

FACTORS INFLUENCING UNIVERSITY RESOURCE PLANNING IN THAILAND

JARUMON NOOKHONG*, NUTTHAPAT KAEWRATTANAPAT** & WICHUDA KUNNU***

*JARUMON NOOKHONG, *Information Science Program Concentration with Management Information System, Suan Sunandha Rajabhat University, Bangkok, Thailand*

Jarumon.no@ssru.ac.th

**NUTTHAPAT KAEWRATTANAPAT, *Information Science Program Concentration with Management Information System, Suan Sunandha Rajabhat University, Bangkok, Thailand*

Nutthapat.ke@ssru.ac.th

***WICHUDA KUNNU, *English Program, Suan Sunandha Rajabhat University, Bangkok, Thailand*

Wichuda.ku@ssru.ac.th

ABSTRACT

Abstract—this paper is a documentary research and examination on related research influencing university resource planning in Thailand. 6 influence factors: top management support, user characteristics, technical compatibility, innovativeness in IT, Perceived Usefulness and training. It is suggested that the findings could be applied in planning or strategic formulation of university resource in Thailand.

Keywords—Factors Influencing, Adoption, Enterprise Resource Planning, University Resource Planning

INTRODUCTION

Nowadays, enterprise resource planning is utilized as a driving force of many traditional higher education institutes; it is considered to be a useful tool for integration. Such planning is deemed the biggest information and communication technology investment for higher education institution [1] The main concept is to raise awareness among each individual to perceive an institute as an enterprise. Most organizations have integrated information technology in order to systematically achieve a goal based on the organization process. ERP is one of such information technology to be efficiently adopted [2]

University resource planning was designed to solve university problems in order to achieve harmony between pieces of data for improving management quality and effectiveness in order to improve management levels. By utilizing the university resource planning, characteristics and properties of university will be identified leading to an ability to inspect for capabilities concerning competitiveness and an ability to improve public service [3]

The university resource planning is an information system model for a new educational management for technological integration of university. The development level of university resource planning will reflect the overall strength of university by taking internal relationships in organization into consideration in order to create the same information standards and formulate combined criteria and specific conditions in order to integrate with information system [4] According to the basic principle of enterprise resource planning for management of educational data structure in a higher institute, it helps preserving resource and minimized working procedures leading to much more efficient and achievable information operations. ERP minimizes university's resource allocation procedures and working operations and management leading to a better service for instructor and student.

Nowadays, enterprise resource planning is utilized as a driving force of many traditional higher education institutes; it is considered to be a useful tool for integration. Such planning is deemed the biggest information and communication technology investment for higher education institution [1] The main concept is to raise awareness among each individual to perceive an institute as an enterprise. Most organizations have integrated information

technology in order to systematically achieve a goal based on the organization process. ERP is one of such information technology to be efficiently adopted [2]

Given that, a study and investigation to find factors influencing university resource planning in Thailand has been performed. It is suggested that the findings could be applied in planning or strategic formulation of university resource in Thailand by utilizing in an analysis or forecasting or using as a factor for decision-making in the future.

OBJECTIVES

To study factors influencing university resource planning in Thailand.

METHODOLOGY

A synthesis of related literature connected to factors influencing university resource planning in Thailand suggested that:

[5] performed a study “TAM-based success modeling in ERP” and found that the modelling in ERP was consisted of (1) top management support (2) communication (3) cooperation (4) training (5) technological complexity.

[6] performed a study “An extension of the technology acceptance model in an ERP implementation environment”. It revealed that such study evaluated the impact of one belief construct (shared beliefs in the benefits of a technology) and two widely recognized technology implementation success factors (training and communication) on the perceived usefulness and perceived ease of use during technology implementation.

[7] performed an investigation into “Determination of the Factors that affect the use of enterprise resource planning information system through technology acceptance model”. It was determined that, eleven independent variables, all of which were taken into consideration in the scope of user characteristics, innovative characteristics, organizational and environmental characteristics factors, had statistically meaningful and positive effect on perceived ease of use and perceived usefulness which represent TAM parameters.

[8] conducted a study “A study on ERP system acceptance based on technology acceptance model”. They found that these new added variables were related to individual characteristics and the organizational contexts in which the ERP implementation takes place. Nine constructs comprised of ERP: ease of use, ERP usefulness, ERP compatibility, ERP business fit, shared belief in the benefit of ERP system, facilitating condition, ERP self-efficacy, argument for change and personal innovativeness of IT were hypothesized as antecedents to ERP systems symbolic adoption.

[9] studied “Factors related to the intended use of ERP systems”. It revealed that it investigated the correlation of the perceived usefulness of the ERP system, perceived ease of using it, and computer anxiety in users to their satisfaction with the used ERP system.

[10] investigated “Explaining intention to use an enterprise resource planning (ERP) system: an extension of the UTAUT model”. They found that six independent variables and two moderating variables have been identified for further research on the impact of end-users’ intention to use ERP system. From the literature review, all six independent variables, namely performance expectancy, effort expectancy, social influence, training, communication and shared beliefs, positively contributed to the end-users’ intention to use the ERP system.

[11] investigated “The influence of external factors on routine ERP usage” and they found that three groups of external factors which influence ERP usage 1. Organizational process characteristics 2. system and technological characteristics 3. Personal characteristics and information literacy.

[12] performed a studied “Determinants of acceptance of ERP software training in business schools: Empirical investigation using UTAUT model”. It revealed that it was convenience from online access, innovativeness in information technology, performance expectancy, and effort expectancy positively impact students’ behavioral intention to use, while facilitating conditions and behavioral intention to use positively impact use behavior.

[13] studied “The actual usage of ERP systems: An extended technology acceptance perspective”; The study thus attempted to explain behavioral intention and actual usage of ERP implementation based on the technology acceptance model (TAM). The model also incorporated additional behavioural constructs, top management support, computer self-efficacy (CSE) and computer anxiety.

[14] investigated “Understanding the behavioral intention to use ERP systems: An extended technology acceptance model”. The results indicated that subjective norms, perceived usefulness and education level were determinants of behavioral intention to use the system. In addition, perceived usefulness affects attitude towards use, and both perceived ease of use and compatibility affect perceived usefulness. Implications of these findings were discussed and further research opportunities described.

RESULTS

Based on related document and literature, findings regarding factors influencing university resource planning are as figure 1:

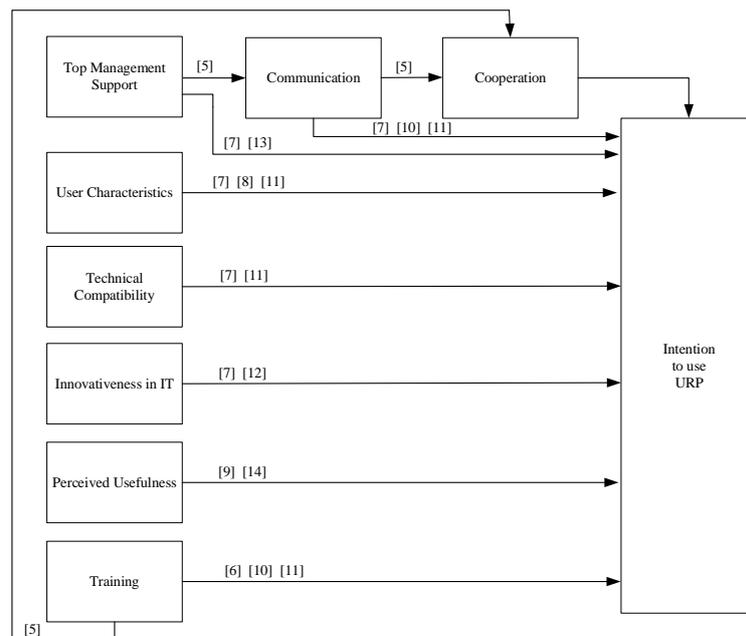


Figure 1
The research Model

figure 1 this paper is a documentary research and examination on related research influencing university resource planning in Thailand. 6 influence factors: top management support, user characteristics, technical compatibility, innovativeness in IT

CONCLUSION

According to [2][15][16] higher education institute adopted the enterprise resourcing planning in university's technical modules i.e., finance, human resource, project management and student records concerning their status, employee, buildings, documentation and transactions in and outside the campus; [17] applied enterprise cloud computing in educational institutes; web-service technology was also applied in distributed processing to support network data sharing. Based on the aforementioned research, they are relevant to a study conducted by [18] according to the statement “technological acceptance is in connection with the following factors: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation and habit”. The study findings can be utilized in decision-making, university's resource management or they can be utilized in decision-making on other fields of university resource management; moreover, they can be utilized as an application guideline of university resource planning.

ACKNOWLEDGMENTS

We would like to thank the Institute for Research and Development's Suan Sunandha Rajabhat University's fund for supporting this research study and for providing sponsorship.

REFERENCES

- [1] Ahmad, R. M., Othman, Z. & Mukhtar, M. (2011), "ERP Implementation Framework for Malaysian Private Institution of Higher Learning", *International Conference on Electrical Engineering and Informatics*.
- [2] Mudaliar, A., Garde, V. & Sharma, D. (2009), "Educational Resource Planning – A Framework for Educational Institutions", *Second International Conference on Emerging Trends in Engineering and Technology (ICETET-09)*.
- [3] Li, et al. (2010), "Research on Digital Campus of Higher Colleges and Its Management Platform", *International Conference on Educational and reformation Technology (ICEIT 2010)*. URL: <http://ieeexplore.ieee.org/document/5607544/>
- [4] Hao, L., Fei, R. & Jian, C. (2010), "EURP: Extended Framework of University Resource Planning", *International Forum on Information Technology and Applications IEEE*. URL: <http://ieeexplore.ieee.org/abstract/document/5634656/>
- [5] Salvador Bueno & Jose L. Salmeron. "TAM-based success modeling in ERP", URL: <https://www.semanticscholar.org/paper/TAM-based-success-modeling-in-ERP-Bueno-Salmeron/fdbfd316ca19d0be72f359545ce58d93677e9404?navId=extracted>.
- [6] Kwasi Amoako-Gyampah & A. F. Salam. (2004), "An extension of the technology acceptance model in an ERP implementation environment", *Information & Management*, Pp. 731-745.
- [7] Yaşar Akça & Gökhan Özer. (2016), "Determination the Factors that Affect the Use of Enterprise Resource Planning Information System through Technology Acceptance Model", *International Journal of Business and Management*, Vol. 11, No. 10.
- [8] Rajesri Govindaraju & Nenny Indriany. "A Study on ERP System Acceptance Based on Technology Acceptance Model" URL: <http://eprints.utcc.ac.th/2155/1/2155fulltext.pdf>
- [9] Željko Garača. (2011), "Factors Related to the Intended Use of ERP Systems", *Management*, Vol. 16, 2, Pp. 23-42.
- [10] Mei Ling Keong, Thurasamy Ramayah, Sherah Kurnia & Lo May Chiun. (2012), "Explaining intention to use an enterprise resource planning (ERP) system: an extension of the UTAUT model", Vol. 13, No. 4, Pp. 173-180.
- [11] Simona Sternad, Miro Gradisar & Samo Bobek (2011), "The influence of external factors on routine ERP usage", *Industrial Management & Data Systems*, Vol. 111, No. 9, Pp. 1511-1530.
- [12] Sumedha Chauhan & Mahadeo Jaiswal. (2016), "Determinants of acceptance of ERP software training in business schools: Empirical investigation using UTAUT model", *The International Journal of Management Education*.
- [13] Ya-Yueh Shih. (2009) "The Actual Usage of ERP Systems: An Extended Technology Acceptance Perspective", *Journal of Research and Practice in Information Technology*, Vol. 41, No. 3.
- [14] C.A. Gumussoy, F. Calisir & A. Bayram. (2007), "Understanding the behavioral intention to use ERP systems: An extended technology acceptance model", *IEEE*
- [15] Pollock, N. & Cornford, J. (2004), "ERP systems and the university as a unique organization", *Information Technology & People*.
- [16] Abdellatif H. J. (2014), "ERP in Higher Education: A Deeper Look on Developing Countries", *IEEE*, Pp. 73-78.
- [17] Sultan, N. (2010), "Cloud computing for education: A new dawn?", *International Journal of Information Management*.
- [18] Nutthapat Kaewrattanapat, Jarumon Nookhong & Wipada Chiewchan. (2018), "The Empirical Study on Instructors' Acceptance and Use Interactive Book in Digital Learning Environment", *TheIRES conference Zurich, Switzerland*