatanatastalian menunjukkan rasa mengawal yang lebihbaikkeatashasiltaksiran orang awam.Iajugamemberipersepsihubungankuasa yang lebihbaikkepada orang awamdenganagensikerajaan yang manamerekamempunyaitanggungjawabuntukmembayarcukai.

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Kata kunci :Penerangan, kepuasan proses maklumat, ketelusan proses maklumat, rasa mengawaldan persepsi hubungan kuasa.

Abstract

Online advisory services have become ubiquitous and are of the essence of life in today's living. Many government agencies these days are offering such services as a means to provide a hassle free assistance to the public in fulfilling their information and service needs. This project assesses the impact of providing online advisory services, in particular those with explanation feature, to the public. Building on insights from practice and literature, the project utilizes a survey to empirically examine the key role of explanation feature provided in online advisory tools. Three online advisory tools being examined are the e-Filing, e-Quit Rent and e-Assessment; all provide services related to tax assessment. 100 respondents involved in this small scale project; their opinions are gathered by means of questionnaire which is developed from four major constructs namely information process satisfaction, information process transparency, sense of control and perceived power relationship. The analysis phase involved the use of SPSS version 19.0 that supports various data analysis techniques including descriptive statistics, cross tabulation and correlation. The findings reveal fore-Filing shows sense of control lead to greater satisfaction among public. Whilee-Quit Rentande-Assessment isthe perceived power relationshipis better forthesatisfactionof information.Fortransparency in the processof e-filing informationande-Quit Rent,a sense ofcontrolisbetter thanthe perceived power relationshipinsteadofe-Assessment. It can be concluded from this project that the explanation in online advisory tools gives the public a better sense of control over their assessment outcome. It also gives the public a better perceived power relationship with the government agency to which they are beholden.

Keywords : Explanation, information process satisfaction, information process transparency, sense of control and perceived power relationship.

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List of Abbreviations

ELMNet   Eligibility Module on the Internet

DVA   Department of Veterans' Affairs

IPS   Information Process Satisfaction

IPT   Information Process Transparency

SOC   Sense of Control

PPR   Perceived Power Relationship

NRE   Ministry of Natural Resources and Environment

DV   Dependent variable

IV   Independent variable

IE   Internet Explorer

IRB   Inland Revenue Board

SPSS   Statistical Package for Social Science

CHAPTER 1

INTRODUCTION

Online advisory services are increasingly being adopted by modern service organizations as an effective way of interacting with their customers. Online advisory services are web-based services that assist user or public in obtaining information about their country's e-government material to self-assess their eligibility for aid and to make informed decisions on whether to proceed to the next stage of their application process. In addition, these tools offer advice, decision support and better understanding of problem situations by giving them an 'expert' answer to a problem.

Online advisory services can address a wide range of client needs and are expected to create benefits for both the organization and its customer (Li, 2011). According to Dayal and Johnson (2000), online advisory systems could provide benefits to the citizens, including increased transparency of the decision making process, a greater sense of control and more positive perceptions and power situation. This claim was evidenced in the success of Eligibility Module on the Internet(ELMNet), which has improvedAustralianDepartment of Veterans' Affairs(DVA) productivity up to 80% the quality and consistency of its primary decisions and its customer satisfaction. In the context of e-government, an effective online advisory tool that satisfies citizen's self-assessment needs on a government website can be seen as a reflection of the government 'sincerity' in delivering services, thus promoting a more democratic image of the government (Li &Gregor, 2011).

Malaysia is one of the many countries which have been seriously engaged in establishing citizen-centric online services via e-government or e-state government portals. The goal is to improve the convenience, accessibility, expediency, openness and quality of interactions between government agencies and citizens as well as businesses. It is also to improve information flow and processes within government agencies, leading to improve in speed and quality of policy development, coordination and enforcement (MAIT, 2008; MAMPU, 2009; Azizan&Fazli, 2010; Alias *et al*., 2011; Hana, 2011). Examples of such services available on the e-

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REFERENCES

Alias, E.S., Idris, S.H.M., Ashaari, N.S., &Kasimin, H. (2011).Evaluating e-Government Services in Malaysia Using the EGOVSAT Model.*Proceedings of The International Conference on Electrical Engineering and Informatics (ICEEI),* Bandung, pp. 1-5.

Azizan, H.M. &Fazli, A.H. (2010). E-government and Malaysia: a theoretical consideration. *SOSIOHUMANIKA*, vol 3(2), pp. 305-324.

Baharati, P. &Chaudhury, A. (2004).An empirical investigation of decision-makingsatisfaction in web-based decision support systems.*Decision Support Systems*, vol.37(2), pp.187–197.

Berdykhanova, D., Dehghantanha, A., &Seddon, A. (2010). Trust challenges and issues of E-Government: E-Tax prospective, *Int.J. Computer Science Security*., vol.8(7), pp. 62-66.

Bluman, A.G. (2009). *A Step by Step Approach: Statistics*, McGraw-Hill Companies 2nd Edition.

Braddock, C.H., Edwards, K.A., Hasenberg, N.M., Laidley, T.L. & Levinson, W. (1999).Informed decision making in outpatient practice: time to get back to basics.*JAMA*, vol.282(24), pp. 2313–2320.

Berry, D. C. & Broadbent, D. E. (1987). Explanation and verbalization in a Computer-assisted Search Task.*Quarterly Journal of Experimental Psychology*, pp. 585-609.

Cheskin Research. (1999). *eCommerce Trust Study*. Retrieved on March 22, 2012 from http://wwwstudioarchetype.com/cheskin/

Chong, L. C. (2008). The e-Tanah System: Towards the modernization of the land administration system in Malaysia. *Paper presented at the 10th International Surveyor's Congress*, Kuala Lumpur.

Davis, F.D. (1989). Perceived Usefulness, perceived ease of use, and user Acceptance of Information technology. *MIS Quarterly*, September 1989, pp. 318-340.

Dayal, S. & Johnson, P. (2000). A web-based Revolution in Australian Public Administration, Conference Paper, 2000 (1) *The Journal of Information, Law and Technology (JILT)*. Retrieved on March 22, 2012 fromhttp://www.law.warwick.ac.uk/jilt/00-1/dayal.html

Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology.*MIS Quarterly*, vol.13(3), pp. 319-340.

Dziarstek, C., Farnschläder, F., Gilleßen, S., Süßmilch-Walther, I. & Winkler, V. (2004). A User-Aware Financial Advisory System, in Chamoni, P. (eds): MultikonferenzWirtschaftsinformatik (MKWI) 2004, Essen. Berlin: AkademischeVerlagsgesellschaft.(Bd. 2.), pp. 217-229.

Egger, F.N. (2000). Trust me, I'm an online vendor: towards a model of trust for e-commerce system design. *CHI 2000 Conference Proceedings*. New York: ACM SIGGHI.

ElAlfi, A.E.E & El Alami, M.E (2009).Intelligent Advisory System for Supporting University Managersin Law. (IJCSIS*) International Journal of Computer Science and Information Security*, Vol. 3(1),2009.

ETAAC. (2002). *Electronic Tax Administration Advisory Committee (ETAAC)*, USA: AnnualReport to Congress.

FEMA. (2008). The New Citizen-Centric, User-Friendly FEMA Website: lessons Learned. Retrieved May,2012 from http://www.fema.gov/media/site_case_study.sthm

Fogg, B.J., Marshall, J., Laraki, O., Osipovich, A., Varma, C., Fang, N., Paul, J., Rangnekar, A., Shon, J., Swani, P. &Teinen, M. (2001). What makes web site credible? A report on a large quantitative study.*CHI 2001 Conference Proceedings*. New York: ACM SIGGHI.

Gao, S., Wang, H., Xu, D., Wang, Y.,Shen, W., &Yeung, S., Intelligent decision support for family financial planning, *Proceedings of the 39th Annual Hawaii International Conference on System Sciences*, Hawaii, 4-7, January (2006).

Gilbert, N. (1989). Explanation and Dialogue.*Knowledge Engineering Review*, (4:3), pp.205-231.

Goguen, J.A., Weiner, J. L., &Linde, C. (1983). Reasoning and Natural Explanation. *International Journal of Man-Machine Studies*, (19), pp. 521-559.

Gregor, S. &Benbasat, I. (1999). Explanations from intelligent systems: theoretical foundations and implications for practice. *MIS Quarterly*, vol.23(4), pp.497–530.

Hair, J.F., Henderson, R.E., Black, W.C. &Tathan, R.L. (1995).*Multivariate Data Analysis with Reading*.Prentice Hall.

Hana, A.A. (2011). An evaluation framework for Saudi e-Government.*Journal of e-Government Studies and Best Practices*, vol.2011, pp. 1-12

Hayes-Roth, F., &Jacobstein, N. (1994). The state of knowledge-based systems, *Communications of the ACM*, 37(3), pp. 27-39.

Holsapple, C.W. &Whinston, A.B. (1996).*Decision Support Systems: a Knowledge-Based Approach*, St. Paul: West Publishing.

Ishak, I. S. & Alias, R.A (2005).Designing a strategic information system planning methodology for Malaysia institutes of higher learning.*International Association for Computer Information System*, vol.5(1).

Izatun, S. (2008, April 22). Almost half a million taxpayers now using e-filing.*The Star*.

Jackson, D. (1994). *Expert System Design and Development.* New Jersey: Prentice-Hall.

James, G., J. (1987). *The Ecological Approach to Visual Perception*. New York: LawrenceErlbaum Associates.

Jen, R.F., Cheng, K.F. & Wen, P.C. (2006). Acceptance of electronic tax filing: A study of taxpayer intentions. *Information & Management*, vol.43(1), pp. 109-126.

Johnson, B. & Christensen, L. (2000).*Educational Research: Quantitative and Qualitative Approaches*. MA: Allyn and Bacon.

Kidd, A. L. (1985). *What Do Users Ask? Some Thoughts on Diagnostic Advice, in Expert System '85, M. Merry (ed.),* Cambridge, England.: Cambridge University Press.

Koufaris, M. (2002*).*Applying the Technology Acceptance Model and Flow Theory to Online Consumer Behavior, *Information Systems Research*, vol.13(2), pp.205-223.

Li, M. (2011).Online government advisory service innovation through Intelligent Support Systems.*Inf. Manage.,* vol.48(1) , pp.27-36.

Li, M. &Gregor, S. (2011). Outcomes of effective explanations: Empowering citizens through online advice. *Decision Support System,*vol.52(1), pp.119-132.

MAIT (2008).*E-Government in Malaysia*. Retrieved on March, 2012 from http://www.mait.com

MAMPU,E-Government Malaysia: Way Forward, *1 e-Government Conference*, 2009.

Mao, J. (1995). An Experimental Study of the use and Effects of Hypertext Based Explanations in Knowledge-based Systems, Unpublished Doctoral Dissertation, University of British Columbia.

Mao, J. &Benbazat, I. (2000). The use of explanations in knowledge-based systems: cognitive perspective and a process-tracing analysis. *Journal of Management Information System,* vol.17(2), pp. 153-179.

Noga, T., & Arnold, V. (2002). Do tax decision support systems affect the accuracy of tax compliance decisions?,*International Journal of Accounting Information Systems*, vol.3(3), pp.125-144.

Norusis, M.J. (1999). *SPSS 19.0 guide to data analysis*. New Jersey: Prentice Hall.

Ocass, A., &Fenech, T. (2003).Web retailing adoption: exploring the nature of Internet users web retailing behaviour, *Journal of Retailing and Consumer Services*, vol.10, pp.81–94.

Olson J.S. & Olson, G.M. (2000).121 trust in e-commerce.*Communications of ACM* vol. 43(12), pp.41-44

Ortory, A., &Patridge, D. (1987).Surprisingness and Expectation failure: What's the Difference, in *Proceedings of the 10th International Joint Conference on Artificial Intelligence*, vol.1, pp.106-116.

Parasuraman, A., (2000). Technology readiness index (TRI): A multiple-item scale to measurereadiness to embrace new technologies. *Journal of Service Research*, vol.2(4), pp.307-320.

Parasuraman, A., & Colby, C. L., (2001).Techno-ready marketing: How and why yourcustomers adopt technology. New York: The Free Press.

Perlmutter, L.C., & Monty, R.A. (1979).Choice and Perceived Control Lawrence Erlbaum, Hillsdale, NJ.

Punch (2003). *Survey Research: The basics*.London:SAGE Publications Ltd.

Saadé, R. G., Kira, D., &Dogmoch, D. (2007).Towards a Student Advisory System for E-learning, *Proceedings of the 2007 Informing Science and IT Education Joint Conference.*

Schank, R. C. (1986). *Explanation: A First Pass, in Experience, Memory and Reasoning, Lawrence Erlbaum Associates*, Hillsdale, NJ., 139-165.

Sekaran, U. (2000). *Research Method for Business: A skill Building Approach*: 4th Edition, John Wiley & Sons, Inc., New York.

Simon, H.A. (1997). *The New Sciences of Management Decision*, Prentice Hall, New York.

Sttlianou, A. C., Madey, G. R., & Smith, R.D. (1992).Selection criteria for Expert System Shells: A Socio-technical Framework, *Communication of the ACM* (35:10), pp. 30-48.

The Macquarie Dictionary (1981), Macquarie Library, McMahons Point, Australia.

Toulmin, S. E. (2003).*The Uses of Argument, Updated ed*., Cambridge University Press,Cambridge, England, 2003.

Toulmin, S., Rieke, R., &Janik, A. (1984).*An Introduction to Reasoning*, Macmillan, New York.

Turban, E., Aronson, J.E., & Liang, T.P. (2005).*Decision Support Systems and Intelligent Systems*, Prentice-Hall, New Jersey.

Wang, L., Bretschneider, S. & Gant, J. (2005).Evaluating Web-based EGovernment Services with a Citizen-Centric Approach, *Proceedings of the 38th annualHawaii international conference on system science*, Hawaii: IEEE.

Wanninger, L. (1998). Profitable Electronic Commerce : Frame Work, Examples, Trends. *Eleventh International Bled Electronic Commerce Conference*, vol.2, pp.3-27.

Ye, L. R., & Paul E. J.(1995). The Impact of Explanation Facilities on User Acceptance of Expert Systems Advice, *MIS Quarterly*, vol. 19(2), pp. 157-172.

Zikmund, W.G. (2003). *Business Research Methods* (7th $^{ed.}$). Thompson, South Western, United State of America.