A Study of Management Information System (MIS) Competency and Adoption Strategy among Oil Companies in Libya

ABDULSALAM SALEM A

COLLEGE OF BUSINESS UNIVERSITI UTARA MALAYSIA 2009

DECLARATION

I declare that all the work described in this thesis was undertaken by my own research (unless otherwise acknowledged in the text) and that none of the work has been previously submitted for any academic degree. All sources of quoted information have been acknowledged through references.

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Abstract

The objectives of the research was to examine the relationship between MIS competency and MIS strategy adoption to maximize the utilized of resource management on oil companies in Libya and also to examine the influence of MIS adoption factors such as subjective norm, usefulness and ease of use of the product influence on MIS competency on companies in Libya on the perspective of resource management of the product. This study is important to contribute to better understanding for production process on how important MIS strategy, competency and strategic MIS. It will help companies to make some changes based on the result of this research. The research confirmed the relationship between subjective norm, perceived usefulness and ease of u contribute were positively related to MIS competency. It provides estimates of the research model and suggests which components of the adoption item will get more successful in Oil Companies. The research models are being pursued in the adoption of organization competency to succeed. Through this research companies able to understand the all level production and see how well the management has done its part to watch over their MIS strategy. This study is designed to provide the benefit for management practitioners, especially for stakeholder in oil companies in Libya. For practitioners, the aim is to offer a holistic and in-depth overview of how to forms the product through the Furthermore, this study confirmed to determination of MIS competency and strategy. enhance and develop MIS strategy to make products and all activities using MIS as efficient This study also significance to fill the gaps in the literature review and contribute to the increase of strategy in the firm, company and organizations. This study also intends to help practitioners to understand what factors influence the MIS strategy using competency and strategic MIS.

Keyword: MIS Competency, Subjective Norm, Perceived Usefulness, Perceived Ease of Use.

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CHAPTER 1

OVERVIEW OF THE RESEARCH

1.1 Background of the Study

With the development of technological revolution and economic globalization and the fundamental change of social production method, human capital and social capital has become the key factors for a business organization to achieve competitive advantage (Li and Hu, 2007). Management information system (MIS) is charged with improving the strategy of organizations and people related on MIS through the employ of information technology. MIS is a multifaceted discipline which combines technologies, personnel, processes, and organizational mechanisms. Clearly, the success of MIS is measured in terms of individual and organizational strategy (Chen and Cheng, 2008).

For nearly 50 years the development of information systems (IS) was almost entirely perceived as a technical discipline. IS professionals, with a certain level of help from users, set about developing IS in the various functional areas of firms. They were supported by IS development and project management methodologies, as well as a range of other tools and techniques. A large number of high-profile system development failures put the technical focus of the discipline at the centre of discussion (Stuart Maguire and Tom Redman, 2006).

It is only recently that the "softer" aspects of the IS development process have achieved a higher profile. For instance, it could be argued that from changing one line of computer code to the implementation of an integrated, organization-wide IS is

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REFERENCES

- Ajzen, I. (1991), "The Theory of Planned Behavior", **Organizational Behavior and Human Decision Processes**, Vol. 50, Iss. 2, pp. 179-212
- Ajzen, I. and Fishbein, M. (2004), "The Influence of Attitudes on Behavior", In **Handbook of Attitudes and Attitude Change: Basic Principles**, D. Albarracín, B. T. Johnson and M. P. Zanna (Eds.), Mahwah, NJ: Erlbaum, pp. 173-221
- Ahuja, M., Gupta, B. and Raman, P. (2003), "An empirical investigation of online consumer purchasing behavior", *Communications of the ACM*, Vol. 46 No. 12, pp. 145-51.
- Allen, C. T., Machleit, K. A. and Schultz Kleine, S. (1992), "A Comparison of Attitudes and Emotions as Predictors of Behavior at Diverse Levels of Behavioral Experience", **Journal of Consumer Research**, Vol. 18, pp. 493-504
- Anderson ,G.(1994).a proactive model for training needs analysis ,journal of European Industrial training, vol18.
- Armitage, C. J. and Christian, J. (2003), "From Attitudes to Behavior: Basic and Applied Research on the Theory of Planned Behavior", **Current Psychology: Developmental, Learning, Personality, Social**, Vol. 22, No. 3, pp. 187-195
- Bandura, A. (1997). "Integrative strategic strategy measurement systems: strategy, strategic alignment of manufacturing, learning and organizational strategy." Working paper.
- Bamberg, S., Ajzen, I. and Schmidt, P. (2003), "Choice of Travel Mode in the Theory of Planned Behavior: The Roles of Past Behavior, Habit, and Reasoned Action", **Basic and Applied Social Psychology**, Vol. 25, No. 3, pp. 175-187
- Baron, R. M. and Kenny, D. A. (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic and Statistical Considerations", **Journal of Personality and Social Psychology**, Vol. 51, No. 6, pp. 1173-1182
- Blanchard, C. M., Rhodes, R. E., Nehl, E., Fisher, J., Sparling, P. and Courneya, K. S. (2003), "Ethnicity and the Theory of Planned Behavior in the Exercise Domain", **American Journal of Health Behavior**, Vol. 27, No. 6, pp. 579-591, [Electronic], Available: ProQuest Medical Library [2005, July 8]

- Boyd, E. and Spekman, R. (2001), "Internet usage within B2B relationships and its impact on value creation: a conceptual model and research propositions", available at: http://papers.ssrNocom/abstract=282521.
- Boyle, B. and Alwitt, L.F. (1999), "Internet use within the US plastics industry", *Industrial Marketing Management*, Vol. 28, pp. 327-41.
- Ball, K. (2001), "The use of human resource information systems: a survey", Personnel Review, Vol. 30 No. 6, pp. 677-93.
- Bariff, M.L. and Ginsberg, M.J. (1981), "MIS and the behavioural sciences: research patterns and prescriptions", Data Base, Vol. 14 No. 1, pp. 19-26.
- Benkhoff, B. (1997). "Disentangling organisational commitment: the changes of the OCQ for research and policy". Personnel Review, Vol. 26 No. 1, pp. 114-20.
- Boland, R.J. (1979), "Control, causality and information system requirements", Accounting, Organisations and Society, Vol. 4 No. 3, pp. 259-72.
- Boynton, A.C. and Zmud, R.W. (1987), "Information technology planning in the 1990s: directions for practice and research", MIS Quarterly, Vol. 11 No. 1, pp. 59-71.
- Brooke, C. and Maguire, S. (1998), "Systems development a restrictive practice", International Journal of Information Management, Vol. 18 No. 3, pp. 165-80.
- Cetin, M. O. (2006). The relationship between job satisfaction, occupational and organizational commitment of academics. Journal of American Academy Business, 8(1): 78-88. Retrieved on 8 October 2006 from ABI/INFORM Global.
- Choo, H. J., Chung, J. E. and Pysarchik, D. T. (2004), "Antecedents to New Food Product Purchasing Behavior among Innovator Groups in India", **European Journal of Marketing**, Vol. 38, No. 5/6, pp. 608-625, [Electronic], Available: Emerald Group Publishing Limited/0309-0566 [2005, November 25]
- Churchill, G. A. Jr. and Surprenant, C. (1982), "An Investigation into the Determinants of Customer Satisfaction", **Journal of Marketing**, Vol. 19, No. 4, pp. 491-504
- Conner, M., Kirk, S. F. L., Cade, J. E. and Barrett, J. H. (2001), "Why Do Women Use Dietary Supplements? The Use of the Theory of Planned Behavior to Explore Beliefs About Their Use", **Social Science and Medicine**, Vol. 52, pp. 621-633

- Cook, A. J., Kerr, G. N. and Moore, K. (2002), "Attitudes and Intentions towards Purchasing GM Food", **Journal of Economic Psychology**, Vol. 23, Iss. 5, p. 557-572
- Courneya, K. S., Bobick, T. M. and Schinke, R. J. (1999), "Does the Theory of Planned Behavior Mediate the Relation between Personality and Exercise Behavior?", **Basic and Applied Social Psychology**, Vol. 21, Iss. 4, pp. 317-324
- Cunningham, G. B. and Kwon, H. (2003), "The Theory of Planned Behavior and Intentions to Attend a Sport Event", **Sport Management Review**, Vol. 6, pp. 127-145
- Clarke ,N.(2003).the politics of training needs analysis ,journal of workplace learning, vol 15.
- Chiu, David & Mak .(1999).ReMIS training need analysis :a proposed framework for literature review ,journal of personal review ,Vol 28.
- Churchill, R. H. (1974). Job satisfaction and product strategy of Lebanese banking staff. Journal of Managerial Psychology, 18(4): 368-376. Retrieved on 15 August 2006 from http://www.emerald-library.com
- Checkland, P.B. and Scholes, J. (1999), Soft Systems Methodology in Action: A 30 Year Retrospective, Wiley, Chichester.
- Chen, Q. & Cheng, H. (2008). Research on Resource-Based Management Information System Competencies and Strategies. IEEE.
- Cohen, M. (1998). Applied business research: Quantitative and qualitative methods. Singapore: John Wiley and Sons.
- Gray, R.M. and Kinealy, M.A. (1996), Human Resource Management and the Internet, Hilbre Business Press, New York, NY.
- Henson, R.2001; MIS in the 21st Century: Challenges and Opportunities.
- Hopkins, Bryan, 2003. e-MIS: Using Intranets to Improve the Effectiveness of Your People.
- Ivancevich, U., & Matteson. G. (1996). Gender and the relationship between perceived fairness in pay, promotion, and job satisfaction in a sub-Saharan African economy. Women in Management Review, 21(3): 224-240. Retrieved on 12 August 2006 from http://www.emerald-library.com
- James &Leat. (1997). training needs analysis :weakness in the conventional approach, journal of European industrial training, vol 21.

- Lin& Darling (1997).a processual analysis of customer service training, journal of service Marketing, vol 11.
- Locke, E.A. (1976),. "The nature and causes of job satisfaction", in Dunnette, M.D. (Ed.), Handbook of Industrial and Organizational Psychology, Rand McNally, Chicago, IL, pp. 1297-349.
- Lofquist, D. B., & Weiss, J. (2003). Organizational culture and job satisfaction. Journal of Business& Industrial Marketing, 18(3): 219-236. Retrieved on 12 August 2006 from http://www.emerald-library.com
- Luthans, F. (1998), Organizational Behavior, 8th ed. Boston: McGraw-Hill.
- Li, Y. & Hu, L. (2007). The Impact of MISMIS on Enterprise Social Capital: A View from Social Network. IEEE.
- Maiga, J. C. (2003). Job satisfaction among product assistance professionals: A national study. Journal of Employment Counseling, 39: 50-60. Retrieved on 12 October 2006 from EBSCOhost Full Display.
- Maslow, A.H. (1954). Motivation and Personality. New York: Harper & Row Publishers.
- McCormick, G. J. & Ligen, W. R. (1985). Perceived overqualification and dimensions of job satisfaction: A longitudinal analysis. The Journal of Psychology, 134(5): 537-555. Retrieved on 10 September 2006 from EBSCOhost Full Display.
- Mitchell, M. A. (1987). How important is compensation for job satisfaction of retail trainers? Some evidence. Product Benefit Plan Review. Retrieved on 15 September from EBSCOhost Full Display.
- Mowday, R. (1982). "The measurement of organizational commitment", Journal of Vocational Behaviour, Vol. 14, pp. 224-7.
- O' Malley, K. (2000). "The effect of participative strategy evaluation on accountants' psychological empowerment, organizational commitment, and job satisfaction." Working paper.
- Osborne, M. (2003), "Attitudinal organizational commitment and job strategy: a meta-analysis", Journal of Organizational Behavior, Vol. 23, pp. 257-66.
- Patricia A. K. Fletcher, 2007. From Personnel Administration to Business-Driven Human Capital Management the Transformation of the Role of MIS in the Digital Age.
- Preffer, J. (1979), "Scales for the measurement of some work attitude and aspects of psychological well-being", Journal of Occupational Psychology, Vol. 52, pp. 129-48.

- Peter, L .(1994).Reparatory grid as a tool for training needs analysis, journal of Learning organization, vol 1.
- Reed & Vakola .(2006).what role can a training needs analysis play in organizational change, journal of organizational change management, vol 19.
- Robbins, S. P. (2005). Organizational behavior(11th ed.). New Jersey: Prentice Hall.
- Robbin, S. P., & Langton, A. (2005). Organizational behavior (4th ed.). Irwin: McGrawHill
- Schappe, S. P. (1998). The influence of job satisfaction, organizational commitment, and fairness perceptions on organizational citizenship behavior. The Journal of Psychology, 132(2): 277-290. Retrieved on 15 August 2006 from EBSCOhost Full Display.
- Schultz, B. (1994). Supervisory actions, job satisfaction and turnover intentions of Irish trainee accountants. The Irish Accounting Review, 12(2): 47-73. Retrieved on 12 October 2006 from ABI/INFORM Global.
- Sekaran, U. (2000). Research method for business: A skill building approach. 3rd Ed. New York: John Wiley and Sons.
- Smith, E., Kendall, J. M. & Hulin, G. F. (1969). Dimension of work satisfaction as predictors of commitment type. Journal of Managerial Psychology, 17(7): 564-579. retrieved on 10 September 2006 from http://www.emerald-library.com
- Tietjen, M. A., & Myers, R. M. (1998) Motivation and Job Satisfaction. Management Decision, 36/4, 226–231.
- Tosi, D., Rizzo, J., & Caroll, T. (1990). Organizational commitment: A mediator of the relationships of leadership behavior with job satisfaction and strategy in a non-western country. Journal of Managerial Psychology, 15(1): 6-28. Retrieved on 15 August 2006 from http://www.emerald-library.com
- Ulrich, C. (1997). Job satisfaction and gender: an expanded specification from the NLSY. International Journal of Manpower, 25(2): 211-234. Retrieved on 12 August 2006 from http://www.emerald-library.com
- Wright, L., & McMahan, F. (1992). The impact of organizational culture and personorganization fit on organizational commitment and job satisfaction in Taiwan. The Leadership and Organization Development Journal, 25(7): 592-599. Retrieved on 17 August 2006 from http://www.emerald-library.com