

Information system and behavioural intention: evaluating the user behaviour of financial information system in developing country of Indonesia

Idria Maita, Saide Saide, Yelia Gusti Putri, Megawati Megawati & Medyantiwi Rahmawita Munzir

To cite this article: Idria Maita, Saide Saide, Yelia Gusti Putri, Megawati Megawati & Medyantiwi Rahmawita Munzir (2021): Information system and behavioural intention: evaluating the user behaviour of financial information system in developing country of Indonesia, Technology Analysis & Strategic Management, DOI: [10.1080/09537325.2021.1915474](https://doi.org/10.1080/09537325.2021.1915474)

To link to this article: <https://doi.org/10.1080/09537325.2021.1915474>



Published online: 19 Apr 2021.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)



Information system and behavioural intention: evaluating the user behaviour of financial information system in developing country of Indonesia

Idria Maita ^{a,b}, Saide Saide ^{c,d,e}, Yelia Gusti Putri ^{a,b}, Megawati Megawati ^{a,b} and Medyantiwi Rahmawita Munzir ^{a,b}

^aDepartment of Information System, Faculty of Science and Technology, State Islamic University of Sultan Syarif Kasim Riau (Universitas Islam Negeri Sultan Syarif Kasim Riau - UIN SUSKA Riau), Pekanbaru, Indonesia; ^bITGES Research Group (IT Governance Enterprise System), Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia; ^cDepartment of Information System (PRO-Knowledge Research Group), Faculty of Science and Technology, State Islamic University of Sultan Syarif Kasim Riau (Universitas Islam Negeri Sultan Syarif Kasim Riau, UIN SUSKA Riau), Riau, Indonesia; ^dEnReach (Energy Research Center), Universitas Islam Negeri Sultan Syarif Kasim Riau, Riau, Indonesia; ^ePRO-Knowledge Research Group, Pekanbaru, Indonesia

ABSTRACT

The aim of this study is to examine the dimensions (e.g., facilitating conditions (FC), performance expectancy (PE), effort expectancy (EE) and social influence (SI)) that influence behavioural intentions in financial institution in Indonesia. This research explores both the practical and theoretical basis of these paradigms. Studying the literature explores a theoretical existence of related context preceding the user behaviors. In addition, SPSS was used to measure demographic and generate descriptive statistics. Overall, the results demonstrate that behavioural intention (BI) was significantly influenced by FC, while PE and SI were marginally supported, and EE was not significant. It is acknowledged that FC is important incentives to necessitate action of user behavioural. The findings of this study may help institution and financial department to initiate new strategies such as integrating the dimensions of user experience on information system based on various indicators of this study. Additionally, to maximize the usage of information system, the institution can implement training for the employee concerning how to use the system. Further research may extend the focus to multiple organisations, cultures, and countries. This research is useful for institutions and academics as the comparative and intersecting explanation of enhancing user's usage of information system in Indonesia.

ARTICLE HISTORY

Received 20 July 2020
Revised 5 February 2021
Accepted 31 March 2021

KEYWORDS

Information system (IS);
UTAUT behaviour intention;
financial institution;
developing country

Introduction

Reaching business goals, an organisation requires to increase supporting resources of organisational performance. The prospective achievement of an organisation is determined by such an ability of their employees to effectively implement the strategies (e.g. use of information system or IT tools) to achieve organisation's objectives (Almatrooshi, Singh, and Farouk 2016; Muwardi et al. 2020; Psoinos, Kern, and Smithson 2000). Information technology (IT) and its extensive utilisation in the era of globalisation is increasingly both private and government in adopting IT features to manage their daily operations (Ainin et al. 2015; Sobkowiak and LeBleu 1996). As organisation expectation, information systems help organisations to process information quickly, precisely and

accurately (Delone and Mclean 2003; Saide et al. 2019c; Saide and Sheng 2020b). However, to achieve these objectives, user behaviour is required in using and utilising the information system or IT tools (Fisher and Howell 2004; Hsieh and Wang 2007).

User behavioural or user satisfaction is a crucial aspect in information systems adoption due to it in-touch directly with users (Levy, Murphy, and Zanakis 2009; Maita, Saide, and Irmayani 2018). Attitudes and perceptions of information system users are forms of user behaviour. The level of user understanding of the use of the system is the key for the institution to get maximal benefits of the system. In addition, by measuring user experience on usage of an information system, it lets the executive level to identify their employee's initiative in each single or down-top level in an organisation and develop their practice in another place (Al-Momani, Mahmoud, and Ahmad 2019; Halilovic and Cicic 2013; Valsamidis et al. 2019). Therefore, the author deals with investigating user behaviour, experience and knowledge of using information system. The approach or theory to identify user's experience and behaviour during using the information system is known as UTAUT framework (Venkatesh et al. 2003). The UTAUT is the previous acceptance model of technology developed by (Venkatesh et al. 2003) with a combining numerous IS/IT acceptance research models.

Based on Theory Planned Behaviour (TPB) model, behaviour of users are determined by intentions and perception while the intention is influenced by attitudes toward behaviour, subjective norms and perceptions of behavioural (Ajzen and Madden 1986). The capacity of the TPB in supporting a framework for exploring and predicting the acceptance of IT/IS innovation. To manage the organisations routines, the information technology adoption is needed in the digital era (Aydiner et al. 2019; Indrajit et al. 2018). As expected by an organisation, information systems can help organisations present information quickly, precisely and accurately (Delone and Mclean 2003). However, to achieve these objectives, the information system adoption cannot be separated from user behaviour utilising information system. The user behaviour is shaped by attitudes on IS users (Chaiyasoonthorn and Suksa-Ngiam 2018). Venkatesh et al. (2003), as the main developer of the UTAUT, have measured the user's behaviour and experience. UTAUT is able to determine about 70% of behavioural intention (BI) of technology/IS adoption and about 50% of IS/technology utilisation (Venkatesh, Thong, and Xu 2012).

However, prior studies usually analyse the UTAUT model in the context of profit organisation or business companies such as supply chain and manufactures (Nysveen and Pedersen 2016), health (Bawack and Kala Kamdjoug 2018), mobile/smartphone (Gupta, Dogra, and George 2018; Miadinovic and Xiang 2016; Zhang 2010), finances (Rahi et al. 2019; Tarhini et al. 2016; Yu 2012), rather than non-profit organisation or government institution. Thus, there is still little scientific understanding of how the non-profit organisation can adopt UTAUT model during IT/IS adoption plan and application in their companies. The lack of a direct empirical measurement for BI of information system adoption in the context non-profit organisational or government institution has yielded a knowledge gap.

As we elaborated above, UTAUT adoption is not enough only in profit companies but also needs to in line with non-profit organisation to ensure everything on UTAUT and IT adoption strategies will be run comprehensively. Previous studies still limited explored the UTAUT or information technology adoption model in profit-organisation, especially in developing countries (Karuri, Waiganjo, and Manya 2013, 2017; Venkatesh, Sykes, and Zhang 2011). Since developing countries seem to face more challenges when it comes to information technology adoption caused by a lack of digital-culture behaviour and beliefs. Thus, still few research have been conducted on UTAUT – information technology adoption in developing countries (Fuad and Hsu 2018; Holzmann, Schwarz, and Audretsch 2020; Klaus 2000), turning it a vital gap for further study for authors.

Finally, to attain any meaningful practical theoretical contributions and to identify critical parts of further study, this study will focus on aspects that influence the behaviour intention and information systems or IT adoption in the context of non-profit organisation, especially among users of financial management information system (website/application name "SIPKD system") in government's financial department in Riau Province (Indonesia). To examine the relationships, the authors created a survey-based to measure the conceptual model. This study is structured: The first

section provides the introduction or research motivations. The second section explains the review of related and research model. The third section presents the methods/approach to the study. The fourth section offers analysis and results. The fifth section describes the discussion of findings and conclusions of this research.

Literature review and model development

Literature review

The UTAUT was developed by (Venkatesh et al. 2003) with a combination of a numerous IT/IS (see Table 1 for operational definition of each construct/theory). These eight models mainly composed by several elements such as social influence (SI), effort expectancy (EE), performance expectancy (PE) and facilitating condition (FC) factor that had significant effect on user's behaviour intention to adopt information technology tools or information systems (Rahi et al. 2019; Venkatesh et al. 2003). Venkatesh et al. (2003) as the main developers of UTAUT theory encouraged future studies to explore more the UTAUT in several ways such as in the new context of cultural background and a new view of user behaviour. We, therefore, extend the UTAUT model in the context non-profit organisation or government institution in a developing country. In the following, we describe the importance of each factor of the UTAUT model of this research.

First, PE defined as the level of confidence of user that by using the IS/IT system will benefit in workplace (Venkatesh et al. 2003). In the context of SIPKD, this means that users SIPKD (admins, heads of fields, heads of sub-fields and staffs) consider they will not only find the useful IS/IT features but also finish their jobs effectively and quickly (DeLone and McLean 1992). Prior study has exposed that PE factor is the strongest predictor of BI (Morris and Venkatesh 2000).

Second, effort expectancy (EE) is described as the correlated level by the utilisation of the IS/IT systems that can reduce an individual's effort (e.g. time, effort, energy) to finish the work (Venkatesh et al. 2003). Prior scholars found that the EE has an encouraging effect on BI (Phichitchaisopa and Naenna 2013). Third, SI is defined as how user perceives interests that are trusted by others who will influence them in using a new IS/IT system (Venkatesh et al.

Table 1. A related construct underlying UTAUT model.

Theory	Authors	Operational definition
Reasoned Action Theory	Fishbein and Ajzen (1975)	Most fundamental theories and contribute to human behaviour. This theory starts from studying a user's behaviour towards the IS/IT application
Technology Acceptance Model (TAM)	Davis (1989)	TAM considers that two individual beliefs, namely perceptions of usability and ease of use perception are the main influences of attitudes that direct behaviour towards the IS/IT application
Motivational Mode	Davis, Bagozzi, and Warshaw (1992)	The motivation concept is determining attitudes or behaviour. The motivational model consists of two constructs, namely motivation that comes from within a person and from outside. Someone's perception of using technology because there is no strong reason other than doing it. While from outside the self can be in the form of increased performance, income and promotion
Theory Planned Behaviour (TPB)	Ajzen (1991)	TPB is the developed form of TRA model with a new construct namely the perception that controls attitude (perceive behavioural control)
The combined of TPB and TAM model	Taylor and Todd (1995)	The combination of TPB model and TAM model which adds variable attitudes to experienced and inexperienced ones
Personal Computing Utilization Model (MPCU)	Thompson, Higgins, and Howell (1991)	IS/IT benefits such as computers can affect one's attitude in using or not using the technology
Theory of Innovation Diffusion (IDT/DOI)	Rogers (1983)	Defines diffusion as a process of relative gain
Social Cognitive Theory (SCT)	Bandura (1999)	Affect one's attitude such as feelings, anxiety and use of technology as a result of reciprocal relationships between environment, attitude and cognitive

2003). In this term, it is associated with the impression of influential people such as boss and coworkers on the user's tendency on IT/IS system (admins, heads of fields, heads of sub-fields and staffs) to adopt SIPKD.

Fourth, FC is the individual confidence level in the infrastructure and supporting facilities provided by the organisation to encourage the utilisation of the existing systems (Venkatesh et al. 2003). Fifth, the main two outcome constructs in UTAUT model are BI and tangible use or behaviour. On the other hand, the intention to use the IS/IT system could be changed time by time (Arman and Hartati 2015). Prior study states that BI construct as a main determinant of user behaviour in simulating and developing a strategy on the internet market such a ticket purchasing behaviour (Escobar-Rodríguez and Carvajal-Trujillo 2013). Senior researchers argue that the conditions such an influence attitudes will create the user intentions (Fishbein and Ajzen 1975).

Hypothesis and conceptual model development

This section explains the relationship of constructs. PE is the sub-variable of UTAUT model that has received much considerable responsiveness of scholars from various research area. In addition, it also refers to which users are committed by the fact that operating the information system to attain business goals. Prior researchers found that a strong connection among the determinants factors between PE and BI (Chang et al. 2019; Yu 2012). PE is a direct tool to measure the information system adoption in organisation. In shortly, PE measures the level of which the user imagines that using the information system services will encourage them to achieve better performance. Scholars suggested that this is the important predictor of the intention to use or adopt information technology features (Tarhini et al. 2016). We therefore assume that PE will correlate with BI. *Hypothesis 1: PE has a significant influence on BI of SIPKD users.*

The second construct is EE. EE construct refers to the level of enjoyable feeling and easy to use in utilising of the IS/IT system. This construct is established between the user's effort at work, performance outcomes and rewards point from the user's effort (Ghalandari 2012). Second, integrating in EE is the complexity of the MPCU (Davis 1993). EE factor is a crucial element in the circumstance of information technology adoption. If the users feel enjoy and easy to use the information systems or IT tools, user enthusiastic to practice it. Several studies found that the positive impact of EE on BI (Chong 2013; Ha and Stoel 2009). We, therefore, assume that effort expectancy will affect BI. *Hypothesis 2: EE has a significant effect on BI of SIPKD users.*

The SI as the third factor refers to which user's perceptions interest to try or use the I/IT system because the invitation/persuade from their friends or influencer person in their life (Venkatesh, Thong, and Xu 2012). Scholars found that the premise that SI factor has increased BI of user to use the IS/IT in companies (Phichitchaisopa and Naenna 2013). The conceptions included in SI element such as social factor, subjective norm and image. Each view refers to the conception that the social relationship has a considerable influence on the way a person act. The authors, therefore, simulate that SI will affect BI. *Hypothesis 3: SI has a significant influence on BI of SIPKD users.*

At the last construct of the conceptual model for this study is FC. FE construct refers to the operating process or technical and company conditions that assist the IT/IS feature in the company. FC is a construct that concern on environment setting that increases the willingness of user to use the IT/IS in the institution. In this construct, the compatibility and perceived behavioral control are the determiner process. By adopting the IS/IT technology acceptance model, researchers reported a constructive impact of FC on BI (Shu and Chuang 2011). We, therefore, assume that facilitating conditions will affect BI. *Hypothesis 4: FC has a significant influence on BI of SIPKD users (Figure 1).*

The model of conceptual was developed based on understanding and existing issues on the literature review above. The research model proposes a straight relationship between independent constructs and dependent construct. In this research, the authors modified which is direct

correlation between FC variable to BI. In addition, exclude the moderator since research subjects tend to be homogeneous. Thus, it adjusts to the situation and conditions of the research environment. We therefore hypothesise relationship of independent variables consisting of UTAUT constructs, namely, EE, PE, FC and SI; and as the dependent variable, namely, BI.

Methods

In this research, we used a quantitative approach through the questionnaire survey and literature review (Creswell 2013; Ramadhani, Saide, and Indrajit 2018). Data collection uses a questionnaire and the sample of this study is all SIPKD users on BPKAD of Pekanbaru City that is consisting of admins, heads of fields, heads of sub-fields and staff.

Sample

In this study, the data collection process is obtained via questionnaire distribution. The questionnaires letters are allocated to all users in the SIPKD Department of Pekanbaru City that is consisting of admins, heads of department, heads of sub-department and staff. In this research, structured questionnaire designed consists of three parts. First, an introduction to the study. Second, the respondent's information. Third, the questionnaire form contains items measurement regarding the conceptual model.

Measures

The hypothesis development model of this study uses the multiple regression analysis (MRA) technique. The MRA is used to measure the relationship of each hypothesis or variables relationship (independent and dependent construct). Techniques of data processing using SPSS to perform statistical calculations. This study uses two moderators, namely, gender and age. This study used the items measurement of UTAUT constructs, namely, EE construct, PE construct, FC construct, and SI construct; and as the dependent variable, namely, BI construct. These variables which consists of five statements for one variable so that the total becomes 25 statements (Venkatesh et al. 2003) with new adjustments based on the context of this study. The measurement of the questionnaire statement uses a Likert scale consists from strongly disagree to strongly agree. Hypothesis test

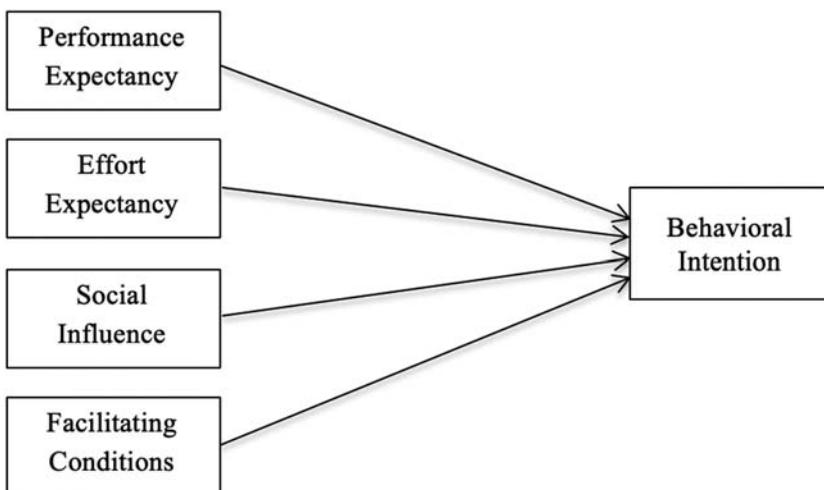


Figure 1. Conceptual model.

uses multiple linear regression analysis to measure the relationship with every single hypothesis development. Table 2 presents the items of each variable:

Results and analysis

This section explains data results analysis techniques and research model results that are given in the following tables.

Respondents description

We first check the reliability and validity of each variable. Table 3 shows the respondents demographics. Respondent's characteristics were divided into age, gender, position, education level and working time. Gender was divided into male and female. The number of male respondents was presented at 48.48% and female respondent's value about 51.51%. In position type, there was system administrator with 24.24%, head of the department with 9.09%, head of sub-department 27.27% and general staff with higher number 39.39%.

Validity and reliability

The validity and reliability were checked. All factor loading scores should exceed 0.6 from each construct should exceed 0.5 (Hair et al. 2012; Saide et al. 2019b). Regarding Table 4, 21 items have satisfactory scores which are above 0.6, except PEd, EEb, FCa and FCe under 0.6 were excluded. The Cronbach's alpha scores are also reliable in this study (see Table 5).

Table 2. Items measurement.

Variable	Items
PE	<ul style="list-style-type: none"> PE1: Using information system of SIPKD allow me the tasks completion faster PE2: Using information system improves the quality of work PE3: Using information system makes work easier PE4: Using information system increases work effectiveness PE5: Using information system increases work productivity
EE	<ul style="list-style-type: none"> EE1: The use of SIPKD information system is easy to learn EE2: Information system of SIPKD is easily accessible EE3: Interaction with information system of SIPKD is clear and easy EE4: Information system of SIPKD is flexible EE5: Information system of SIPKD is easy to use
SI	<ul style="list-style-type: none"> SI1: People who influence my behaviour, thinking that I have to use information system of SIPKD SI2: People who are important to me, thinking that I have to use SIPKD system SI3: I feel that I follow the current trends when using SIPKD system SI4: My organisation supports the use of SIPKD system SI5: More experienced of my friends can help me in using SIPKD system
FC	<ul style="list-style-type: none"> FC1: Organisation has the resources to use SIPKD system such as computers, printers and networks FC2: I have knowledge to use SIPKD system (e.g. know how to use computer and internet) FC3: IT Staff is available to help me if I found difficulty using SIPKD FC4: Instructions/guidance are available about how to use features in SIPKD FC5: SIPKD is not compatible with other systems that I use frequently (e.g. laptop, smartphone)
BI	<ul style="list-style-type: none"> BI1: I intend to use SIPKD more often in the next period BI2: Overall, I am satisfied with the performance of SIPKD (e.g. the appearance and function of each menu) BI3: I access SIPKD almost every day (e.g. login and using SIPKD whether or not to make a report) BI4: I hope that SIPKD system will use continuously in every financial management BI5: I like working using SIPKD system

Table 3. Respondents description.

Description	Percentage
<i>Gender</i>	
Male	48.48
Female	51.51
<i>Age</i>	
24–40 years old	54.54
41–55 years old	45.45
<i>Position</i>	
Administrator	24.24
Head of Field	9.09
Head of Sub Field	27.27
Staff	39.39
<i>Education Level</i>	
Senior High School	12.12
D3	12.12
S1	57.57
S2	18.18
<i>Working Times</i>	
1–5 years	51.51
6–10 years	48.48

The authors adopt five variables which are EE construct, PE construct, FC construct and SI construct; and as the dependent variable, namely, BI construct. The validity test uses a statistic correlation of product-moment. Based on table, r where df value is 31 (known by formula $df = n - 2$) and with significant 5%, then the value of r table is 0.344. If r count $>$ r table, then the item declared valid. The validity test results can be seen at Table 4.

The reliability test was measured by cross-check the score of CA. If the score of CA of each variable is above 0.6, then it is declared reliable. Table 5 shows that CA scores were more than 0.6, so it can be interpreted that the results are reliable.

Table 4. Results of validity test.

Variable	R count value	Results
PEa	0.745	Accepted
PEb	0.715	Accepted
PEc	0.736	Accepted
PEd	0.524	Not significant
PEe	0.873	Accepted
EEa	0.717	Accepted
EEb	0.486	Not significant
EEc	0.713	Accepted
EEd	0.779	Accepted
EEe	0.713	Accepted
Sl a	0.674	Accepted
Sl b	0.745	Accepted
Sl c	0.602	Accepted
Sl d	0.739	Accepted
Sl e	0.752	Accepted
FCa	0.500	Not significant
FCb	0.775	Accepted
FCc	0.831	Accepted
FCd	0.817	Accepted
FCe	0.527	Not significant
Bl a	0.656	Accepted
Bl b	0.789	Accepted
Bl c	0.658	Accepted
Bl d	0.717	Accepted
Bl e	0.846	Accepted

Table 5. Results of reliability test.

Variable	Cronbach alpha (CA)	Results
PE1	0.954	Reliable
PE2	0.954	Reliable
PE3	0.954	Reliable
PE4	0.956	Reliable
PE5	0.952	Reliable
EE1	0.954	Reliable
EE2	0.957	Reliable
EE3	0.954	Reliable
EE4	0.953	Reliable
EE5	0.954	Reliable
SI1	0.955	Reliable
SI2	0.954	Reliable
SI3	0.955	Reliable
SI4	0.954	Reliable
SI5	0.954	Reliable
FC1	0.956	Reliable
FC2	0.954	Reliable
FC3	0.953	Reliable
FC4	0.953	Reliable
FC5	0.957	Reliable
BI1	0.955	Reliable
BI2	0.953	Reliable
BI3	0.955	Reliable
BI4	0.954	Reliable
BI5	0.953	Reliable

Hypothesis results

For the hypothesis tests, the authors adopt MRA techniques to check the effect of the independent constructs on the dependent construct. In this study, there were five main variable and four hypotheses which are whether the PE, EE, SI and FC will affect BI. Regression analysis is a statistical method for modelling the function of relationships between variables. The regression analysis of this study was multiple linear regression with the regression equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

where a is the constants; b is the regression slope; Y is the BI construct; X_1 is the PE construct; X_2 is the EE construct; X_3 is the SI construct; X_4 is the FC construct; e is the error (Table 6)

The requirement of standard value for checking the effect of independent constructs on the dependent construct is if the value of t count $> t$ Table or significant value level ≤ 0.05 (or 90% significant level) (Figure 2).

As shown in Table 7, hypothesis 1, which states that PE positively influences BI, was marginally significant ($\beta = 0.284$, $p \leq .070$). Hypothesis 2, which predicts that EE positively influences BI, was not supported ($\beta = -0.066$, $p \leq 0.687$). Similarly, hypothesis 3, which states that SI definitely affects BI, was marginally supported with p -value score ($\beta = 0.315$, $p \leq .076$). On the

Table 6. Multiple regression analysis results.

Model	Unstandardised Coefficients		Standardised Coefficients		Sig.
	B	Std. error	Beta	t	
	1.650	1.800		0.917	.367
PE	0.256	0.139	0.284	1.835	.077
EE	-0.058	0.142	-0.066	-0.407	.687
SI	0.297	0.161	0.315	1.844	.076
FC	0.384	0.173	0.400	2.223	.034

other hand, Hypothesis 4, states that FC positively influences BI, was supported ($\beta = 0.400$, $p \leq .034$).

Discussions, conclusions, and implications

Our findings provide several important implications for organisation, research and knowledge field. Since prior literature studies offered more company or profit organisation context (Bawack and Kala Kamdjoug 2018; Francisco and Swanson 2018; Rahi et al. 2019; Tarhini et al. 2016; Zhang 2010) of information system BI while seldom been discussed more technical process this concern in non-profit organisation especially in the government context. Therefore, this research addressed these theoretical and practical gaps. Based on the hypothesis results, this study indicated that each predictive construct is a key determinant to the conceptual model of BI. In doing so, this study suggests that not all constructs in UTAUT theory can be used in the context of non-profit organisation in a developing country.

This study examines four constructs of user's BI of financial management information system (application name 'SIPKD system') in the government's financial department in Riau Province (Indonesia). The four predictors investigated are EE, SI, PE and FC. The result justifies the interest of the current study to reveal the valuable predictors for this specific sample which is non-profit organisation. Another outcome/purpose of this study was exploring the effect of modified construct which is facilitating conditions on the effect of BI. The data collected by the formal government is used to answer the research questions.

Subsequently, the first correlation is examined. PE is found not meaningful effect on the BI. Followed by the second predictor, EE was not significant effect to support BI of users in using information systems. The results are similar with prior research that also found out that EE had no substantial influencer (Bennani and Oumlil 2013). Other researchers contend that the characteristic of the respondents could have been one of the reasons of unsupported effect between these constructs (Phichitchaisopa and Naenna 2013).

The third predictor construct, SI was not significant effects to the intention to use the information system. This result is similar with other scholars who also did not find a significant determinant of UTAUT between SI and BI (Zaremohzzabieh et al. 2014). Certainly, several research studies even had to reject the relationship development (Thompson, Higgins, and Howell 1991). In short,

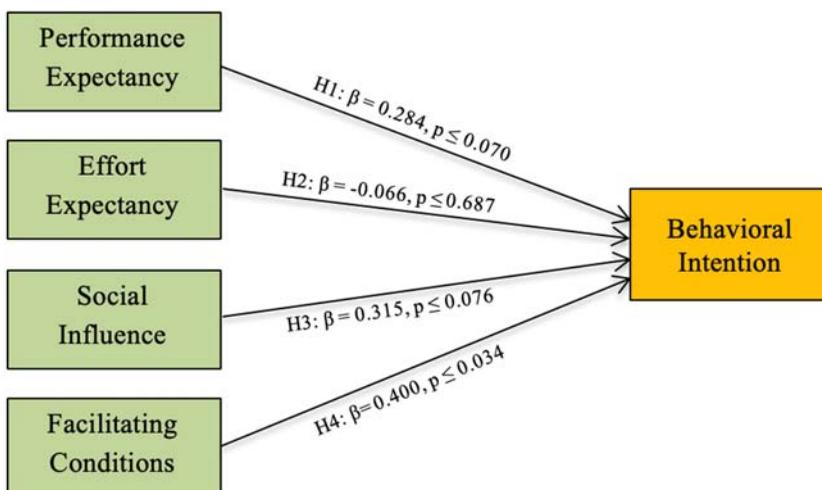


Figure 2. Conceptual findings.

Table 7. Hypothesis results.

Relationship	T-Statistics	P-Values	Results
H1: PE → BI	1.835	.070	Marginally approved
H2: EE → BI	−0.407	.687	Not approved
H3: SI → BI	1.844	.076	Marginally approved
H4: (FC → BI	2.223	.034	Approved

people who are more experienced and self-confident are less influential by social difficulty (Chang et al. 2007).

The fourth predictor, FC was significantly support user's behavior intention to use the information system. This result is similar and confirmed with previous studies that also found the FC factor was significantly influenced the user's behavior (Nysveen and Pedersen 2016; Tarhini et al. 2016). The results show user intention to use the information system is requiring conditions supports from organisation. In the context of FC factor, the members of organisations believe and hope that the management level already and will commit to providing the training or seminar about how to use the features in SIPKD information systems. These activities will enhance the user's ability, knowledge (Saide et al. 2017; Saide and Sheng 2020a) and experience of how to maximise the SIPKD systems and to avoid user errors.

For the managerial side, the outcomes of this research are also relevant for them to develop future organisational strategy. These results recommend to leaders to understand and encourage their member's behaviour of using information systems tools in organisation. The study, therefore, suggests an essential role for IT department or managers in planning and executing the information system and IT resource allocation decisions about how the IS team maximise their facilitation/resources. The outcomes of this study as a tool and crucial guidelines for creating future resolutions on the financial institution.

Future research opportunity

Finally, since this research concerned with non-profit organisation, the authors are not to decelerate that this model results will be appropriate in many types of organisations, especially in profit companies. While the potency of this research provides the prospect to explore the user's behaviour on information system adoption, limitations do exist. Therefore, future study could be extended to the research model in a different culture, behaviour, other non-profit organisation or government institution and country (developing or developed countries) of user in using information systems tools. This can investigate the subject with different methods and tools such a quantitative and qualitative in data collection approach to complement the reliability of research findings.

A future research also might consider the mixed methods to reduce potential common method bias of the results to be more generalised. Additionally, the mediating and moderating control could be considered such as organisation size, level, types, user's knowledge, knowledge sharing strategy (Saide et al. 2019a; Saide and Mahendrawathi 2015) and manager style to evaluate complex correlations of variables or several theories. Lastly, we have acknowledged that future research would be worthwhile to develop to strengthen the research framework and its foundation.

Acknowledgment

This research was supported by Faculty of Science and Technology (Funding Support Program for Research Publication), Universitas Islam Negeri Sultan Syarif Kasim Riau (UIN SUSKA Riau), Indonesia. Saide Saide (WOS ResearcherID: H-2399-2018) is the corresponding author for this article. He is Lecturer at the Department of Information System, Faculty of Science and Technology, State Islamic University of Sultan Syarif Kasim Riau (Universitas Islam Negeri Sultan Syarif Kasim – UIN SUSKA Riau, Indonesia); Visiting Scholar and Research Collaboration at Tampere University, Finland. Researcher at Department of Information Management, National Taiwan University of Science and Technology (Taiwan Tech), Taiwan; Project Management at EnReach (Energy Research Center), UIN SUSKA Riau; and Chief

Knowledge Officer for PRO-Knowledge Research Group, Indonesia. The authors further would like to thank the Editors and Reviewers for their critiques and revision recommendations.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research was supported by Faculty of Science and Technology (Funding Support Program for Research Publication), Universitas Islam Negeri Sultan Syarif Kasim Riau (UIN SUSKA Riau), Indonesia.

Notes on contributors

Idria Maita is Lecturer at Department of Information System, Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau - UIN SUSKA Riau, Indonesia. She obtained a bachelor's degree at Information System, Universitas Putra Indonesia - YPTK Padang, Indonesia. Holds master's degree at IT Management, Universiti Teknologi Malaysia. She also currently a Chairman of Department of Information System, UIN SUSKA Riau, Indonesia. She was as Secretary at Department of Information System, UIN SUSKA Riau, Indonesia (2003–2006, 2008–2012, 2013–2014). Her research area: Enterprise System, Knowledge Management, IT service management, Project Management, and E-Business. She has published several articles in 2018 *International Conference on Internet and e-Business (ICIEB)* and 2019 *International Conference on Humanities, Education and Social Sciences (IC-HEDS)*. Professional/expertise organizations: AISINDO Indonesia, APTIKOM Indonesia, LSP assessors, and Certified for ICT Project Manager.

Saide Saide is Lecturer at Department of Information System, Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau - UIN SUSKA Riau, Indonesia. Holds two Master's degrees from Department of Information Management, National Taiwan University of Science and Technology, Taiwan, and Department of Information System, Institute Technology of Sepuluh Nopember (ITS Surabaya), Indonesia. He obtained a bachelor's Information System in Indonesia. Visiting Scholar and Research Collaboration at Tampere University, Finland. Researcher at Department of Information Management, National Taiwan University of Science and Technology, Taiwan. Management at EnReach - Energy Research Center, UIN SUSKA Riau, Indonesia. His research addressed: Knowledge Management, Information System, IT-Business Strategy. He has published numerous articles in SSCI/SCI/SCIE journals such as *Big Data, Technology Analysis & Strategic Management, IEEE Transactions on Engineering Management*, and *Journal of Enterprise Information Management*. Also, in *International Journal of Innovation Management, Journal of Science and Technology Policy Management*, and *International Journal of Business and Society*.

Yelia Gusti Putri obtained a bachelor degree at Department of Information System, Faculty of Science and Technology, State Islamic University of Sultan Syarif Kasim Riau (Universitas Islam Negeri Sultan Syarif Kasim Riau - UIN SUSKA Riau), Indonesia. Currently as a Teacher at Insan Cendekia Boarding School, Payakumbuh, Indonesia.

Megawati Megawati is Lecturer at Department of Information System, Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau - UIN SUSKA Riau, Indonesia. Holds master's degree from Department of Information System, Institut Teknologi Bandung (ITB Bandung) Indonesia. She obtained a bachelor's degree at Information System in Indonesia. Her research addressed: IT governance, IT Risk management, Information System, and Organizational Behavior.

Medyantiwi Rahmawita Munzir is Lecturer at Department of Information System, Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau - UIN SUSKA Riau, Indonesia. Holds bachelor's degree from Informatics Engineering, Faculty of Science and Technology, Universitas Islam Negeri Sultan Syarif Kasim Riau - UIN SUSKA Riau, Indonesia. She obtained a master's degree at Computer Science, Universitas Putra Indonesia - YPTK Padang, Indonesia. Research area: Information System, Organizational Behaviour, Knowledge Management. She has published articles related to technology analysis, computing data analytics, and information technology strategy.

ORCID

Idria Maita  <http://orcid.org/0000-0002-2954-1842>

Saide Saide  <http://orcid.org/0000-0002-1866-5305>

Yelia Gusti Putri  <http://orcid.org/0000-0002-4231-8557>

Megawati Megawati  <http://orcid.org/0000-0003-3277-6922>

Medyantiwi Rahmawita Munzir  <http://orcid.org/0000-0002-6735-5063>

References

- Ainin, S., N. Akma Mohd Salleh, S. Bahri, and T. Mohd Faziharudean. 2015. "Organization's Performance, Customer Value and the Functional Capabilities of Information Systems." *Information Systems Management* 32 (1): 2–14. doi:10.1080/10580530.2015.983012.
- Ajzen, I. 1991. "The Theory of Planned Behavior." *Organizational Behavior and Human Decision Processes* 50 (2): 179–211. doi:10.1016/0749-5978(91)90020-T.
- Ajzen, I., and T. J. Madden. 1986. "Prediction of Goal-Directed Behavior: Attitudes, Intentions, and Perceived Behavioral Control." *Journal of Experimental Social Psychology* 22 (5): 453–474. doi:10.1016/0022-1031(86)90045-4.
- Al-Momani, A. M., M. A. Mahmoud, and M. S. Ahmad. 2019. "A Review of Factors Influencing Customer Acceptance of Internet of Things Services." *International Journal of Information Systems in the Service Sector* 11 (1): 54–67. doi:10.4018/IJISS.2019010104.
- Almatrooshi, B., S. K. Singh, and Sherine Farouk. 2016. "Determinants of Organizational Performance: A Proposed Framework." *International Journal of Productivity and Performance Management* 65 (6): 844–859. doi:10.1108/IJPPM-02-2016-0038.
- Arman, A. A., and S. Hartati. 2015. "Development of User Acceptance Model for Electronic Medical Record System." International Conference on Information Technology Systems and Innovation (ICITSI), 1–6
- Aydiner, A. S., E. Tatoglu, E. Bayraktar, and S. Zaim. 2019. "Information System Capabilities and Firm Performance: Opening the Black Box Through Decision-Making Performance and Business-Process Performance." *International Journal of Information Management* 47: 168–182. doi:10.1016/j.ijinfomgt.2018.12.015.
- Bandura, A. 1999. "Social Cognitive Theory: An Agentic Perspective." *Asian Journal of Social Psychology* 2 (1): 21–41. doi:10.1111/1467-839X.00024.
- Bawack, R. E., and J. R. Kala Kamdjoug. 2018. "Adequacy of UTAUT in Clinician Adoption of Health Information Systems in Developing Countries: The Case of Cameroon." *International Journal of Medical Informatics* 109 (October 2017): 15–22. doi:10.1016/j.ijmedinf.2017.10.016
- Bennani, A., and R. Oumlil. 2013. "Factors Fostering IT Acceptance by Nurses in Morocco." IEEE 7th International Conference on Research Challenges in Information Science (RCIS), 1–6
- Chaiyasoonthorn, W., and W. Suksa-Ngiam. 2018. "Users' Acceptance of Online Literature Databases in a Thai University: A Test of UTAUT2." *International Journal of Information Systems in the Service Sector* 10 (1): 54–70. doi:10.4018/IJISS.2018010104.
- Chang, I. C., H. G. Hwang, W. F. Hung, and Y. C. Li. 2007. "Physicians' Acceptance of Pharmacokinetics-Based Clinical Decision Support Systems." *Expert Systems with Applications* 33 (2): 296–303. doi:10.1016/j.eswa.2006.05.001.
- Chang, C. M., L. W. Liu, H. C. Huang, and H. H. Hsieh. 2019. "Factors Influencing Online Hotel Booking: Extending UTAUT2 with Age, Gender, and Experience as Moderators." *Information (Switzerland)* 10: 1–18. doi:10.3390/info10090281.
- Chong, A. Y. L. 2013. "A two-Stage SEM-Neural Network Approach for Understanding and Predicting the Determinants of m-Commerce Adoption." *Expert Systems with Applications* 40 (4): 1240–1247. doi:10.1016/j.eswa.2012.08.067.
- Creswell, J. W. 2013. "Research Design: Qualitative, Quantitative, and Mixed Methods Approaches." In *Research Design Qualitative Quantitative and Mixed Methods Approaches*, edited by Vicki Knight, Jessica Young, Kalie Koscielak, Brittany Bauhaus, and Megan Markanich, 1–284. California: SAGE Publications, Inc.
- Davis, F. D. 1989. "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology." *MIS Quarterly: Management Information Systems* 13 (3): 319–339. doi:10.2307/249008.
- Davis, F. D. 1993. "User Acceptance of Information Technology: System Characteristics, User Perceptions and Behavioral Impacts." *International Journal of Man-Machine Studies* 38 (3): 475–487. doi:10.1006/imms.1993.1022.
- Davis, F. D., R. P. Bagozzi, and P. R. Warshaw. 1992. "Extrinsic and Intrinsic Motivation to Use Computers in the Workplace." *Journal of Applied Social Psychology* 22 (14): 1111–1132. doi:10.1111/j.1559-1816.1992.tb00945.x.
- DeLone, W. H., and E. R. McLean. 1992. "Information Systems Success: The Quest for the Dependent Variable." *Information Systems Research* 3 (1): 60–95. doi:10.1287/isre.3.1.60.
- Delone, W., and E. Mclean. 2003. "The DeLone and McLean Model of Information Systems Success: A Ten-Year Update." *Journal of Management Information Systems* 19 (4): 9–30. doi:10.1080/07421222.2003.11045748.
- Escobar-Rodríguez, T., and E. Carvajal-Trujillo. 2013. "Online Drivers of Consumer Purchase of Website Airline Tickets." *Journal of Air Transport Management* 32: 58–64. doi:10.1016/j.jairtraman.2013.06.018.
- Fishbein, M., and I. Ajzen. 1975. *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- Fisher, S. L., and A. W. Howell. 2004. "Beyond User Acceptance: An Examination of Employee Reactions to Information Technology Systems." *Human Resource Management* 43 (2–3): 243–258. doi:10.1002/hrm.20018.
- Francisco, K., and D. Swanson. 2018. "The Supply Chain Has No Clothes: Technology Adoption of Blockchain for Supply Chain Transparency." *Logistics* 2 (1): 2. doi:10.3390/logistics2010002.
- Fuad, A., and C. Y. Hsu. 2018. "UTAUT for HSS: Initial Framework to Study Health IT Adoption in the Developing Countries." *F1000Research* 7 (May): 1–8.
- Ghalandari, K. 2012. "The Effect of Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions on Acceptance of E-Banking Services in Iran: the Moderating Role of Age and Gender." *Middle-East Journal of Scientific Research* 12 (6): 801–807.

- Gupta, A., N. Dogra, and B. George. 2018. "What Determines Tourist Adoption of Smartphone Apps?" *Journal of Hospitality and Tourism Technology* 9 (1): 50–64. doi:10.1108/JHTT-02-2017-0013.
- Ha, S., and L. Stoel. 2009. "Consumer e-Shopping Acceptance: Antecedents in a Technology Acceptance Model." *Journal of Business Research* 62 (5): 565–571. doi:10.1016/j.jbusres.2008.06.016
- Hair, F. J., M. Sarstedt, T. M. Pieper, and C. M. Ringle. 2012. "The Use of Partial Least Squares Structural Equation Modeling in Strategic Management Research: A Review of Past Practices and Recommendations for Future Applications." *Long Range Planning* 45 (5–6): 320–340. doi:10.1016/j.lrp.2012.09.008.
- Halilovic, S., and M. Cicic. 2013. "Understanding Determinants of Information Systems Users Behaviour: A Comparison of Two Models in the Context of Integrated Accounting and Budgeting Software." *Behaviour and Information Technology* 32 (12): 1280–1291. doi:10.1080/0144929X.2012.708784.
- Holzmann, P., E. J. Schwarz, and D. B. Audretsch. 2020. "Understanding the Determinants of Novel Technology Adoption among Teachers: The Case of 3D Printing." *Journal of Technology Transfer* 45 (1): 259–275. doi:10.1007/s10961-018-9693-1.
- Hsieh, J. J. P. A., and W. Wang. 2007. "Explaining Employees' Extended Use of Complex Information Systems." *European Journal of Information Systems* 16 (3): 216–227. doi:10.1057/palgrave.ejis.3000663.
- Indrajit, R. E., S. Saide, R. Trialih, H. Wei, and H. Herzavina. 2018. "A Brief Review : The Roles in Triggering Knowledge Management Scheme Adoption to Increase Enterprise Performance." In *The 9th International Conference on Information and Communication Technology Convergence (ICTC)*, Jeju, South Korea, 79–84.
- Karuri, J., P. Waiganjo, and A. Many. 2013. "Adoption of Health Information Systems by Health Workers in Developing Countries - Contextualizing UTAUT." 2013 IST-Africa Conference and exhibition, IST-Africa 2013, January.
- Karuri, J., P. Waiganjo, and D. Orwa. 2017. "Determinants of Acceptance and Use of DHIS2 in Kenya: UTAUT-Based Model." *Journal of Health Informatics* 11 (2): 1–22.
- Klauss, R. 2000. "Technology Transfer in Education - Application to Developing Countries." *Journal of Technology Transfer* 25 (3): 277–287. doi:10.1023/A:1007822605056.
- Levy, Y., K. E. Murphy, and S. H. Zanakis. 2009. "A Value-Satisfaction Taxonomy of IS Effectiveness (VSTISE): A Case Study of User Satisfaction with IS and User-Perceived Value of IS." *International Journal of Information Systems in the Service Sector (IJISSS)* 1 (1): 93–118. doi:10.4018/jiss.2009010106.
- Maita, I., Saide, R. E. Indrajit, and A., and Irmayani. 2018. "User Behavior Analysis in Academic Information System Using Unified Theory of Acceptance and Use of Technology (UTAUT)." In *The 2018 International Conference on Internet and E-Business - ICIEB '18*, Singapore, 223–228.
- Miadinovic, J., & Xiang, H. (2016). *A Study on Factors Affecting the Behavioral Intention to use Mobile Shopping Fashion Apps in Sweden*. 1–75. <http://www.diva-portal.org/smash/get/diva2:933382/FULLTEXT01.pdf>
- Morris, M. G., and V. Venkatesh. 2000. "Age Differences in Technology Adoption Decisions : Implications for a Changing Workforce." *Personnel Psychology* 53 (2): 375–403. doi:10.1111/j.1744-6570.2000.tb00206.x
- Muwardi, D., S. Saide, R. E. Indrajit, E. S. Astuti, and H. Herzavina. 2020. "Intangible Resources and Institution Performance: The Concern of Intellectual Capital, Employee Performance, Job Satisfaction, and Its Impact on Organization Performance." *International Journal of Innovation Management* 24(05): 1–21. doi:10.1142/S1363919621500092.
- Nysveen, H., and P. E. Pedersen. 2016. "Consumer Adoption of RFID-Enabled Services. Applying an Extended UTAUT Model." *Information Systems Frontiers* 18 (2): 293–314. doi:10.1007/s10796-014-9531-4
- Pchitchaisopa, N., and T. Naenna. 2013. "Factors Affecting the Adoption of Healthcare Information Technology." *EXCLI Journal* 12: 413–436.
- Psoinos, A., T. Kern, and S. Smithson. 2000. "An Exploratory Study of Information Systems in Support of Employee Empowerment." *Journal of Information Technology* 15 (3): 211–230. doi:10.1177/026839620001500304
- Rahi, S., M. M. Othman Mansour, M. Alghizzawi, and F. M. Alnaser. 2019. "Integration of UTAUT Model in Internet Banking Adoption Context: The Mediating Role of Performance Expectancy and Effort Expectancy." *Journal of Research in Interactive Marketing* 13 (3): 411–435. doi:10.1108/JRIM-02-2018-0032
- Ramadhani, S., S. Saide, and R. E. Indrajit. 2018. "Improving Creativity of Graphic Design for Deaf Students Using Contextual Teaching Learning Method (CTL)." In *The 2nd International Conference on Information system and Data mining - ICISDM '18*, Florida, USA, 136–140.
- Rogers, E. M. 1983. Diffusion of innovations. In *Free Press*.
- Saide, S., E. S. Astuti, R. E. Indrajit, R. Trialih, and H. Herzavina. 2019a. "What We Give, We get Back: Investigating the Dimensions That Influence Knowledge Sharing on Profit Enterprise in Indonesia." *Journal of Science and Technology Policy Management* 10 (5): 1047–1062. doi:10.1108/JSTPM-06-2018-0056.
- Saide, S., Z. Ding, E. Siti Astuti, M. Jannati, and H. Herzavina. 2019b. "An Adoption of Acceptance Model for the Multi-Purpose System in University Library." *Economic Research-Ekonomika Istraživanja* 32 (1): 2393–2403. doi:10.1080/1331677X.2019.1635898
- Saide, S., R. E. Indrajit, R. Trialih, and S. Ramadhani. 2019c. "A Theoretical and Empirical Validation of Information Technology and Path-Goal Leadership on Knowledge Creation in University: Leaders Support and Social Media Trend." *Journal of Science and Technology Policy Management* 10 (3): 551–568. doi:10.1108/JSTPM-06-2018-0067

- Saide, S., and E. Mahendrawathi. 2015. "Knowledge Management Support for Enterprise Resource Planning Implementation." *Procedia Computer Science* 72: 613–621. doi:10.1016/j.procs.2015.12.170
- Saide, S., and M. L. Sheng. 2020a. "Knowledge Exploration – Exploitation and Information Technology: Crisis Management of Teaching – Learning Scenario in the COVID-19 Outbreak." *Technology Analysis and Strategic Management* 1–16. doi:10.1080/09537325.2020.1854714
- Saide, S., and M. L. Sheng. 2020b. "Toward Business Process Innovation in the Big Data Era: A Mediating Role of Big Data Knowledge Management." *Big Data* 8 (6): 464–477. doi:10.1089/big.2020.0140
- Saide, S., and H. L. Wei. 2017. "Knowledge Sharing Behavior and Quality among Workers of Academic Institutions in Indonesia." *International Journal of Business and Society* 18 (S2): 353–368. <http://www.ijbs.unimas.my/images/repository/pdf/Vol18-S2-paper8.pdf>.
- Shu, W., and Y. H. Chuang. 2011. "The Behavior of Wiki Users." *Social Behavior and Personality* 39 (6): 851–864. doi:10.2224/sbp.2011.39.6.851
- Sobkowiak, R. T., and R. E. LeBleu. 1996. "Repositioning HR Information Systems: Empowering Employees Through Information." *Information Systems Management* 13 (1): 62–64. doi:10.1080/10580539608906974
- Tarhini, A., M. El-Masri, M. Ali, and A. Serrano. 2016. "Extending the UTAUT Model to Understand the Customers' Acceptance and Use of Internet Banking in Lebanon." *Information Technology & People* 29 (4): 830–849. doi:10.1108/ITP-02-2014-0034
- Taylor, S., and P. Todd. 1995. "Assessing IT Usage: The Role of Prior Experience." *MIS Quarterly: Management Information Systems* 19 (4): 561–568. doi:10.2307/249633
- Thompson, R. L., C. A. Higgins, and J. M. Howell. 1991. "Personal Computing: Toward a Conceptual Model of Utilization." *MIS Quarterly: Management Information Systems* 15 (1): 125–142. doi:10.2307/249443
- Valsamidis, S., I. Petasakis, S. Kontogiannis, and F. Perdiki. 2019. "Factors of Usage Evaluation for a tax Information System." *International Journal of Information Systems in the Service Sector* 11 (3): 1–18. doi:10.4018/IJISS.2019070101
- Venkatesh, V., G. M. Michael, B. D. Gordon, and D. D. Fred. 2003. "User Acceptance of Information Technology: Toward a Unified View." *MIS Quarterly* 27 (3): 425–478. doi:10.2307/30036540
- Venkatesh, V., T. A. Sykes, and X. Zhang. 2011. "“Just What the Doctor Ordered”: A Revised UTAUT for EMR System Adoption and use by Doctors." *Proceedings of the Annual Hawaii International Conference on System Sciences*, 1–10
- Venkatesh, V., J. Y. L. Thong, and X. Xu. 2012. "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology." *MIS Quarterly* 36 (1): 157–178. doi:10.2307/41410412
- Yu, C. S. 2012. "Factors Affecting Individuals to Adopt Mobile Banking: Empirical Evidence from the Utaut Model." *Journal of Electronic Commerce Research* 13 (2): 105–121.
- Zaremozhzabieh, Z., B. A. Samah, S. Z. Omar, J. Bolong, and H. A. M. Shaffril. 2014. "Fisherman's Acceptance of Information and Communication Technology Integration in Malaysia: Exploring the Moderating Effect of Age and Experience." *Journal of Applied Sciences* 14 (9): 873–882. doi:10.3923/jas.2014.873.882
- Zhang, E. M. 2010. "Understanding the Acceptance of Mobile SMS Advertising among Young Chinese Consumers." *Psychology & Marketing* 30 (6): 461–469.