

Successful Adoption of E-Monitoring for Budgeting Implementation in Context of Mandatory Environment and Tri Hita Karana Culture

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Abstract

This study examines the successful adoption of electronic monitoring for budget implementation (E-MBI) using model of Unified Theory of Acceptance and Use of Technology (UTAUT) that modified in context of mandatory environment and Tri Hita Karana cultural. This study aim is to examine and explain factors affecting the successful adoption of electronic government in Regional Office of Religion Ministry of Bali based on local culture of Tri Hita Karana. Data was collected by survey method using questionnaire. Samples were 60 personnel of E-MBI. Data were analyzed by using partial least squares. The research proves that performance expectancy, social and cultural and information quality can affect user satisfaction to E-MBI. Meanwhile, effort expectancy, facilitating conditions, and system quality cannot affect the user satisfaction to E-MBI. Public education or religious cannot affect the effect of exogenous variables on endogenous variables. In addition, the results reinforce UTAUT to construct models of social and cultural factors in context of Tri Hita Karana to replace social factors construct in UTAUT model.

Keywords: UTAUT, e-government, mandatory setting, Tri Hita Karana cultural

1. Introduction

The development of information and communication technology has become a global trend, including the digitization of government sector known as electronic government (e-government). The transformation of e-government services has many benefits such as the provision of cost-effective services, reduction of administrative costs, and accelerates managerial decision-making (Ahmadjayadi, 2004). Religion Ministry (RM) began to design and developing the principles of telemetric technology mechanism (electronic) usage, one of them was monitoring and reporting the budget implementation. Large Working Unit (WU) makes Religion Ministry naturally develop an Information Systems (IS) to facilitate the budget implementation control.

Strengthening control and evaluation of budget implementation electronically was held by mandate issuance of Religion Ministry No. 47 of 2014 on Electronic Monitoring of Budget Implementation at Religion Ministry (PMA 47/2014). PMA 47/2014 requires the use of Electronic Monitoring of Budget implementation (E-MBI) for entire Work Unit under Religion Ministry organizational structure.

Regional Office of Religion Ministry in Bali Province is Work Unit of Indonesia Republic with area of Religion Ministry Working Unit of vertical agencies in province of Bali. Therefore, Work Unit in Bali Provincial Office for Religious Affairs, according PMA 47/2014, Work Unit is obliged to implement electronic monitoring for budget implementation through application of E-MBI on website www.e-MBI.ReligionMinistry.go.id before next 20 months. Reality suggests that many work units still not update the data report of program implementation within specified time limits. 95 Work Units within Bali Provincial Office for Religious Affairs, 53.7% (51 Work Unit) has not been updating the data report on E-MBI. Latest completion report rate is 46.3%. Therefore, it can be said that E-MBI has not been used effectively in controlling and reporting process the performance of budget implementation in Bali Provincial Office for Religious Affairs.

The data show a reluctance to deal budget implementation performance reporting through E-MBI. E-MBI actually is implemented to support the control and reporting activities of Work Unit at all levels. E-MBI usage at all levels of Work Unit improves the quality control of budget implementation programs in the Work Unit. Therefore, E-MBI should be accepted and used by all Work Unit in Religion Ministry. Jogiyanto (2008: 1) mentions the failure of Information Technology (IS) implementation in organization can be caused by low IS technical quality. It can also be caused by behavioral aspects.

This study may provide an overview and greater insight into IS technology field and better understanding of IS behavioral theory based on individual (UTAUT) and process (DeLone & Mclean, 1992) and factors affecting IS users satisfaction on required adoption in public sector organizations (e-government) with reconstruction of definition and measurement of social affect by linking constructs in culture of Tri Hita Karana (THK). This research suggest input and contribution to organization in decisions making of IS technological implementation by considering the impact of user satisfaction of IS technology as a measure for IS successful and effectiveness and open the horizons within organization about the importance to understand social and cultural factors to promote employees to use IS in order to improve performance.

This study aim is to examine and explain the effect of performance expectancy, effort expectancy, social and cultural factors, facilitating conditions, systems quality, and information quality on E-MBI user satisfaction. In addition, the study also examines the effect to strengthen the education sector performance expectancy, social and cultural factors, and information quality on E-MBI user satisfaction.

2. Theory Review and Hypothesis Development

2.1 Assessment Theory

Research on new technology acceptance at individuals and organizations level has been conducted by Venkatesh et al., (2007). Previous research on IS usage has been done with various models, especially in environments to use IS voluntarily. But the application of its findings in a mandatory environment relatively not clear. Theoretical models of IS adoption was incorporated Venkatesh et al. (2003) in a theory known as the Unified Theory of Acceptance and Use of Technology (UTAUT). This theory presents four major determinant of user acceptance and IS usage, namely performance expectancy, effort expectancy, social affect and facilitating conditions.

UTAUT models have been widely used in IS adoption research, but within IS voluntary environmental. The UTAUT model adoption in public sector organizations with mandatory environment is relatively rare. Therefore, the application of IS adoption model at public sector organizations in mandatory environments is interesting to study.

Brown et al. (2002) describe a model acceptance of existing technologies do not conform to explain in adoption context of mandatory environment. Specifically indicated that IS as dependent variable is not appropriate in mandatory environment to use IS. In mandatory environment, users are required to use a specific technology or system to perform the work. Users must use the system, regardless of whether he intends to use it (Brown et al., 2002; Chan et al., 2010). They noted that in a mandatory environment, the intention to use the IS may be associated with other beliefs, such as reward and punishment, rather than confidence to IS itself. Thus, testing the intentions and the antecedent become less relevant in context of mandatory environment.

Adversely, user satisfaction is the better dependent variable than IS for large-scale, integrated and mandatory environment (Brown et al., 2002). This study finding supported Al-Khowaiter, et al. (2013) that performance expectancy, effort expectancy, social factors and facilitating conditions have a direct effect on user satisfaction. It is consistent with Chan et al. (2010) which indicates that performance expectancy, effort expectancy, social factors and facilitating conditions affect on user satisfaction. Furthermore, user satisfaction has been widely recognized as a key indicator of IS success matrix (DeLone and Mclean, 1992). User satisfaction is a variable to measure the effectiveness of IS success (Jogiyanto, 2007: 25).

Baridwan (2012) explains that UTAUT still has weakness because it only uses the individual context (performance expectancy and effort expectancy) and social context (social affect). Therefore, research to develop UTAUT models by incorporating technology into model is needed. DeLone and Mclean (2003) argues that technology context is one interest factors that need to be considered as a behavioral determinant. Within context of this technology, the constructs used in UTAUT will be more complete because it considers the three contexts of individual, social and technological context.

Constructs in this technology context is system quality and information quality. Mason (1978) found the system quality and information quality will determine the attitude of system users. Context of this technology has been used in several studies, among others DeLone and Mclean (1992), Molla and Licker (2001), DeLone and Mclean (2003), Roldan and Leal (2003) and Livari (2005), for the success model of information system. These studies suggested that user satisfaction is affected by system quality and information quality (Jogiyanto, 2007).

In relation with social context and human role in IS acceptance and usage, it is necessary to consider the effect of cultural factors. Human behavior and practices to do activities in public sector organizations is quite heavily affected by culture. Susanto, et al. (2008) explains that organizational culture is an important factor to determine the success or failure of enterprise. Lippert and Volkmar (2007) explains that organizational culture is an important factor to create the context of technology usage and performance. McCoy et al. (2007) explains that culture is widely believed to have a major effect on behavior and people practices around the world. At same time, the process to accept technology is increasingly important in organizations and in society at large. This shows that culture, including THK culture, is concerned with IS, since IS is a small part of one community activities, include economics (Windia and Dewi 2007: 23).

THK has become holistic life philosophy and unique because it only root in Bali Hinduism. Windia and Dewi (2007: 2) and Wiana (2007: 8) explain that THK is a culture system with following elements: (1) *parahyangan*, harmonious relationship with God; (2) *palemahan*, a beautiful harmony between man and his environment; and (3) *pawongan*, harmonious relationship between human beings. Thus, the goal is to achieve life happiness in THK emphasize on principles of harmonization, alignment and balance between economic motives, environment, culture, aesthetics, and spiritual.

Ariyanto (2014) conducted a study which emphasizes the role of culture in adoption behavior and IS usage with dimensions of THK. The research was carried out to reconstruct definition and measurement of social affect construct (social affect) from organizational culture perspective and spiritual level (especially THK culture in Bali) by replacing the social affect construct into sociocultural construct. This is in line with Al-Gahtani et al. (2007), Bandyopadhyay and Fraccastoro (2007), as well as Venkatesh and Zang (2010), who do the replacement, expansion or modification of social affect in UTAUT model due to cultural differences in research context. His research found that social and cultural factors (THK) has positive effect on intention to adopt and utilize IS. The social factor is a direct predictor of intention to adopt IS and IS is affected by culture of the place. It is consistent with Suardikha (2012) which explains that THK culture affect the IS usage.

2.2. Hypothesis development

Performance expectancy is a technological attribute to contribute positively to users attitude and user satisfaction in context of employment and consumers (Brown et al., 2008; Venkatesh et al., 2003), including in situations of mandatory usage (Brown et al., 2002). IS acceptance research in a mandatory environment to use IS was conducted by Chan et al. (2010). Research results show that performance expectancy affects on user satisfaction. These results are supported Al-Khowaiter, et al. (2013), Ariyanto (2014), Ling, et al. (2015) as well as Chopra and Rajan (2016), which found that performance expectancy has positive effect on user satisfaction. When the technology use is mandated, performance expectancy encourage positive attitudes in IS user satisfaction, by improving efficiency to use technology. Therefore, the first hypothesis of this study is:

H₁: Performance expectancy has positive effect on E-MBI user satisfaction

Effort expectancy is also a technological attribute to contribute positively to users attitude and user satisfaction in context of employment and consumer (eg, Brown et al., 2008; Venkatesh et al., 2003), including mandatory usage (Brown et al., 2002). IS acceptance research in a mandatory environment was conducted by Chan et al. (2010). Research results indicate that expectancy efforts affect on user satisfaction. These results are supported Al-Khowaiter, et al. (2013), Ariyanto (2014), as well as Chopra and Rajan (2016) that effort expectancy has positive effect on user satisfaction. When technology usage is mandated, effort expectancy promote positive attitudes towards IS user satisfaction, namely by minimizing the effort to use technology. Therefore, the second hypothesis of this study is:

H₂: Effort expectancy has positive effect on E-MBI user satisfaction

The social factor is an interpersonal consideration to use technology. The social factor is a direct predictor of intention to adopt IS and IS is affected by culture applied (Ariyanto, et al., 2014). It is consistent with Suardikha (2012) who found that THK culture affect on IS usage. Given the user satisfaction is considered as attitudes (Brown et al., 2002), it is expected that social factors will have a positive effect on user satisfaction. This effect is expected will same in context of mandatory environment, even the effects of social and cultural factors more powerful in mandatory environment because of individuals tendency to meet the pressure from higher authorities (Venkatesh et al., 2003). It is supported by findings of Chan et al. (2010), Al-Khowaiter, et al. (2013), Ariyanto (2014), Ling, et al. (2015) as well as Chopra and Rajan (2016) who found that social factors have positive effect on user satisfaction. Therefore, the third hypothesis of this study is:

H₃: Socio-cultural factor has positive effect on E-MBI user satisfaction

The facilitating conditions a level to indicates the individual belief that organizational and technical infrastructure already exists to support the technology-based IS usage. The facilitating conditions is a user evaluation on usage environment (Venkatesh et al., 2003). Adequate resource tend to create a positive attitude because users have little reason not to be involved in IS implementation. Similar to social factors, expected facilitating conditions have a positive effect on user satisfaction. Facilitating condition effect is expected to be significant in mandatory usage, because users will be able to assess they access and ability to use the facilitating resources, such as help-desk support and experts support. In mandatory conditions, Chan et al. (2010) show that facilitating conditions affect on user satisfaction. This result is supported by findings of Al-Khowaiter, et al. (2013) and Ariyanto (2014) that facilitating condition has positive effect on user satisfaction. Therefore, the forth hypothesis of this study is:

H₄: Facilitating conditions has positive effect on E-MBI user satisfaction

The system quality measures the information system through a system usage or system linkage characteristics (DeLone and Mclean, 1992 and 2003; Negash et al., 2003). The system quality is a measure of its information technology quality itself. The system quality is the technical level of success of accuracy and efficiency of a system to produces information. The empirical study shows that system quality affect on user satisfaction (Roldan and Leal, 2003, McGill et al., 2003, Livari 2005, and Hussein et al., 2005). Budiyanto (2009) examine the implementation of computerized hospital information system at General Hospital Sragen with the research object was billing system. The empirical test results indicated that system quality has a significant positive effect on user satisfaction. Consistent with Bales, et al. (2012), Al-Khowaiter, et al. (2013) and Al Athmay, et al. (2016) explains that system quality has a positive effect on user satisfaction. Therefore, the fifth

hypothesis of this study is:

H₅: System quality has a positive effect on E-MBI user satisfaction

The information quality is something to concerns about the output value produced by technology-based information systems (DeLone and Mclean, 1992; 2003; Negash et al., 2003). The information quality is used to measure the output quality of a system based accounting information technology. The information generated by information system must be relevant, accurate, and reliable. Empirical studies show that information quality affect on user satisfaction (Garrity and Sanders, 1998; Molla and Licker, 2001, Roldan and Leal, 2003, McGill et al., 2003, Livari 2005, Hussein et al., 2005, Purwanto 2007, Kishor Vaidya 2007). Budiyanto study (2010) showed that information quality has significant and positive effect on user satisfaction. These results are consistent with findings of Urbach, et al. (2011), Al-Khowaiter, et al. (2013) and Al Athmay, et al. (2016) that information quality has a positive effect on user satisfaction. Therefore, the sixth hypothesis of this study is:

H₆: Information quality has a positive effect on E-MBI user satisfaction

This study uses a moderating variable of general cognitive ability and intelligence, it is proxied by public and religious education (education sector). The usage of public and religious education will affect a person's intellect and knowledge that allows a person to adapt the new IS, such as in research of Zmud (1979), Roger (1983), Agarwal and Prasad (1999), Iqbaria et al. (1996) and Burton-Jone and Hubona (2003). In relation with IS adoption and utilization, education sector (public and religious) will strengthen the intentions and behavior of adoption due to different depth of understanding of accounting and information system. Therefore, within mandatory environment, the public and religious education is expected to strengthen user satisfaction. Hambrick and Mason (1984) suggest that education level to some extent serve as an indicator of executive dexterity to look for new innovations. Ariyanto (2014) and Chopra and Rajan (2016) argues that IS acceptance and usage is affected by education and increased along with higher education levels. Therefore, the seventh hypothesis of this study is:

H₇: Education sector strengthens the affect of performance expectancy, social-cultural factors, and information quality on E-MBI user satisfaction.

3. Research Methods

This study population were 60 E-MBI users in Religious Affairs Office of Bali Provincial. The nonprobability sampling method is used with saturated sampling technique.

This study uses a manifest variables and latent variables. Manifest variables are indicators of moderating variable whose education value can be measured directly from respondents answers. latent variables used are: (1) performance expectancy (Venkatesh et al., 2003), (2) effort expectancy (Venkatesh et al., 2003), (3) social and cultural factors (Ariyanto, 2014), (4) the facilitating conditions (Venkatesh et al., 2003), (5) the system quality (Livari, 2005), and (6) the information quality (Livari, 2005). The e variable is user satisfaction (Brown et al., 2008).

This study uses questionnaire with five point Likert scale and semantic differential 5 points. Moderating variable of education sector is measured by dummy with 0 for religious education and one for public education. Analysis technique used is Partial Least Square at a significance level 5 percent. Validity and reliability is tested before. Model analysis is presented in Figure 1 below.

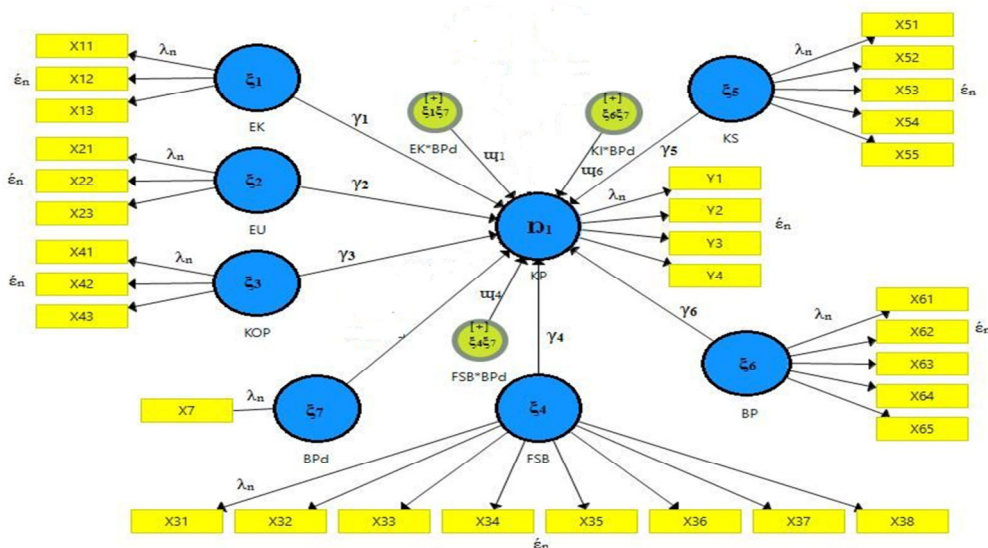


Figure 1: Research Model

4. Results and Discussion

The hypotheses testing are described in two parts: without moderating effects and with moderating effect. Although the PLS is a SEM technique that can test simultaneously the measurement model and structural model, but to assess the effect of moderation must follow the rules of Baron and Kenny (1986), where the moderating effects analysis can be done if the main effect (the direct affect of independent variables on dependent) is significant. If that does not happen, then moderating effects test cannot be performed (Jogiyanto, 2009: 116).

Hypotheses testing results for major structural model (without moderation) are presented in Table 1.

Table 1. Hypothesis Testing without Moderation Variable

Description	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
X1 (PE) => Y (US)	0,222	0,204	0,106	2,105	0,018
X2 (EE) => Y (US)	0,056	0,050	0,115	0,481	0,315
X3 (SCF) => Y (US)	0,202	0,198	0,108	1,874	0,031
X4 (FC) => Y (US)	-0,088	-0,100	0,091	0,970	0,166
X5 (SQ) => Y (US)	0,049	0,041	0,217	0,266	0,410
X6 (IQ) => Y (US)	0,580	0,606	0,269	2,157	0,016

Source: Primary data processed, 2016

Testing the moderating effect of education variable is done to independent variables with significant direct effect on user satisfaction, namely performance expectancy, social and cultural factors and information quality variables. The test results with structural model for moderating effect is shown in Table 2.

Table 2. Moderation Effect Hypothesis Testing

Description	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
(M1) ES => Y (US)	-0,012	-0,020	0,105	0,113	0,455
X1 (PE)*ES => Y (US)	0,083	0,042	0,127	0,655	0,256
X3 (SCF)*ES => Y (US)	0,043	0,046	0,129	0,333	0,370
X6 (IQ)*ES => Y (US)	-0,056	-0,033	0,129	0,436	0,332

Source: Primary data processed, 2016

The test result shows that H₁ hypothesis is supported by data with a positive coefficient. This means that higher performance expectancy will increase user satisfaction to use E-MBI application. This study result is consistent with research of by Chan et al. (2010), Al-Khowaiter, et al. (2013), Ling, et al. (2015), Ariyanto (2014) and Chopra and Rajan (2016). This empirical evidence implies that an individual who has high performance expectancy will be more satisfied to use information systems rather than individuals who have low performance expectancy. User satisfaction is a success measure the effectiveness of information systems, so it can be said that people who have high performance expectancy will use information systems more effectively than those with low performance expectancy.

Higher information systems success come from users with high performance expectancy. Therefore, information systems analysts and developers should consider ways to improve the performance expectancy of individual user (Wang and Shih, 2009). Implementation of based-technology information systems can make the complicated company operations to become more efficient, so that individuals feel the benefits of system, can done the job faster, easing the job, and can increase productivity and achievement (Venkatesh, et al., 2003).

The test result shows that H₂ hypothesis is not supported by data. This means that effort expectancy has no significant effect on E-MBI user satisfaction. The empirical evidence is not consistent with research of Chan, et al. (2010), Al-Khowaiter, et al. (2013), Ariyanto et al. (2014) and Chopra and Rajan (2016), but it is consistent with Ling, et al. (2015). Insignificant effect of efforts expectancy on user satisfaction allegedly is caused by several factors. First, responders had enough experience to interact with computer and E-MBI applications as seen from the respondents characteristic who indicate that 92.11% of users have experience to use computers more than 5 years, or even 50% of users had experience to use E-MBI applications above 2 years. It consistent with research of Venkatesh et al., (2003) that efforts expectancy is only significant in first period alone (ie T1 stage or the period after training) and become insignificant with changing times and more individual's experience to use the system. Second, interaction and E-MBI user satisfaction do not affected by the effort expectancy, but by other beliefs like the reward and punishment system because of the mandatory usage.

The test result shows that H₃ hypothesis is supported by data with a positive coefficient. This means that higher socio-cultural factors will increase user satisfaction to use E-MBI application. These results are consistent with research of Chan et al. (2010), Al-Khowaiter, et al. (2013), Ariyanto et al. (2014), Ling, et al. (2015) as well as Chopra and Rajan (2016) who found that social factors have positive effect on user satisfaction. This empirical evidence implies that individuals tend more satisfied to use IS if other people feel important to her to affect him to use IS, has a religious moral consciousness and feeling that IS usage has good effect on surrounding environment. User satisfaction is a success measure of information systems effectiveness. It can be

said that social-cultural factors will increase the effectiveness of information systems success. Therefore, the management of top level decision makers can take advantage of socio-cultural factors in order to implement information systems. Management needs to look at higher personal responsibility that work is worship, increasing the role of leadership and co-workers in motivating the users, and raise the awareness about the good effect of IS usage for environment preservation.

The test results showed that hypothesis H_4 is not supported by data. This means that facilitating conditions has no significant effect on E-MBI user satisfaction. The empirical evidence is not consistent with Chan, et al. (2010), Al-Khowaiter, et al. (2013), as well as Fathiah and Fadhilah (2015), but it is consistent with research of Napitupulu and Patria (2013) and Chopra and Rajan (2016). This insignificant effect is allegedly caused by several factors. First the majority of users (76.32%) have a lifespan of between 27-36 years, included in younger generation to complete the process of internet-based reporting with IS even without any facilitating conditions.

Second, the respondents have had considerable experience to interact with computers and E-MBI applications. It can be seen from the respondents characteristics that 92.11% of users have experience to use computer above five years, even 50% of users have experience to use E-MBI applications above 2 years. This is consistent with Jogiyanto (2008: 340) which explains that along with increasing time or the user experience to technology, the facilitating conditions affect become increasingly weak. Third, respondents found less objective factors in their work environment to makes it easy for them to do a job by utilizing the information technology, such as the low internet capacity, training modules or experts who assist them to use IS

The test results showed that H_5 hypothesis is not supported by data. This means the system quality does not have a significant effect on E-MBI user satisfaction. The empirical evidence is not consistent with research of Budiyo (2009), Bal, et al. (2012), Al-Khowaiter, et al. (2013), and Al Athmay, et al. (2016), but it is consistent with research of Baridwan (2012). Insignificant effect of system quality on user satisfaction allegedly is caused by several factors. First, there is no users participation in system development. Second, quite high percentage of respondents with score 3 and low respondent asses that information systems (E-MBI) will continue to function in case of error. Thirdly, interaction and user satisfaction to E-MBI is not affected by system quality, but by another belief as reward and punishment system because of its mandatory usage.

The test results showed that hypothesis H_6 is supported by data with a positive coefficient. This means that higher information quality will increase user satisfaction to use E-MBI application. The this study result is consistent with research of by DeLone and McLean (1992), Roldan and Leal (2003), Budiyo (2009), Urbach, et al. (2011), Al-Khowaiter, et al. (2013), and Al Athmay, et al. (2016) who found that information quality has significant and positive effect on user satisfaction. This empirical evidence implies that individual will tend to become more satisfied to use IS if the information generated from the system number is sufficient, complete, accurate and thorough, and contemporary. Given the success of user satisfaction is a measure of information systems effectiveness, it can be said that high information quality will enhance the effectiveness of information systems success. Therefore, information systems analysts and developers should consider to improve the information quality produced by the system. High information quality gives users will benefit from the existence of system and will satisfied with system.

The test result shows that H_7 hypothesis is not supported by data. Public or religious education does not moderate the effect of exogenous variables on endogenous variables. The empirical evidence is not consistent with research Ariyanto (2014) and Chopra and Rajan (2016) that IS acceptance and usage is affected by education and increased along with higher levels of education. Thus, it can be stated that education does not strengthen the effect of performance expectancy, effort expectancy, social and cultural factors, facilitating conditions, system quality and information quality on E-MBI user satisfaction. This insignificant result allegedly is caused by several factors. First, respondents characteristics shows that educational level of PIC mostly scholars (78.95%). It makes respondents have similar expertise, depth, and same intellectual breadth. Second, 28 respondents (68.42%) have experience to use E-MBI above one year, even 19 people (50%) have interacted with E-MBI application above two years.

Related to organizational behavior theory, Robbins and Judge (2008: 63) explain that even in most complicated works, the real learning typically have been ended before someone worked there for two years. Third, the entire PIC E-MBI from various fields of education have been trained and use the same module to give similar knowledge between them.

Statistical tests showed that moderating variable coefficients of education variable and the interaction with exogenous variables produces insignificant result. This moderating variable is called as homologiser moderation (moderation potential), the variables has potential moderating to strength the relationship between predictor variables (exogenous) and dependent variable (endogenous). This variable does not interact with predictor variables and does not have a significant relationship with dependent variable (Solimun, 2010). Therefore, education variable in this study is potential moderating variables (homologiser moderation).

5. Conclusions and Suggestions

Based on empirical testing and discussion above, it can be concluded that performance expectancy, social-cultural factors, and information quality can increase user satisfaction to use E-MBI application. While other variables such as the effort expectancy, facilitating conditions, and system quality does not affect on E-MBI user satisfaction. Moreover, education sector does not moderate the effect of these variables on user satisfaction E-MBI.

Future researchers can perform research with longitudinal data in hope that researchers can observe the individuals behavior before, during, and after the adoption of technology-based IS. This study uses the social construct and cultural factors in context of Bali culture (Tri Hita Karana), future researchers can consider to include Hosftede (2010) culture.

Reference

- Agarwal, R., and Karahanna, E. 2000. Time Flies When You 'are Having Fun: Cognitive Absorption and Beliefs about Information Technology Usage. *MIS Quarterly*. Vol. 24, No. 4, December, p. 665-694.
- Ahmadjayadi, C. 2004. Sistem Informasi Pemerintahan Abad 21. Kementerian Komunikasi dan Informasi. <http://www.kominfo.go.id>.
- AL Athmay A. A. A, Fantazy K., and Kumar V. 2016. E-Government Adoption and User's Satisfaction: An Empirical Investigation", *Euro Med Journal of Business*, Vol. 11 Iss: 1, pp.57 - 83.
- Al-Gahtani, S.S., Hubona, G.S., and Wang, J. 2007. Information Technology (IT) in Saudi Arabia: Culture and The Acceptance and Use of IT. *Information and Management* 44. P. 681-691.
- Al-Khowaiter, W.A.A., Dwivedi, Y.K., and Williams, M.D. 2013. Conceptual Model for Examining The Adoption and Success of Human Resource Information Systems In Public Sector Organizations in Saudi Arabia. *UK Academy for Information Systems Conference Proceedings 2013*. Paper 3.
- Ariyanto, D., dan Subroto, B., Purnomosidhi, B., Rosidi. 2014. Does the Balinese Tri Hita Karana Culture Affect the Adoption and Usage of Information Technology System. *Information and Knowledge Management*. Vol.4, No.9. pp 150-160.
- Ariyanto, D. 2014. Kesuksesan Pengadopsian dan Pemanfaatan Sistem Informasi Akuntansi Berbasis Teknologi dalam Konteks Budaya *Tri Hita Karana* pada Industri Hotel (*disertasi*). Malang: Universitas Brawijaya.
- Bal, Y., Bozkurt, S. and Ertemsir, E. 2012. The Importance of Using Human Resources Information Systems (HRIS) and A Research on Determining The Success of HRIS. *Management, Knowledge and Learning International Conference*.
- Baridwan, Z. 2012. "Analisis Keperilakuan Individu terhadap Implementasi Sistem Informasi Akuntansi: Model Penerimaan dan Kesuksesan Sistem Informasi Berbasis Teknologi" (*disertasi*). Malang: Universitas Brawijaya.
- Bandyopadhyay, K., Fraccastoro, K.A. 2007. The Effect of Culture on User Acceptance of Information Technology. *CAIS* 19. P. 522-543.
- Brown, S. A., Massey, A.P., Montoya-Weiss, M.M., and Burkman, J.R. 2002. "Do I Really Have To? User Acceptance of Mandated Technology." *European Journal of Information System*, (11) 4, pp 283-295.
- Brown, S. A., Venkatesh, V., Kuruzovich, J., and Messey, A.P. 2008. "Expectation Confirmation: An Examination of Three Competing Models," *Organizational Behavior and Human Decision Processes* (105) 1, pp.52-66.
- Budiaji, W. 2013. Skala Pengukuran dan Jumlah Respon Skala Likert. *Jurnal Ilmu Pertanian dan Perikanan* 2013. ISSN 2302-6308
- Budiyanto. 2009. Evaluasi Kesuksesan Sistem Informasi dengan Pendekatan Model Delone dan Mclean: Studi Kasus Implementasi Billing System di RSUD Kabupaten Sragen (*tesis*). Surakarta: Universitas Sebelas Maret.
- Burton-Jones, A., and Hubona, G.S. 2003. The Mediation of External Variables in the Technology Acceptance Model, Working Paper. *Department of Computer Information's Systems*. Georgia State University.
- Chan, F. K. Y., Thong, J. Y. L., Venkatesh, V., Brown, S.A., P. Jen-Hwa, H., and Tam, K. Y. 2010. Modeling Citizen Satisfaction with Mandatory Adoption of An E-government Technology. *Journal of the Association for Information System* (11) 10, pp. 519-549.
- Chopra S., and Rajan P. 2016. Modeling Intermediary Satisfaction with Mandatory Adoption of E-Government Technologies for Food Distribution. *Information Technologies & International Development*, 12(1), 15-34.
- Cooper, D., and Schindler, P.S. 2006. *Metode Riset Bisnis, Volume 2, Edisi 9*. PT Media Global Edukasi. Jakarta
- Dawes, J. 2008. Do data characteristics change according to the number of scale points used?: An experiment using 5-point, 7-point and 10-point scales. *International Journal of Market Research* Vol. 50 Issue 1.
- DeLone, W. H., and Mclean, E. R. 1992. Information System Success: The Quest for the Dependent Variable.

- Information System Research*, 3(1): 60-95.
- DeLone, W.H., and McLean E.R. 2003. The DeLone and McLean Model of Information System Success: A Ten Year Update. *Journal of Information System*.
- Fathiah, N., dan Fadhilah. 2015. The Integration of Unified Theory Acceptance Use Technology (UTAUT) and End User Computing Satisfaction (EUCS) to Evaluate Information System (IS). *The 11 Asian Academy of Management International Conference (AAMC) 2015* 2nd-4th October 2015. Penang.
- Ghozali, I., dan Latan, H. 2015. *Partial Least Squares, Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 3.0*. Semarang: Badan Penerbit-Undip.
- Hofstede, G. 2010. *Cultures and Organizations: Software of the Mind*. McGraw-Hill: New York.
- Jogiyanto, H.M. 2008. *Sistem Informasi Keperilakuan (Edisi Revisi)*. Yogyakarta: Andi
- Jogiyanto, H.M. 2007. *Model Kesuksesan Sistem Informasi*. Yogyakarta: Andi
- Ling, C. H., Islam Md. A., Manaf A. H.A., and Mustafa W. M. W. 2015. Users Satisfaction Towards Online Banking in Malaysia. *International Business Management* 9 (1): 15-27.
- Livari, J. 2005. An Empirical Test of the DeLone-McLean Model of Information System Success. *The DATA BASE for Advances in Information Systems*. (36:2). Spring.
- Lippert, S.K., and Volkmar, J.A. 2007. Cultural Effect on Technology Performance and Utilization: a Comparison of U.S. and Canadian Users. *Journal of Global Information Management*. Vol. 15, No. 2, April-June, p. 56-90.
- Mason, R.O. 1978. Measuring Information Output: A Communication System Approach. *Information and Management*. (1-5). P. 219-234.
- McCoy, S., Galleta, D.F., and King, W.R. 2007. Applying TAM Across Culture: The Need for Caution. *European Journal of Information Systems*. Vol. 16, p. 81-90
- McGill, T., Hobbs, V., and Klobas, J. 2003. User-Developed Applications and Information Systems Success: A Test of DeLone and McLean's Model, *Information Resource Management Journal*, 16(1): 2445.
- Molla, A., and Licker, P.S. 2001. E-commerce Systems Success: An Attempt to Extend and Respectively the DeLone and Mclean model of ISS. *Journal of Electronic Commerce Research*. (2:4). P. 1-11.
- Napitupulu, T.A., Patria, S.H.J. 2013. Factors That Determine Electronic Medical Records Users Satisfaction: A Case Of Indonesia. *Journal of Theoretical and Applied Information Technology*. Vol. 58 No.3.499-505.
- Peraturan Menteri Agama Nomor 47 Tahun 2014 tentang Monitoring Pelaksanaan Anggaran Secara Elektronik pada Kementerian Agama.
- Preston, C. C., and Colman, A. M. 2000. Optimal number of response categories in rating scales: reliability, validity, discriminating power, and respondent preferences. *Acta Psychologica* 104: 1-15.
- Purwanto, A. 2007. Rancangan dan Implementasi Model Pemeriksaan Kinerja Badan Pemeriksa Keuangan Republik Indonesia atas Aplikasi E-Government di Pemerintah Daerah: Studi Kasus Kabupaten Sragen (tesis). Yogyakarta: Universitas Gajah Mada
- Robbins, S.P., and Judge, T.A. 2008. *Perilaku Organisasi, Edisi 12, Buku 2*. Salemba Empat: Jakarta.
- Roger, E.M. 1983. Diffusion of Innovations. *The Free Press. A Division of Macmillan Publishing Co. Inc.* Third Edition.
- Roldan, J.L., and Leal, A. 2003. A Validation Test of an Adaptation of the DeLone and Mclean's Model in the Spanish EIS Field. *Idea Group Publishing*.
- Solimun, 2010. *Pemodelan Persamaan Struktural Pendekatan PLS*, Fakultas MIPA Universitas Brawijaya, Malang.
- Suardikha, I.M.S. 2012. Pengaruh Implementasi Budaya *Tri Hita Karana* terhadap Penggunaan Sistem Informasi Akuntansi Dimediasi Keyakinan-Diri atas Komputer, Keinovatifan Personal, Persepsi Kegunaan, dan Persepsi Kemudahan Penggunaan pada Bank Perkreditan Rakyat di Bali. (disertasi). Malang: Universitas Brawijaya.
- Susanto, A.B., Sujanto, F.X., Wijanarko, H.; Susanto, P., Mertosona, S., Ismail, W. 2008. *A Strategic Management Approach Corporate Culture dan Organization Culture*. The Jakarta Consulting Group. Jakarta
- Urbach, N., and Muller, B. 2011. The Updated DeLone and McLean Model of Information Systems Success. *Integrated Series in Information Systems Information Systems Theory: Explaining And Predicting Our Digital Society* (pp. 1–18). USA: Springer.
- Venkatesh, V., Morris, M. G., Davis G. B., and Davis F. D. 2003. "User Acceptance of Information Technology: Toward A Unified View," *MIS Quarterly* (27) 3, pp. 425-478.
- Venkatesh, V., Davis, F. D., and Morris, M. G. 2007. "Dead or Alive? The Development, Trajectory and Future of Technology Adoption Research," *Journal of the Association for Information Systems* (8) 4, pp. 267-286.
- Venkatesh, V., and Zhang X. 2010. "Unified Theory of Acceptance and Use of Technology: U.S. VS. China," *Journal of Global Information Technology Management* (13)1, pp. 5-27.

- Wang, Y.S., and Shih, Y.W. 2009. Why do People Use Information Kiosks? A Validation of The Unified Theory of Acceptance and Use of Technology. *Government Information Quarterly*, 26, 158-165.
- Wiana, I .K. 2007. *Tri Hita Karana Menurut Konsep Hindu*. Paramita Surabaya. Surabaya.
- Windia, W., dan Dewi, R.K. 2007. *Analisis Bisnis yang Berlandaskan Tri Hita Karana*. Penerbit Universitas Udayana. Denpasar
- Zmud, R.W. 1979. Individual Differences and MIS Success: A Review of the Empirical Literature. *Management Science*. Vol. 25 No. 10