

Factors Influencing Accountants' Acceptance of Enterprise Resource Planning Implementation

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Abstract

This study examines the factors influencing accountants' acceptance of Enterprise Resource Planning (ERP) implementation. Specifically, this study examines three factors namely, perceived usefulness, perceived ease of use and computer self-efficacy that may influence the accountants' acceptance on ERP implementation. This study employs the questionnaire survey on 218 accountants who are working in various industries in Malaysia. This study shows that computer self-efficacy significantly influence the accountants' acceptance on ERP implementation. However, this study shows that no significant influence of perceived usefulness and perceived usefulness on accountants' acceptance on ERP implementation. The findings of this study indicate that the accountants perceived ERP more as a requirement imposed by the government rather than finding the system useful. However, the accountants can become motivated in exploring ERP when they are given greater control in using ERP. That is, the success of ERP implementation can be attributed by the accountants' involvement and participation in enhancing the functionality of the system and indirectly promote accountability. This study provides insights to organisations in assessing and predicting acceptance factors towards ERP among their employees, particularly the accountants so that they can assure ERP implementation success.

Keywords: Enterprise resource planning; Accountants; Perceived usefulness; Perceived ease of use; Computer self-efficacy; Malaysia.



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1. Introduction

The popularity of ERP increased over a decade from the 1990s to 2000s, as the adoption of ERP provided an integrated software solution that spans the range of business processes, enabling organisations to gain a holistic view of its business enterprise. Based on the 2016 Report on ERP Systems and Enterprise Software by [Panorama Consulting Solution \(2016\)](#), SAP, Oracle, Microsoft and Epicor are the ERP software most frequently adopted by businesses. Today's business operating environment is competitive, complex, volatile, fast changing and entrepreneurial, coupled with broad social and demographic changes which affect how and where a business is being operated in meeting the demands of the changing global consumer population. The use of technology has led businesses to develop a platform for data gathering, as well as meeting customers' demands and latest industry's trend in order to keep ahead of their competition ([Nah et al., 2001](#)). Adoption and implementation of Enterprise Resources Planning (ERP) could play a major role in assisting businesses to manage their resources and activities effectively. This includes finance, human resources, marketing, production and business development, among others, using one single database, application and unified interface across the business process ([Ehie and Madsen, 2005](#)). This made it a main business component and the most important development in corporate use ([Davenport, 1998](#); [Ehie and Madsen, 2005](#); [Seng, 2007](#)). It is evident that technology has now become an integral component in business.

According to [Soja and Paliwoda-Pękosz \(2013\)](#), a business can benefit from adopting ERP in terms of management, database, system, customer service, finance, market position, employees and IT infrastructure. However, despite the various benefits of ERP, there are cases involving failure in ERP implementation. Studies have shown that the success or failure of ERP implementation can either be the ERP itself or human factor. [Gargeya and Brady \(2005\)](#) suggested six factors that may influence the success or failure of ERP implementation namely, ERP functionality, project team/ management support/ consultants, internal readiness/training, dealing with business diversity, planning/ development/budgeting, and adequate testing. The "people element" is deemed to be one of the main factors to be considered by a business when adopting ERP ([Fui-Hoon Nah et al., 2001](#); [Ram et al., 2013](#); [Seng Woo, 2007](#)).

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This study aims to examine users' acceptance of ERP implementation. Specifically, this study aims to determine the factors that influence accountants' acceptance of ERP implementation. This study is important as it provides a better insight to practitioners and academics. The remainder of this paper is structured as follows. The next section, Section 2 provides the literature review. Section 3 provides the research framework and hypotheses of this study. This is followed by Section 4 that outlines the research design. The results of the data analyses and discussions are shown in Section 5. The last section concludes this study.

2. Literature Review

2.1. Enterprise Resource Learning

ERP refers to the commercial business software package that consists of modules to manage business resources, services, products, human capital, and the effectiveness and efficiency of capital assets in via one complete integrated application. Klaus *et al.* (2000) defines ERP as “*comprehensive, packaged software solutions that seek to integrate the complete range of a business's processes and functions in order to present a holistic view of the business from a single information and IT architecture*”.

ERP combines three elements for a business to achieve competitive advantage. The first element is integration of multiple business facets. The second element is the user client/server application and third element is sharing business information across the departments, subsidiaries and group of businesses (Youngberg *et al.*, 2009). ERP involves a large investment and require significant business resources for implementation and thus, is considered as inherent risk. When comparing with the traditional and simple information systems, ERP represents a completely different class of information system application (Amoako-Gyampah and Salam, 2004).

ERP adoption also contributes to changes in the accounting processes and practices. That is, instead of manually keying-in figures, ERP assists a business to simplify the accounting process by linking to the excel formula to produce a report and hence, reducing the time in preparing accounts and financial reports. Other benefits received by accounting users are increased flexibility in information generation, increased integration of accounts applications and improved quality of financial reports (Spathis and Constantinides, 2004).

2.2. Accountants and ERP Acceptance

In view of the accountants as the ERP users, their role involves every stage of ERP implementation, from the system designers to the system auditors. The role of accountants is not only keying-in data and producing financial reports but they are also involved in designing the ERP system due to their expertise in the business operation and process. The accountants would advise the ERP vendors and the management on the information that needs to be generated, the sources of information, and accounting practices that must be followed (Saeidi *et al.*, 2014). Furthermore, the involvement of the accountants as part of the project team during ERP setup is important to ensure that the ERP implementation follows the required accounting standards and compliance. According to Grabski *et al.* (2009), the accountants are not the same as the other typical ERP users since they need to ensure that the ERP system complies with accounting act and regulations such as IFRS, SOX and Base II. Thus, the involvement of the accountants in ERP implementation is more crucial compared to other ERP users to ensure that the system complies with the accounting regulations while at the same time achieves the organisation's objectives. The role of the accountants in implementing ERP enhances them to a new level which is as a business partner to the organisation. They are no longer just generating information and producing historical data from the system, but also involved in providing management guidance for strategic and tactical plans (Grabski *et al.*, 2009).

Since the mid-1970s until today, researchers have conducted a large number of studies to understand the factors that influence individuals to use information system. This is because adoption of this technology does not necessarily meet the users' expectations (Chang *et al.*, 2008; Hwang, 2005) (Compeau and Higgins, 1995; Majed, 2002). Within the literature, there are studies that have examined human factors related to ERP such as Akbulut and Motwani (2005) and Rajan and Baral (2015). Most of these studies have relied on the Theory of Reasoned Action (TRA) and the Theory Acceptance Model (TAM) in understanding the link between human factors and information system acceptance. In TAM, Davis (1989) introduced two human factors that are interrelated namely, the perceived usefulness (PU) and perceived ease of use (PEOU). Studies have also emphasised on computer self-efficacy (CSE) as an important human factor towards user acceptance of a particular information system.

2.3. Perceived Usefulness (PU)

One of the constructs introduced by Davis (1989) in his Technology Acceptance Model (TAM) is perceived usefulness (PU). Davis (1989) defined PU as “*the degree to which a person believes that using a particular system would enhance his or her job performance*”. In the TAM model, Davis (1989) proposed that PU directly or indirectly affects attitudes towards a system due to the reinforcement value of outcomes (Al-Gahtani, 2001; Mathwick *et al.*, 2001). According to Bhattacharjee (2002), if users are willing to perform a transaction with a particular system, it is already considered as PU. Arguably, if the ERP assists users to attain a desired performance result, it is expected that the users would adopt an ERP system, as both user intention and personal attitude towards using the ERP system exists (Amoako-Gyampah and Salam, 2004). Consequently, the higher a user's PU in using an ERP system, the more likely that the user would accept ERP (Ramayah and Lo, 2007). Furthermore, PU has a significant influence on an ERP system and directly contributes to usage of the system among other factors. The change in technology and the intrinsic involvement of users are important in influencing the PU towards ERP (Amoako-Gyampah, 2007). Consistent with other studies, Calisir and Calisir (2004) found that PU has a stronger

effect on end-user usage. End-users are more likely to be more satisfied with the ERP if they believe that using the system would increase their performance and productivity.

2.4. Perceived Ease of Use (PEOU)

Users may believe that a given application is useful and at the same time believe that the system is difficult to use. Thus, the benefits received from the usage of the system outweighed the efforts required to use the application. Such belief refers to perceived ease of use (PEOU). Davis (1989) defined PEOU as “the degree to which a person believes that using a particular system would be free of effort”. When the application is perceived to be easier to use, the users are more likely to accept the application. According to Davis (1989), PEOU has a significantly positive relationship with ERP acceptance by users. In addition, Ramayah and Lo (2007) found that PEOU has a positive influence on user acceptance towards ERP. They conducted their study on manufacturing companies from various departments using TAM as a research model. Sternad and Bobek (2013) extended Davis (1989) study by incorporating external factors influencing PEOU that directly affects ERP acceptance such as experience with computers, computer self-efficiency, personal innovativeness towards IT, computer anxiety. Thus, personal characteristics can influence an individual’s perception of ERP and acceptance and usage of the system. The results show positive relationship between PEOU towards ERP acceptance. Most of the studies found consistent results with Davis (1989) such as Ramayah and Lo (2007), Calisir and Calisir (2004) and Amoako-Gyampah (2007).

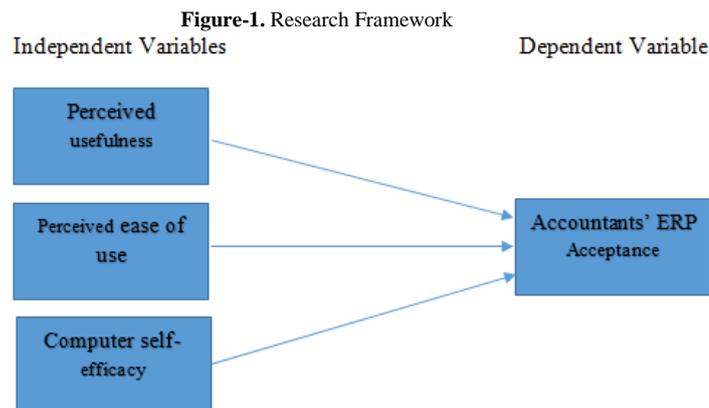
2.4. Computer Self-Efficacy (CSE)

Bandura (1986) defined self-efficacy as “people’s judgement on their capabilities to organise and execute courses of action required to attain designated types of performance. It is a concern not with the skills one has but with judgements of what one can do with whatever skills one possesses”. Self-efficacy is influenced by the social cognitive theory of behaviour. Bandura stated that the factors influence individuals include environmental situations, cognitive and demographic characteristics. He further mentioned that self-efficacy has a role in motivating the behaviour of an individual, where if the individual is easily discouraged he/she will fail, and on the other hand, confident individuals who fall short of their goals will increase their efforts and persevere, resulting in attaining their goal (Bandura, 1986). Alleyne and Lavine (2013) examined the factors influencing accountants’ acceptance combined three models namely unified theory of acceptance (UTAUT), TAM and theory of planned behaviour. They found that CSE is an important predictor of ERP usage. They suggested that their findings are useful for practitioners when they have to deal with environments that engage highly educated, professional and autonomous individuals such as the accountants.

3. Research Framework and Hypotheses

3.1. Research Framework

Figure 1 depicts the research framework for this study. Figure 1 shows the independent variables are perceived usefulness, perceived ease of use and computer self-efficacy whilst the dependent variable in this study is user acceptance. The research framework shows how the users’ behaviour represented by PU, PEOU and CSE influence the accountants’ acceptance towards ERP.



3.2. Research Hypotheses

According to Davis (1989), PU has a direct positive effect on user acceptance towards information system. It has a significant positive effect on ERP acceptance and its influence is three times stronger than PEOU (Davis, 1989). Similar results were found by Saadé and Bahli (2005) who used TAM as a theoretical background in their study. Consistent with previous research, Amoako-Gyampah (2007) also found a positive relationship between user behaviour and ERP acceptance. In addition, he found PU to have the largest effect on user behaviour compared to other variables. In addition, Ramayah and Lo (2007) found consistent results with previous studies, where PU has been identified as having more influence on behaviour factors and in prediction of user acceptance towards ERP.

Mallat *et al.* (2006) proposed that even though PU is a primary predictor concerning user behaviour towards ERP, the effect of PU depends on the situation where the system is being used. Based on previous literature and TAM, the following hypothesis is developed:

H1: Perceived usefulness has a positive effect towards ERP acceptance

PEOU is one of the constructs introduced by Davis (1989) in the original TAM. It is a degree to which an invention is seen as being not too difficult to study, and its functions not too difficult to understand or to run (Rogers, 2010). Davis (1989) found a positive relationship between PEOU and user acceptance. According to Amoako-Gyampah (2007), PEOU has a direct positive and significant effect on user acceptance towards online systems and such result is consistent with many studies (Costa *et al.*, 2016; Guritno and Siringoringo, 2013; Wu and Wang, 2005)

Davis (1989) found that PEOU has a less strong relationship compared to PU. However, Hasan and Ahmed (2007) found inconsistent results from Davis (1989) and Johnson and Payne (1985). These studies found that PEOU has a stronger relationship compared to PU as a behaviour factor towards ERP acceptance. In addition, Scott and Walczak (2009) also found a different result where there is no significant statistical relationship between PEOU and user acceptance towards ERP as compared to PU. This study follows the hypothesis in TAM which examines the direct effect between PEOU and user acceptance. Thus, the second hypothesis is:

H2: Perceived ease of use has a positive effect towards ERP acceptance.

CSE is one of the independent variables in this study. The higher the self-efficacy beliefs in an individual, the more efforts and persistence will be given by the individual compared to individual with lower self-efficacy beliefs. Therefore, CSE affects user behaviour towards ERP acceptance and this has been proven by previous studies such as Chou and Chen (2009) and Ariff *et al.* (2012).

Most studies constructed CSE as additional measurement or extension in TAM directly or indirectly. These studies examined indirect relationship between CSE and user acceptance towards ERP, through PU and PEOU. (Agarwal and Karahanna, 2000) used CSE as a cognitive absorption factor that indirectly influences PU and PEOU. Other studies have also examined similar factor such as Sternad and Bobek (2013) and Scott and Walczak (2009). On the other hand, Yi and Hwang (2003) found a direct relationship between a specific CSE, user behaviour intention, and the effect on CSE in behaviour intention. This study focuses on the direct effects of CSE towards user acceptance. Based on reviewing the literature, the following hypothesis is proposed.

H3: Computer self- efficacy has a positive effect towards ERP acceptance.

4. Research Design

4.1. Sample Selection

The sample for this study is the accountants who are working in the private companies specifically in the Accounts and Finance departments. The companies are from the various industries in Malaysia. The accountants are chosen as the respondents as they are directly involved in the ERP implementation and actively rely on the ERP in performing their tasks.

4.2. Research Instrument

This study uses the questionnaire as the research instrument. The questionnaire is developed based on Davis *et al.* (1992), Murphy *et al.* (1989) and Venkatesh and Davis (2000) with some modifications to suit the context of this study. A five-part instrument is used in this study. The first part requests the respondents' perception on PU towards the ERP system used in their organisation. There are 10 items in this part. Among the items are: 'Using ERP improves the quality of the work I do', 'Using ERP gives me greater control over my work', 'Using ERP improves my job performance', and 'Using ERP enhances my effectiveness on the job'. This part uses a 7 point scale from '1' as 'strongly agree' to '7' as 'strongly disagree'.

The second part requests respondents' perception on PEOU towards ERP system used in their organisation. There are 10 items in this part. Among the items are: 'Using ERP improves the quality of the work I do', 'Learning to operate the ERP is easy for me', 'The ERP is rigid and inflexible to interact with', and 'It is easy for me to remember how to perform tasks using the ERP'. This part uses a 7 point scale from '1' as 'strongly agree' to '7' as 'strongly disagree'.

The third part requests the respondents' perception on CSE towards ERP systems. There are 12 items in this part. Among the items are: 'I feel confident escaping/exiting from the ERP', 'Understand terms/words relating to ERP', 'Describing the function/option screen in the ERP', and 'Explaining why ERP will or will not run on' This part uses a 7 point scale from '1' as 'strongly agree' to '7' as 'strongly disagree'.

The fourth part requests respondents' user acceptance of ERP. There are two items in this part. The items are 'I intend to use the an ERP system for performing to perform my job as often as needed' and 'I frequently use the ERP in my job as often as needed'. This part uses a 7 point scale from '1' as 'strongly agree' to '7' as 'strongly disagree'.

The last section gathers general information regarding the participants' gender, age, and levels of education. This section also solicits participants' experience pertaining to computer usage which includes current use of ERP and number of years of experience in ERP usage.

4.3. Data Collection

The data for this study were collected using questionnaire. The questionnaire was administrated to the organisations through an online platform. The data were collected in stages during a course of 9 months starting from April 2015 to January 2016. In the nine months period, 218 answers were received. No identifiers were to be put on the questionnaire so that the respondents remained anonymous. Respondents were requested to click (or tick) the relevant response options, type responses to open ended options, and to submit the questionnaires via the web

server that was used to administer the survey. Eighteen responses were incomplete and unusable, hence were removed from the data analysis. Thus, the final analysis was done based on 200 useable questionnaires.

5. Results and Discussion

5.1. Demographic Profile

Table 1 presents the descriptive statistics for the respondents' demographic profile. Table 1 shows the demographic profile for 200 respondents. The demographic profile includes the respondents' gender, age, professional qualification, academic qualification, and experience in using ERP systems. Based on Table 1, most of the respondents are female (73.5%) whilst 26.5% of them were male. Out of the 200 respondents, half of them (51.5%) are in the age group of 25-30 while 32.5% are in the age group of 31-40, and 16% are in the age group of less than 25. More than 66.5% of the respondents hold a Bachelor's Degree in Accounting and 25.5% hold a professional accounting certificate such as ACCA, CIMA, ICSA, MIA and CPA. Out of the 200 respondents, 43.5% of the respondents have been using ERP system for 1 to 4 years in their working life. According to Hwang (2005), user experience is one of the important moderating factors that influence user acceptance towards ERP implementation.

Table-1. Demographic Profile

Demographic Characteristics		Frequency	Percentage (%)
Gender	Male	53	26.5
	Female	147	73.5
Age	< 25	22	11.0
	25 – 30	103	51.5
	31 – 40	65	32.5
	> 40	10	5.0
Academic Qualification	Professional Degree	41	20.5
	Bachelor's Degree	133	66.5
	Master's Degree	26	13
Professional Qualification	Yes	51	25.5
	No	149	74.5
Experience	< 1 years	24	12.0
	1 - 4 years	87	43.5
	5 - 10 years	80	40.0
	> 11 years	9	4.5

5.2. Factors influencing ERP Acceptance

Table 2 presents the correlation matrix for dependent variables and independent variables employed in this study. This correlation provides an indication whether there is any relationship between these two variables (Julie Pallant, 2013).

Table-2. Correlation Analysis

Correlations					
Construct	PU	PEOU	CSE	UA	USG
PU	1				
PEOU	-.173*	1			
CSE	.351**	-.327**	1		
UA	-.050	-.009	.124	1	
USG	.233**	-.046	.224**	.154*	1

Notes:

1. PU – Perceive Usefulness, PEOU – Perceived Ease of Use, CSE – Computer Self-Efficacy, UA – User Acceptance, USG – ERP Usage
2. **. Correlation is significant at the 0.01 level (2-tailed).
3. *. Correlation is significant at the 0.05 level (2-tailed).

Table 2 shows the correlation among the variables in this study. The results show that all independent variables are both positively and negatively correlated. The PU variable is negatively and is not significantly related to user acceptance towards ERP ($r=-0.50$). This gives an indication that the usefulness of an ERP system in assisting users to enhance their job performance is not a main factor towards their acceptance of ERP. The PEOU variable is also negative and not significantly related to user acceptance towards ERP ($r=-0.09$). This gives an indication on whether the ERP system is complex to use and that it is not a main factor considered by the users to use the system.

CSE is found to have a positive relationship with user acceptance towards ERP ($r=1.24$). This result suggests that users' social influence can play an important role in their acceptance of an ERP system. User acceptance towards ERP is significant and positively related to usage of ERP ($r=0.154$, $p=0.05$). These findings indicate that user acceptance towards ERP is related to the actual usage of ERP. The higher the user's acceptance towards ERP systems, the more likely he or she will use the ERP system.

5.3. Assessment of Structural Model

Before proceeding further to examine the research hypotheses using PLS structure model, all constructs were tested for multicollinearity, which is considered to be a threat to model experimental design (Farrar and Glauber, 1967) together with variance inflation factor (VIF). Multicollinearity is said to exist among the independent variables if these independent variables are related to or dependent upon each other (Bowerman *et al.*, 2001). Multicollinearity was assessed among the independent variables. The correlation matrix does not indicate multicollinearity where the coefficients are below 0.80. Correlation coefficient above 0.80 would suggest a problem of multicollinearity.

The collinearity diagnostics given in Table 3 shows that VIF for the independent variables is less than 3 and the tolerance level is above 0.4 which further suggests that multicollinearity does not exist among the independent variables.

Table-3. Collinearity Statistics

Variables	Tolerance	VIF
PU	.864	1.157
PEOU	.888	1.126
CSE	.785	1.274
UA	.974	1.027

5.4. Perceived Usefulness and ERP Acceptance

This section is to examine hypothesis 1 that states PU has a positive effect towards ERP acceptance. This study employed two analyses, PLS structure model and multiple regression to test the hypothesis. A descriptive statistics of the respondents' PU is shown in Table 4. The construct for PU consists of 10 items using the seven-point scales with the anchors 1 = strongly agree, 4 = Neutral, and 7 = strongly disagree. The result shows that for PU of 200 respondents, the mean score and standard deviation scores are 1.9685 and 0.44806 respectively, indicating that users do not held strong PU on ERP acceptance.

Tablet-4. Descriptive Statistic for PU

Variable	N	Min	Max	Mean	Std. Deviation
PU	200	1	3	1.9685	0.44806

Note: PU - Perceived Usefulness

Table 5 presents the results from the PLS structure model. This study shows that the result does not support hypothesis 1, as PU has a positive effect towards ERP acceptance. Therefore, this study conducted further analysis using multi regression to test on the relationship between PU and user acceptance for the purposed hypothesis.

Table-5. PLS Structure Model for PU

Relationship	Path coefficient	T-statistics	Hypothesis	Support (Yes/No)
PU → UA	-0.37	0.300	H1	No

Notes: PEOU – Perceived Ease of Use, UA – User Acceptance

Based on the empirical result for regression analysis reported in Table 6, the null hypothesis fails to be rejected for PU at conventional significant level. There is not enough significant evidence to support hypothesis H1 that there is a relationship between PU and user acceptance. ($\beta = 0.37$, p - value > 0.1) based on PLS structure model. The result contradicts with previous studies using TAM. One of the possible reasons for the negative relationship between PU and user acceptance is the usefulness of ERP. When an ERP system is useful, user behaviour is not a main determinant towards ERP acceptance.

Table-6. Regression Analysis for PU

Variable	Coefficients	t-stat	Collinearity Statistics	
			Tolerance	VIF
(Constant)	2.167	1.103(0.271)		
PU	(0.391)	(2.152) (0.032)	0.873	1.146
F – stat	1.751(0.158)			
r ²	0.026			
Adjusted r ²	0.011			

Note: *, **, and *** denote the statistical significance at 10%, 5%, and 1% level, respectively.

$$IU = 2.17 \beta_0 - 0.39 PU + 0.17 PEOU + 0.30 CSE + \epsilon \quad (4.1)$$

(1.103) (-2.152) (0.383) (2.163)

Nowadays, most organisations around the world use ERP to improve their business processes and work efficiency to create strategically competitive advantages (Spathis and Constantinides, 2003). Thus, employees do not have a choice to reject the system especially in industries with high volume daily transactions. For example: in the

food and beverage industry, the volume of transaction, such as daily sales is very high and it is essential to link the front end system to the back end system such as linking the Account Receivable module to the General Ledger module. Such information will be used by accountants to produce financial reports. If an organisation or user rejects ERP systems, they will have difficulty in processing high volume data as they would have to do it manually and their daily work will become inefficient.

In addition, in 2015 the Malaysian government implemented Goods and Service Tax (GST), which requires all GST registered organisations to use ERP to ensure the accuracy of their business transaction records so they are less likely to make errors in their GST declaration. Furthermore, additional features in the ERP recommended by the Royal Malaysian Customs Department (RMCD) has a function to generate a standard file known as Tax Payer Access Point (TAP) and GST Audit File (GAF) (Royal Malaysian Customs Department, 2016). Therefore, with the RMCD requirement, it will be impossible for users to process GST data manually. Software developers will need to upgrade their system to cater to all requirements by RMCD and thus this directly increases the usefulness of ERP.

Another point to consider is user involvement during the implementation of ERP. User involvement refers to employees' participation in the system's development or implementation process as it provides users the opportunity to react positively towards ERP systems. Participation of users can improve the functionality of the ERP. Regardless of modules or function, it is important that an ERP system fulfils users' basic requirements. Therefore, user opinions and they sharing their knowledge on daily operations are crucial during the implementation of an ERP system as their input will enhance the functionality of the system. Users should overcome their resistance to use the system once their ERP system is ready for use. If users participated in the implementation of the organisation's ERP, they will already be well-versed with the system's functions, outcomes and how the system can expedite their work process (Matende and Ogao, 2013). User acceptance is still at the implementation stage. Hence PU may not be an important factor for ERP usage in the later stage.

Secondly, this sample was taken from various industries. Different industries have different ERP requirements in choosing an ERP system and different budget allocations. Manufacturing companies or businesses involved in complex operations require high-end ERPs such as SAP and Oracle, compared to a normal trading or retailing organisation that may choose a simple ERP system. When ERP systems used by users and industries are different, user behaviour and intention also become diverse. Therefore, not all ERP users are affected by PU and CSE. The ERP itself is a contributing factor towards acceptance of the system, such as how user friendly is the system, is the interface easy to use or is the ERP able to produce good reports that meet management requirements.

5.5. Perceived Ease of Use and ERP Acceptance

Table 7 presents the descriptive statistics of the respondents' CSE. The construct for CSE consists of 10 items and using a 7-point scale with 1 as strongly agree, 4 as Neutral, and 7 as strongly disagree. The results show that for CSE of 200 respondents, the mean score and standard deviation scores are 1.9685 and 0.44806 respectively, indicating that users not held strong CSE on ERP acceptances.

Table-7. Descriptive Statistic for CSE

Variable	N	Min	Max	Mean	Std. Deviation
PEOU	200	3.20	4.60	3.9580	.28255

Note: CSE - Perceived Ease of Use

Table 8 presents the results from the PLS structure model. This study shows that the result does not support hypothesis 2, as CSE has a positive effect towards ERP acceptance. Therefore, this study conducted the multi regression to test on the relationship between CSE and user acceptance for the purposed hypothesis.

Table-8. PLS Structure Model for CSE

Relationship			Path coefficient	T-statistics	Hypothesis	Support (Yes/No)
CSE	→	IU	0.17	0.440	H2	No
CSE	→	PU	-0.11	0.109	H2a	No

Notes: PEOU – Perceived Ease of Use, PU – Perceived Usefulness, IU – Intention to Use.

Based on the empirical result for regression analysis reported in Table 9, the null hypothesis fails to reject for PU and CSE at conventional significant level. However, the result shows that CSE is statistically interacting with user acceptance (IU) at 95% significant level. The external variables could only explain 2.6% (R² = 0.026) variance in User Acceptance (IU).

$$IU = 2.17 \beta_0 - 0.39 PU + 0.17 CSE + 0.30 CSE + \epsilon \quad (4.1)$$

(1.103) (-2.152) (0.383) (2.163)

Table-9. Regression Analysis for PEOU

Variable	Coefficients	t-stat	Collinearity Statistics	
			Tolerance	VIF
(Constant)	2.167	1.103 (0.271)		
PEOU	0.169	0.383 (0.702)	0.889	1.125
F - stat	1.751 (0.158)			
r ²	0.026			
Adjusted r ²	0.011			

Notes: PEOU – Perceived Ease of Use, PU – Perceived Usefulness, IU – Intention to Use.

Based on the result shown in Table 10, PEU has a negative effect on PU. The presented hypothesis for this case supports ERP acceptance. The H₀ has been successfully rejected at 5%, a significant level where the p-value 0.030 < 0.05. In this model, 1% increase in PU, the PEOU the ERP system, decreases on average by 0.17%.

$$PEOU = 3.05 \beta_0 - 0.17 PU + \epsilon_t \quad (4.3)$$

(6.932) (-2.46)

Table-10. Regression Analysis for PEOU and PU

Variable	Coefficients	t-stat	Collinearity Statistics	
			Tolerance	VIF
(Constant)	3.053	6.932 (0.000)		
PEOU	(0.173)	(2.469) (0.014)	1.000	1.000
F - stat	6.098 (0.014)			
r ²	0.030			
Adjusted r ²	0.025			

Both H2 and H2a have negative effects. PEOU has a negative effect on user acceptance towards ERP. PEOU has a negative effect on PU ($\beta = -0.11$, p - value > 0.1) based on PLS structure where there is not enough indication to support hypothesis H2a. User experience is one of the possible reasons that users feel PEOU is not a main behaviour factor.

Out of the 200 respondents, 43.5% have used ERP for 1 year or more, 40.0% of them have used ERP for more than 5 years, and the rest of them have more than 11 years of experience in using ERP usage. When users have more experience, the effect of PEOU is less (Szajna, 1996). Once people begin to use ERP system on a daily basis, they will accept the way the system works and functions, and be able to accept any shortcoming in the system’s functions. Users will try to explore the functions of ERP to reduce workload and generate the reports requested by management. Thus, users gain more knowledge and familiar on ERP. In addition, users may use the same ERP for many years, so they become expert from year to year. Thus, PEOU is not a main behaviour factor, once users have experience using ERP.

Besides user experience, user education and user acceptance towards ERP are other factors that give negative effect to PEOU. According to Gargeya and Brady (2005), the “people element” is the contributing factor towards the success or failure of ERP. Managers need to understand the implications of an ERP system in its daily operations and the reasons why an organisation chooses to have ERP, as well as the benefits received from using ERP. With that, managers need to disseminate the information to their subordinates and share this knowledge. Employees who received adequate training and educational exposure towards ERP can reduce PEOU influence among users. In addition, team members need to play vital role to support each other and share knowledge for them to achieve common business goals. This study focuses on finance departments in which all respondents have at least a degree; either a master’s degree or a professional degree. Their educational level shows that they have a high level of professionalism, and a positive perception and attitude. Therefore, the results may suggests that regardless whether the ERP is easy or difficult to use; if the user has a high understanding of ERP, PEOU is not one of main factor to be considered to influence acceptance towards ERP. Furthermore, users who received continuous training and support from team members would have a positive influence on ERP acceptance (Alleyn and Lavine, 2013).

5.6. Computer Self-Efficacy and ERP Acceptance

A descriptive statistics of the respondents’ CSE is shown in Table 11. The construct for CSE consists of 12 items and using seven-point scales with the anchors 1 = strongly agree, 4 = Neutral, and 7 = strongly disagree. The results show that for CSE of 200 respondents, the mean score and standard deviation scores are 2.5807 and .93711 respectively indicates that users held strong CSE on ERP acceptances.

Table-11. Descriptive Statistic for CSE

Variable	N	Min	Max	Mean	Std. Deviation
CSE	200	1.08	6.00	2.5807	.93711

Note: CSE - Computer Self – Efficacy

Table 12 presents the results from the PLS structure model. This study shows that the result does support hypothesis 3, as CSE will have a positive effect towards ERP acceptance. Further analysis using multi regression was performed to test on the relationship between CSE and user acceptance for the purposed hypothesis for consistency.

Table-12. PLS Structure Model for CSE

Relationship			Path coefficient	T-statistics	Hypothesis	Support (Yes/No)
CSE	→	AU	0.31	0.144	H3	Yes

Notes: CSE – Computer Self –Efficacy, IU – Intention to Use.

Table-13. Regression Analysis for CSE

Variable	Coefficients	t-stat	Collinearity	
			Tolerance	VIF
(Constant)	2.167	1.103(0.271)		
CSE	0.303	2.163**(0.032)	0.803	1.245
F – stat	1.751 (0.158)			
r ²	0.026			
Adjusted r ²	0.011			

There is a significant evidence to support the hypothesis H3, relation between CSE and user acceptance. ($\beta = 0.31$, p - value < 0.05) based on PLS structure model. This study suggests that CSE is positive and significantly correlated with ERP acceptance. Therefore, hypothesis 3 is accepted. This is consistent with previous studies such as Darsono (2005) and Ma and Liu (2005). For example: Hasan (2006) found that CSE had a stronger effect on user acceptance towards ERP when the user is less familiar with technologies. Furthermore, most studies consider CSE as an external factor to support PU and PEOU towards ERP acceptance (Ariff *et al.*, 2012; Medyawati *et al.*, 2011).

Kulviwat *et al.* (2014) found no direct relationship between CSE and user acceptance towards ERP. However, this study found a contradictory result where CSE has a direct effect towards user acceptance. The results in this study are consistent with Compeau D. R. *et al.* (1999), where they found that CSE was directly related to user acceptance towards using IT and that used the technology more frequent.

The positive relationship between CSE and user acceptance indicates that user perceived control on ERP usage. Practitioners may find the results of this study very useful when they have to deal with environments that engage highly educated, professional and autonomous individuals such as accountants. If managers granted their employees a greater control in ERP usage, users will feel encouraged to explore ERP, to suggest changes in the system, and attempt to improve it. Users will use their creativity and ideas to fully utilise the system's functions and in turn the organisation will achieve greater success (Alleyne and Lavine, 2013).

Hwang (2005) pointed out that self-control (informal control) is critical to the success of ERP systems. When an individual has more control on the system he/she uses, it will raise his/her perception level on that system and improve his/her job performance. Further to the above point, the results from this study identified that those who are not in a specific industry and who are using different ERPs may also be affected by CSE as they have to use different interface and functions to cater to the unique characteristics of their individual industry. Out of the 200 respondents, 88% of them have been using ERP for more than 1 year, which also indicates that the users are already familiar with an ERP system and are able to operate the system themselves. Therefore, high CSE directly affect ERP usage.

6. Conclusion

The objective of this study is to determine factors that influence accountants' acceptance of ERP implementation and to examine the effects of accountants' acceptance on ERP implementation. Nowadays, ERP is at the core of every modern and competitive business. Rapid changes in technology will change the business landscape. All information needs to be in real-time and this is critical for every business. Organisations have an obligation to serve their stakeholders. Therefore, it is important that they explore any possibility to utilise technology to fulfil their business need and ERP is one of such solutions.

ERP is not a stand-alone system that is only applicable to a single department. ERP is an integrated system that links information and data throughout all departments, and assists management in decision making. The information that flows in ERP needs to be reliable, up to date and in order. All data that flows into ERP is to be input by a user or human. Therefore, it is important for companies and their top management to understand user behaviour towards ERP implementation.

The literature points out that three most significant behaviours that influence user acceptance towards ERP and usage are PU, PEOU and CSE. These are the key dimensions found and validated to assess user acceptance and

usage based on the well-known TAM model. The questionnaire was answered by the accountants from various business sizes and user experience with ERP systems in Malaysia. The data collected were relevant to validate all the measurement and the PLS structural model's result. All the hypotheses were confirmed enabling a good basis for theoretical and practical support which follow TRA. Theoretically, the present study to understand user acceptance towards ERP and usage are based on few behaviour factors.

Surprisingly, two out of three behaviour factors under the TAM model, PU and PEOU constructs, were not supported. Both PU and PEOU found negative relation with user acceptance towards ERP. There are many possible reasons why this two hypothesis were rejected. One of it is user experience. When users use ERP in daily tasks, they will start to learn how ERP can ease their daily tasks and adopt the system. In addition, with the current ERP interface which always follows the changes in technology, user may find ERP easy to use, interactive and easy to understand. Furthermore, with the many requirements imposed by the government and local and/or international accounting bodies, it is impossible for organisations to process data manually. Every single data need to be computerised and thus ERP becomes a must in the business, not an option. Therefore, ERP itself is PU and PEOU. Thus, with the changes of technology, human behaviour towards ERP changing; both PU and PEOU may not be the main behaviour to determine user acceptance.

Another behaviour factor in this study is CSE, which has a positive relation with user acceptance towards ERP. Accountants are educated professional and autonomous users who are able to accept and use ERP. When user perceive that they have some measure of control over how they use the system, they will be more likely to have high performance levels. The accountants' perception about ease, usefulness or difficulty of using the ERP may be influenced by their expertise, experience and knowledge with the technology.

This study is subjected to a number of limitations. First, this study employed data from questionnaire that has been distributed to accountants without any target industry and target ERP. Therefore, the generalisation of these findings needs to be conducted with caution as the study does not employ sample from a specific industry. Secondly, the study obtained a relatively small sample, thus does not study the general ability of a wider population. Further work could be done to achieve a larger sample. Thirdly, there are many other factors influencing ERP usage, however this study only focuses on three behaviours employed from TAM.

This study recommends organisation to assess and predict acceptance factors towards ERP systems among their employees as this could assist them to evaluate the effectiveness of implementing an ERP system before they do so. This study also suggested that PU and PEOU were not the main behaviour factors to assess ERP acceptance and usage under the current competitive environment. Thus, the organisations should look at other factors when implementing and maintaining an ERP system. In addition, this study provides insights to organisations on factors related to acceptance of ERP systems among professionals.

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