

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

ASIAH BINTI ASMUNI

**UNIVERSITI UTARA MALAYSIA
2012**

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

Abstrak

Khidmat penasihat anatastalian telah wujud di mana-mana dan merupakan satu keperluan dalam kehidupan manusia ini. Pelbagai agensi kerajaan ini menawarkan perkhidmatan sebegini sebagai satu cara untuk menyediakan bantuan kepada orang awam dalam memenuhi keperluan mereka kepada maklumat dan perkhidmatan.

Projek ini menilai kesan penyediaan perkhidmatan penasihat anatastalian, terutamanya yang dilengkapi dengan fungsi penerangan, kepada orang awam. Projek ini menggunakan kaedah tinjauan untuk mengkaji secara empirikal peranan yang dimainkan oleh fungsi penerang dalam alatan penasihat anatastalian. Tiga laman web kerajaan yang mempunyai alatan penasihat anatastalian yang diselidiki adalah *e-Filing*, *e-Quit* dan *Rent dan e-Assessment*; kesemuanya menyediakan perkhidmatan berkaitan taksiran cukai. 100

responden terlibat dalam projek berskala kecil ini;

pandangan mereka dikumpul menerusi soal selidik yang dibina daripada empat konstruk utama iaitu kepuasan proses maklumat, ketelusan proses maklumat, rasa mengawal dan persepsi hubung kuasa.

Fasa analisis melibatkan penggunaan SPSS versi 19.0 yang menyokong pelbagai teknik analisis data termasuk statistik deskriptif, silang dan korelasi. Hasil kajian bagi *e-Filing* menunjukkan rasa mengawal adalah lebih baik bagi kepuasan proses maklumat. Manakala *e-Quit* dan *Rent dan e-Assessment* pula

menunjukkan persepsi hubung kuasa adalah lebih baik bagi kepuasan proses maklumat. Bagi ketelusan proses maklumat *e-Filing* dan *e-Quit* dan *Rent*, rasa mengawal adalah lebih baik berbanding persepsi hubung kuasa sebaliknya bagi *e-Assessment*.

Rumus dari pada projek ini ialah fungsi penerangan alatan penasihat anatastalian menunjukkan rasa mengawal yang lebih baik ke atas hasil taksiran orang awam. Ia juga memberi persepsi hubung kuasa yang lebih baik kepada orang awam dengan agensi kerajaan yang manakamereka mempunyai tanggungjawab untuk membayar cukai.

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 relationships 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.

Acknowledgement

Firstly, praise to Allah S.W.T. for guiding and blessing with perseverance and strength to complete the project. Apart from the efforts of me, the success of the project depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this project. The special thank goes to my helpful supervisor MdmNurAzzah Abu Bakar and AssociateProf. FadzilahSiraj. I can't say thank you enough for her tremendous support and help. Without her encouragement and guidance this project would not have materialized. My grateful thanks also go to my husband (Mohamad Shahuri Mohamad Norlin), my daughter (Nurayeesha Athira) and my son (Muhammad Asif Alwan), who held faith in me and pushed me to succeed. A big contribution and support from you all is very great indeed. Special thanks also go to my friends who supported and motivated me during the project completion. Last but not least, I would like to thank to the Universiti Utara Malaysia management especially the College of Arts and Sciences staffs and those who involved directly or indirectly in the project. May Allah bless you all.

Table of Contents

Abstrak.....	i
Abstract.....	iii
Acknowledgement	iv
Table of Contents.....	v
List of Tables	viii
List of Figures.....	xi
List of Appendices	xii
List of Abbreviations	xiii
CHAPTER 1 INTRODUCTION	1
1.1 Problem statement.....	6
1.2 Research question.....	6
1.3 Objectives.....	6
1.4 Scope of Study	7
1.5 Significance of Project	7
1.6 Organization of This Report.....	7
1.7 Chapter summary	8
CHAPTER 2 LITERATURE REVIEW	9
2.1 Online Advisory System	9
2.1.1 Explanatory Facility in Online Advisory System	9
2.1.2 Design of Explanatory Facility in Online Advisory System	12
2.2 Overview of e-Government Services	13
2.2.1 Online Tax Filing Services	14
2.2.2 Online Quit Rent Service	16
2.2.3 User Acceptance of e-Government Services	16
2.3 Chapter Summary.....	18
CHAPTER 3 METHODOLOGY	20
3.1 Project Framework	20
3.1.1 Information Process Satisfaction (IPS)	21
3.1.2 Information Process Transparency (IPT).....	22

3.1.3 Sense of Control (SOC)	22
3.1.4 Perceived Power Relationship (PPR).....	23
3.2 Project Design	24
3.2.1 Survey	25
3.2.2 Questionnaire Development.....	25
3.2.3 Data Collection	26
3.2.4 Data Analysis	27
3.3 Chapter Summary.....	27
CHAPTER 4 ANALYSIS AND FINDINGS.....	28
4.1 Respondents' profile	28
4.1.1 Demographics	28
4.1.2 Experience with Online Tax System.....	32
4.2 Descriptive statistics analysis.....	33
4.2.1 Descriptive statistics analysis for e-Filing	34
4.2.2 Descriptive statistics analysis for e-Quit Rent	36
4.2.3 Descriptive statistics analysis for e-Assessment.....	38
4.3 Cross tabulation analysis.....	40
4.4 Correlation analysis.....	44
4.4.1 Correlation analysis for e-Filing	45
4.4.2 Correlation analysis for e-Quit Rent	47
4.4.3 Correlation analysis for e-Assessment.....	50
4.5 Logistic regression analysis	52
4.5.1 Likelihood ratio test for e-Filing.....	53
4.6 Chapter Summary.....	62
CHAPTER 5 CONCLUSION	63
5.1 Objectives revisited.....	63
5.1.1 Objective1	63
5.1.1.1 E-Filing system.....	64
5.1.1.2 E-Quit Rent system.....	64
5.1.1.3 E-Assessment	64
5.1.2 Objective 2	65

5.1.2.1 E-Filing system.....	65
5.1.2.2 E-Quit Rent system.....	65
5.1.2.3 E-Assessment	66
5.1.3 Structural model.....	66
5.2 Limitation.....	69
5.3 Suggestion for future work	70
REFERENCES.....	71

List of Tables

Table 3.1: Information Process Satisfaction of e-Filing	21
Table 3.2: Information Process Transparency of e-Filing.....	22
Table 3.3: Sense of control of e-Filing.....	23
Table 3.4: Perceived Power Relationship of e-Filing	23
Table 4.1: Descriptive Statistic for Location of Respondents.....	28
Table 4.2: Summary of the Respondents Profile	34
Table 4.3: Statistics for IPS of e-Filing.....	35
Table 4.4: Statistics for IPT of e-Filing	35
Table 4.5: Statistics for SOC of e-Filing.....	36
Table 4.6: Statistics for PPR of e-Filing	36
Table 4.7: Statistics for IPS of e-Quit Rent.....	37
Table 4.8: Statistics for IPT of e-Quit Rent.....	37
Table 4.9: Statistics for SOC of e-Quit Rent.....	38
Table 4.10: Statistics for PPR of e-Quit Rent	38
Table 4.11: Statistics for IPS of e-Assessment	39
Table 4.12: Statistics for IPT of e-Assessment	39
Table 4.13: Statistics for SOC of e-Assessment	40
Table 4.14: Statistics for PPR of e-Assessment	40
Table 4.15: Cross tabulation results and Chi Square for e-Filing	41
Table 4.16: Cross tabulation results and Chi Square for e-Quit Rent	42
Table 4.17: Cross tabulation results and Chi Square for e-Assessment.....	43
Table 4.18: Correlation between IPS and SOC for e-Filing	45
Table 4.19: Correlation between IPT and SOC for e-Filing	46
Table 4.20 : Correlation between IPS and PPR for e-Filing.....	46
Table 4.21 : Correlation between IPT and PPR for e-Filing.....	47
Table 4.22: Correlation between IPS and SOC for e-Quit Rent	47
Table 4.23: Correlation between IPT and SOC for e-Quit Rent	48
Table 4.24: Correlation between IPS and PPR for e-Quit Rent	49
Table 4.25: Correlation between IPT and PPR for e-Quit Rent.....	49
Table 4.26: Correlation between IPS and SOC for e-Assessment	50
Table 4.27: Correlation between IPT and SOC for e-Assessment.....	51
Table 4.28: Correlation between IPS and PPR for e-Assessment.....	51

Table 4.29: Correlation between IPT and PPR for e-Assessment.....	52
Table 4.30: IPS and IPT towards SOC.....	53
(I felt calm when using e-Filing system)	53
Table 4.31: Parameter Estimates SOC	53
(I felt calm when using e-filing system)	53
Table 4.32: IPS and IPT towards SOC.....	54
(I felt confused when using e-Filing system).....	54
Table 4.33: Parameter Estimates SOC	54
(I felt confused when using e-filing system).....	54
Table 4.34: IPS and IPT towards SOC.....	55
(I felt frustrated when using e-Filing system)	55
Table 4.35: Parameter Estimates SOC	55
(I felt frustrated when using e-filing system).....	55
Table 4.36 : IPS and IPT Towards SOC	56
(I felt in control when using e-Filing system).....	56
Table 4.37: Parameter Estimates SOC	56
(I felt in control when using e-filing system).....	56
Table 4.38: IPS and IPT towards PPR	57
(In tax assessment, the agency expects the public to obey its assessment).....	57
Table 4.39: Parameter Estimates PPR.....	57
(In tax assessment, the agency expects the public to obey its assessment).....	57
Table 4.40: IPS and IPT towards PPR	58
(In tax assessment, the agency strives to assist the public to understand.....	58
the reasoning processes behind assessment outcomes).....	58
Table 4.41: Parameter Estimates PPR.....	58
(In tax assessment, the agency strives to assist the public to understand.....	58
the reasoning processes behind assessment outcomes).....	58
Table 4.42: IPS and IPT towards PPR	59
(It is difficult for public to express disagreements with the government.....	59
on assessment-related decision)	59
Table 4.43: Parameter Estimates PPR.....	59
(It is difficult for public to express disagreements with the government.....	59
on assessment-related decision)	59
Table 4.44: IPS and IPT towards PPR	60
(It is difficult for public to seek recourse from the government agency	60

on assessment-related decision).....	60
Table 4.45: Parameter Estimates PPR.....	60
(It is difficult for public to seek recourse from the government agency on assessment-related decision).....	60
Table 4.46: IPS and IPT towards PPR	61
(Once a decision is made by the agency, it is hard for public to question it).....	61
Table 4.47: Parameter Estimates PPR.....	61
(Once a decision is made by the agency, it is hard for public to question it).....	61

List of Figures

Figure 1.1: A screen shot of help window explanation (type 1)	2
Figure 1.2: A screen shot of explanation stated next to the fields (type 2).....	3
Figure 1.3: A screen shot of explanation note (type 3)	3
Figure 1.4: A screen shot of e-Quit Rent	4
Figure 1.5: A screen shot of e-Assessment	5
Figure 3.1: The adapted model	20
Figure 3.2: Flow of activities	24
Figure 3.3: Sampling Selection.....	26
Figure 4.1: The Distribution of Respondents based on Gender	29
Figure 4.2: The Distribution of Respondents based on Age	29
Figure 4.3: The Distribution of Respondents based on Marital Status	30
Figure 4.4: The Distribution of Respondents based on Education Level	30
Figure 4.5: The Distribution of Respondents based on Computer Usage Time	31
Figure 4.6: The Distribution of Respondents based on Category of Job	31
Figure 4.7: The Distribution of Respondents based on Household Income	32
Figure 4.8: The Distribution of Respondents based on Experience with e-Filing, e-Quit Rent and e-Assessment.....	33
Figure 4.9: Structural model for e-Filing.....	67
Figure 4.10: Structural model for e-Quit Rent.....	68
Figure 4.11: Structural model for e-Assessment.....	69

List of Appendices

Appendix A Questionnaire Sample.....	76
--------------------------------------	----

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 improved Australian Department 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-

The contents of
the thesis is for
internal user
only

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-making satisfaction 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://www.studioarchetype.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 from <http://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): *Multikonferenz Wirtschaftsinformatik (MKWI) 2004*, Essen. Berlin: Akademische Verlagsgesellschaft.(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 Managers in Law. (*IJCSIS International Journal of Computer Science and Information Security*, Vol. 3(1),2009.
- ETAAC. (2002). *Electronic Tax Administration Advisory Committee (ETAAC)*, USA: Annual Report 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: Lawrence Erlbaum 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. & Benbasat, 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
- Ortury, 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 measure readiness 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 your customers 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 annual Hawaii 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.