FACTORS AFFECTING THE ADOPTION OF ENTERPRISE RESOURCE PLANNING (ERP) ON CLOUD AMONG SMALL AND MEDIUM ENTERPRISES (SMES) IN PENANG, MALAYSIA

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ABSTRACT

The purpose of this research is to investigate the effect of cloud security and data privacy, cost effectiveness, Internet reliability, top management support, and competitive pressure factors on the intention to adopt cloud-based ERP system by Small and Medium Enterprises (SMEs) in Penang, Malaysia. This study employs a survey method where 300 SMEs in both manufacturing and service sectors were selected from a list taken from the SME Corporation Malaysia (SME Corp) website. Statistical Package for Social Science (SPSS) version 20 was used to analyze the collected data. There were 51 valid data records from the manufacturing sector as well as 51 valid data responses from the service sector. This paper has developed a theoretical model using the Technological Organizational Environmental (TOE) framework and formulated several hypotheses. The results of this study have revealed that the top management support factor significantly and positively correlates with the intention to adopt cloud-based ERP system in manufacturing SMEs only. In addition, the analyses have found that all the factors have no significant impact on the intention to adopt cloud-based ERP system in both sectors. The practical contribution in this research will be the guidelines for cloud-based ERP providers, SMEs, as well as the Malaysian government in order to encourage the application of cloud-based ERP systems by SMEs.

Keywords: *Smes, ERP, Cloud Computing, Cloud-Based ERP System, Intention To Adopt, Cloud Security And Data Privacy, Cost Effectiveness, Internet Reliability, Top Management Support, And Competitive Pressure*

1. INTRODUCTION

Enterprise resource planning (ERP) is the business management system that evolved from material resource planning (MRP) in the 1970s and MRP II in the 1980s. It is used to manage, manipulate and integrate business functions in the organizations [1, 2]. It is defined as an integrated software application that involves the handling of the entire business transaction as well as processes which may encompass finance, accounting, manufacturing, sales and services, human resource, customer relationship management, supply chain management, logistics and shipment, etc. [3, 4].

Although SMEs will benefit from adopting ERP on cloud-based services in their firms, the rate of ERP adoption is lower than expected [5, 6]. The study of Asohan [7] has found that 68% Malaysian SMEs do not adopt cloud computing as they do not have enough confidence in cloud services. They hesitate to embrace and invest in cloud technology because of lack of successful stories; thus, these SMEs want to wait in order to review other companies' feedback on the cloud computing adoption before they make the decision on whether to adopt cloud technology or not. Malaysian organizations are willing to compare the cloud services between the public, private and hybrid types before they adopt it. They want to compare different cloud services with different solutions to see how the cloud technology can be utilized in various projects. However, most SMEs in the ad hoc stage are in favor of trying cloud services for a short period of time. Besides, 63% of Malaysian SMEs have shown a concern about security measures and the importance they pose at cloud service levels where it should be more transparent [7, 8].

The Malaysian government has attempted the promotion of cloud computing in organizations by creating the "cloud Malaysia info center" website.

This was done in order to raise awareness about cloud computing, inform the public that cloud is available in Malaysia, educate the market-especially SMEs on the benefits of adopting cloud computing, and share the experiences of government agencies, large enterprises and small-to-medium size businesses in cloud computing [9]. In addition, Multimedia Development Corporation (MDeC) provides SME Cloud Computing Adoption Program, which is a financial incentive program. This incentive will be paid on a reimbursement basis. Thus, SMEs can claim a maximum of six months of subscription fee or maximum of RM1,500 of the total subscription fee. The purpose of providing such a program is to accelerate cloud adoption among SMEs and elevate the rate of competitiveness and efficiency of SMEs in doing businesses[10, 11].

The motivation of this research is to discover the reasons of such a low rate of cloud ERP adoption among SMEs in Penang, Malaysia[5, 6]. In other words, the researchers are interested in investigating the causes of the reluctance of SMEs in Penang, Malaysia to adopt cloud ERP system along with helping to provide guidelines to ERP cloud providers, the government, and SMEs to accelerate cloud computing adoption.

This paper is organized as follows. First, the underlying theory of TOE is explained. Then, the conceptual framework is formed to anticipate the intention of using cloud-based ERP system among SMEs with the definition of the variables of the model. Then, hypotheses of this study are formulated. Following that, the research methodology is discussed along with the data analysis. Later, results are presented and discussed. Finally, the conclusion of this study is discussed based on the results of the hypotheses.

2. TECHNOLOGY-ORGANIZATION-ENVIRONMENT (TOE) FRAMEWORK

Since the TAM model is suitable for an individual level only, TOE framework is introduced to cater to the organizational level[12]. TOE stands for technology, organization and environment [13]. The TOE framework was developed by Rocco DePietro, Edith Wiarda and Mitchell Fleischer. Low, et al. [13] explained the TOE framework as "a theoretical model for cloud computing diffusion needs to consider the disadvantages in the adoption and diffusion technological innovation, which are caused by the specific technological, organizational, and environmental contexts of the firm" [13]. The

technological context comprises of internal and external technologies of enterprises. These technologies consist of either equipment or practice [12]. Organizational context refers to the resources and characteristics of a firm such as how big the firm size and scope are, how the firm structure is centralized and formed, as well as how good the quality of human resources is. Environmental context takes into consideration a firm's industry, the arena in which a firm conducts its business, competitors and government policies or intention [12, 13]. This study involves the TOE framework to develop the research model which demonstrates the relationships between the dependent variable, i.e. the intention to adopt cloud-based ERP system and the independent variables that include cloud security, Internet reliability, costs effectiveness, top management support, and data privacy and competitive pressure.

3. THE PROPOSED RESEARCH FRAMEWORK

The independent variables are categorized into three contexts, which are technology, organization, and environment. TOE framework is chosen to build the research model in this research since it can be used at the firm level [14]. Moreover, many researchers have applied TOE framework successfully, such as Ramdani and Kawalek [15] who have carried out their research on enterprise system, Scupola [16] and Seyal, et al. [17] who have applied the same framework on e-commerce system, Premkumar and Potter [18] who have researched on communication technologies, and Tan and Teo [19] who have studied the Internet using TOE framework. Figure 1 illustrates the proposed framework of this study. Table 1 shows all the definitions of the proposed framework.

4. PROPOSED HYPOTHESIS

The study of Ross [20] shows the p-value equals to 0.001. Since the p-value is less than 0.05, cloud security and privacy is considered as a significant factor which affects cloud-based ERP adoption. In addition, the beta coefficient value is 0.553 for security factor 1 which means it is positively correlated with cloud ERP adoption whereas security factor 2 shows -0.073 beta coefficient value which shows slightly negative correlation with the cloud ERP adoption score [20]. This means the cloud security and data privacy have a positive impact on the adoption in the cloud technology. The study of Tehrani [21] has revealed that the cloud security and privacy have a

negative correlation with the cloud technology adoption as the beta value is negative.

H1a: Cloud security and data privacy have negative impacts on intention to adopt cloud-based ERP.

Table 1 The Definition Of Factors In The Proposed Framework

Variable	Definition
Cloud computing adoption	It describes the SMEs' intention to adopt ERP on cloud computing by the cloud security and privacy, cost effectiveness, Internet reliability, top management support, competitive pressure, and SMEs' sector type
Cloud security and data privacy	the degree of cloud computing that is deemed secure and private compare to other computing paradigms [21]
Cost effectiveness	the degree to which a company deems the total cost of expenditure? on cloud computing adoption is lower than the costs that are spent on other computing paradigms [21]
Internet reliability	whether the Internet connection is reliable most of the time, including any poor Internet access and connectivity, and the speed of the Internet bandwidth for enterprise processes to perform smoothly [22]
Top management support	the support provided by the IT decision makers to the company that includes the provision of resources and sponsors of any new plans for achieving a particular purpose as well as involving the adoption of new solutions in the company [23, 24].
Competitive pressure	the pressure that occurs when the enterprise is compared with competitors within the industry [25]. It can be defined as the degree of competition that occurs when the company's operation is going on [26].

The study of Ross [20] shows that the p-value of the cost effectiveness in ANOVA is less than 0.05 which is 0.000. This shows that there is less than one chance in 1000 of Type 1 error. The cost effectiveness and the ERP on cloud computing adoption are strongly correlated. Since the beta coefficient is positive (0.552), the cost effectiveness positively affects the cloud-based ERP adoption among SMEs [20].

H1b: Cost effectiveness has a positive impact on intention to adopt cloud-based ERP.

The research of Ross [20] shows that p-value of 0.001 which means only one over 1000 chance that these decisions were not dependent. This indicates that the relationship between cloud ERP adoption and Internet reliability is significantly correlated [20]. The cloud computing reliability, which includes the Internet reliability, is the reason that causes SMEs to avoid adopting ERP on cloud.

H1c: Internet reliability has a positive impact on intention to adopt cloud-based ERP.

The results of Low, et al. [13] have shown that the top management support has a significant positive impact on the cloud adoption with p-value of 0.048. In contrast, the study of Tweel [27] shows that the top management support does not significantly affect the adoption of cloud technology. However, both studies of Low, et al. [13] and Tweel [27] show positive regression coefficient (beta). Thus, this factor positively affects the organization to adopt ERP on cloud computing [13, 27].

H2: Top management support has a positive impact on intention to adopt cloud-based ERP.

The study of Low, et al. [13] has revealed that beta coefficient of competitive pressure is 0.842 with a positive sign. This indicates that competitive pressure is positively correlated with the ERP on cloud computing adoption. The significance of the regression coefficients of the hypothesized predictors is less than 0.05, i.e. 0.026. This shows that the competitive pressure significantly affects the SMEs' intention to adopt ERP on cloud [13].

H3: Competitive pressure has the positive impact on intention to adopt cloud-based ERP.

All the above beta coefficients mostly have positive values towards the cloud computing adoption. Thus, this research hypothesizes that the TOE factors viz. cloud security and data privacy, cost effectiveness, Internet reliability, top management support, and competitive pressure have a positive impact on the cloud-based ERP adoption among SMEs in Penang, Malaysia. Thus, the possibilities of the significance of the regression coefficients of hypothesized predictors are high.

H4: TOE factors (Cloud security and data privacy, cost effectiveness, Internet reliability, top management support, and competitive pressure) have positive impact on intention to adopt cloud-based ERP.

5. RESEARCH METHODOLOGY

The survey instrument is adopted from Lease (2005), Ross [20], Tehrani [21], and Tweel [27]. The survey instrument is divided into a few sections. In section one, the demographic profile items are included, such as the respondent's position level, company annual sales turnovers, the type of industry of a company, and the number of employees. Section two of the questionnaire is about the intention of cloud-based ERP adoption. Section three is divided into three parts viz. technological, organizational and environmental contexts. In the technological context, there are three factors: cloud security and data privacy issues, cost effectiveness, and Internet reliability of cloud-based ERP issues. In the organizational context, top management support issues related to ERP on cloud adoption were asked. In the environmental context, issues regarding competitive pressure on ERP on cloud computing adoption were dealt with. There were 300 questionnaires distributed to respondents in both hardcopy and softcopy forms. Only 134 questionnaires were returned. After the data filtering was done, only 102 valid responses fulfilled the research focus. The responses are divided based on the business sector and resulted in 51 responses for each manufacturing sector and service sector.

6. ANALYSIS AND RESULTS

A reliability test is conducted to ensure that the questionnaire items show consistency regardless the number of times the measurement is used with the same extraneous variables [28]. Cronbach's (1951) coefficient alpha is considered a very popular reliability test. Cronbach's coefficient alpha gauges the relationship of such an item against the rest of the items. The coefficient alpha value of 0.70 is considered acceptable [29]; however, it is preferable that the value be more than 0.8 [30, 31]. Through the reliability analysis, the same two items of the Internet reliability factor were dropped during the analysis conducted on both samples of manufacturing sector as well as service sector in order to reduce the error of the analysis. Table 2 shows the result of the reliability analysis conducted on the questionnaire factors for both manufacturing and service sectors.

A descriptive analysis is used to describe the characteristics of the collected data quantitatively. The mean, standard deviation and frequency values have been calculated for each of the variables of this study[30]. In addition, the descriptive analysis is carried out to determine the level of a user's intention to adopt ERP on cloud. The measurement of the items is based on 7-Likerts scale where 1 indicates "strongly disagree" and 7 indicates "strongly agree." Table 3 shows that respondents of the manufacturing as well as service sectors agree that cost effectiveness and top management support are directly reflected on the intention to adopt ERP on cloud; yet, the respondents of both sectors think that cloud security, data privacy and Internet reliability have a negative effect on the intention to adopt ERP on cloud. Therefore, it can be concluded that the informants have only a slight agreement upon the factors that affect the intention to use cloud-based ERP system.

Table 2 Reliability Coefficients Of Manufacturing And Service Sectors

Factor	**Manufacturing Sector**		
	Number of Items	**Number of dropped items**	**Cronbach's alpha**
Cloud security and data privacy	9	None	0.89
Cost effectiveness	5	None	0.95
Internet reliability	2	2	0.89
Top management support	5	None	0.89
Competitive pressure	5	None	0.92
Factor	**Service Sector**		
	Number of Items	**Number of dropped items**	**Cronbach's alpha**
Cloud security and data privacy	9	None	0.86
Cost effectiveness	5	None	0.85
Internet reliability	2	2	0.87
Top management support	5	None	0.90
Competitive pressure	5	None	0.87

Table 3 Descriptive Analysis For Manufacturing And Service Sectors

Factors	Minimum	Maximum	Mean	Standard Deviation
Manufacturing Sector				
Cloud security and data privacy	1.89	5.89	3.51	1.01
Cost effectiveness	1.60	6.80	4.83	1.33
Internet reliability	1.00	6.00	2.87	1.39
Top management support	1.80	6.60	4.73	1.22
Competitive pressure	1.80	6.20	4.20	1.09
Intention to adopt ERP on cloud	1.00	7.00	4.38	1.29
	Minimum	Maximum	Mean	Standard Deviation
Service Sector				
Cloud security and data privacy	1.00	6.00	3.49	0.95
Cost effectiveness	2.00	7.00	4.67	1.11
Internet reliability	1.00	6.00	2.71	1.33
Top management support	1.20	7.00	4.67	1.23
Competitive pressure	1.00	7.00	4.31	1.37
Intention to adopt ERP on cloud	2.00	7.00	4.58	1.11

Correlation analysis shows whether such two variables have a positive or negative relationship. Pearson correlation or Spearman correlation is usually utilized to compute the strength between two continuous variables. The strength of relationship can be interpreted through the size of the value of the correlation coefficient. According to Cohen, et al. [32], the relationship between independent and dependent variables is weak when the correlation coefficient value is in the range of 0.10 to 0.29, whereas the relationship between such two variables is considered moderate if the correlation coefficient value is in between 0.30 and 0.49. Finally, if the correlation coefficient value is equal or larger than 0.5, then the relationship is significant[32]. Table 4 shows the summary of

Pearson Correlation between the dependent and the independent variables. By referring to Table 4, cloud security and data privacy and Internet reliability variables have a negative correlation to the cloud ERP adoption among SMEs in Penang. The rest of the variables have shown a positive correlation with the dependent variable [30].

7. REGRESSION ANALYSIS

A regression analysis is required to identify the relationship between variables. The coefficient of determination, the regression coefficients, β with its standardized version, and R^2 are calculated by the regression analysis. Based on the simple regression analysis which is used to test the relationship between a single explanatory variable with a criterion variable, the results from both manufacturing as well as service sectors have shown the same indication. Firstly, all variables have a significant effect toward the intention to adopt ERP on cloud. Secondly, all variables from both sectors have revealed the same behavior effects in terms of the relationship forms. For example, cloud security and data privacy as well as Internet reliability have negative significant impacts on the intention to adopt ERP on cloud since beta values are negative.

Table 5 shows that top management factor has resulted in the highest R^2 value 0.603 which means that top management factor predicts 60.3% of intention to adopt ERP on cloud in manufacturing sector, whereas cost effectiveness has the highest impact on the decision in service sector where it contributes to 35.9%.

The multiple linear regression is used to show the relationship between a single dependent variable and multiple independent variables [33]. Regarding the manufacturing sector, the ANOVA test of this research model shows that the model is significant as *p-value*< 0.01 and R^2= 0.672. That means the independent variables of this research model can explain the reason why 62.7% of SMEs in Penang, Malaysia intend to use cloud-based ERP system. However, the analysis has revealed that only the top management support factor does significantly affect the SME's intention to adopt ERP on cloud. The rest of the factors (cloud security and data privacy,

cost effectiveness, Internet reliability, and competitive pressure) do not have any significant impact on the dependent variable. Thus, the hypothesis H4 is partially supported. Regarding the service sector, the result of ANOVA test shows that the research model is significant with p-value< 0.01, $R2 = 0.396$, and Adjusted $R2= 0.329$. The research model provides the explanation why 39.60% of SMEs in Penang, Malaysia have adopted the use of cloud in the service sector. However, the analysis has shown that none of the factors in service sector has a significant impact on the SMEs' intention to adopt ERP on cloud. This means that the hypothesis number four (H4) is not supported.

8. DISCUSSION

According to Table 6, top management support is the variable that obtains the highest beta coefficient value among other variables in the manufacturing sector. It contributes 77.70% to the ERP on cloud adoption among Penang SMEs. This shows that top management support is the strongest unique contributing factor for manufacturing sectors in this research model in that it has a significant impact on the intention of EPR on cloud adoption[30]. Top management is the vital support in a company in providing resources and directions which can impact the rate of cloud technology adoption among SMEs. In other words, top management is the department that is deeply involved in the decision of whether or not to adopt a new form of technology in a company. Moreover, top management decides whether to provide resources, which include human resource, money and infrastructure to the company in order to adopt new technology. Thus, the respondents from manufacturing sector have chosen this as the main factor that affects them to adopt cloud ERP [27]. Regarding the service sector, none of the factor has shown a significant effect toward cloud-based ERP adoption.

9. CONCLUSION

In conclusion, the respondents of both manufacturing and service sectors agreed that SMEs have the intention to adopt ERP on cloud. The level of intention to adopt ERP on cloud for SMEs in the manufacturing sector is higher compared to their counterparts in the service sector. The cloud security and data privacy factor do not have an impact on the cloud-based ERP adoption among SMEs in Penang. SMEs in Penang may feel that the cloud security and data privacy are not issues that cause them to refuse adopting cloud-

based ERP system as they might be satisfied with the security and privacy level of the cloud services. However, this can also show that SMEs in Penang lack the care for security and privacy issues as they are not aware of their importance. Thus, cloud providers could play an essential role in educating SMEs on how to protect their company data.

In addition, manufacturing and service sectors of SMEs in Penang do not agree that cost effectiveness is an element that affects their decision on the intention to adopt cloud-based ERP. This may be due to the fact that they are not aware of the advantages of cloud-based ERP. Some of the SMEs might think that the cloud-based ERP system is expensive; yet they are not aware that cloud-based ERP system could cut their company costs in the long term as they do not need to pay for high licensing fees, maintenance costs, installation costs, or IT experts' salaries to maintain the system. Besides, Internet reliability is not an issue for both manufacturing and service sectors to not adopt cloud-based ERP as they think that the Internet connection speed in Penang is adequate for performing daily tasks using cloud services.

The data analysis has shown that top management support factor in the manufacturing sector is significantly and positively correlated with the cloud-based ERP system adoption among SMEs in Penang. This is because top management are responsible to make decision, provide resources and give directions to SMEs which indirectly affect the intention of cloud-based ERP adoption. However, for the service sector, top management support has shown no impact on cloud-based ERP system adoption. In addition, competitive pressure did not show an impact in both manufacturing and service sectors. This might be due to the fact that SMEs do not see competitors as a driver to motivate them to adopt cloud-based ERP system. This could mean that SMEs have a lack of knowledge regarding the latest technologies adopted by their competitor when they should be aware that ignoring technology adoption might result in being left behind by their competitors.

In conclusion / All in all, the combined factors of cloud security and data privacy, cost effectiveness, Internet reliability, top management support and competitive pressure have a partial impact on the SMEs' intention to adopt ERP on cloud system with top management support as the sole factor showing a significant impact on the intention of cloud-based ERP adoption. However, in the service sectors, the factors have no significant impact on cloud-based ERP adoption.

This could mean that SMEs in service sector are not prepared to adopt this state-of-the-art technology yet.

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Table 4Correlation Analysis For Manufacturing And Service Sectors

	Manufacturing Sector					
	Intention to adopt ERP on cloud	Cloud security and data privacy	Cost effectiveness	Internet reliability	Top management support	Competitive pressure
Intention to adopt ERP on cloud	1					
Cloud security and data privacy	-0.57**	1				
Cost effectiveness	0.69**	-0.70**	1			
Internet reliability	-0.40**	0.56**	-0.73**	1		
Top management support	0.78**	-0.70**	0.83**	-0.58**	1	
Competitive pressure	0.54**	-0.67**	0.60**	-0.33**	0.67**	1
	Service Sector					
	Intention to adopt ERP on cloud	Cloud security and data privacy	Cost effectiveness	Internet reliability	Top management support	Competitive pressure
Intention to adopt ERP on cloud	1					
Cloud security and data privacy	-0.48**	1				
Cost effectiveness	0.60**	-0.77**	1			
Internet reliability	-0.37**	0.52**	-0.49**	1		
Top management support	0.56**	-0.66**	0.86**	-0.54**	1	
Competitive pressure	0.57**	-0.69**	0.76**	-0.45**	0.72**	1

**Correlation is significant at the 0.01 level (1-tailed).

* Correlation is significant at the 0.05 level (1-tailed).

Table 5 Simple Regression Analysis

Independent Variable	Manufacturing Sector		
	Standardized Coefficient, Beta (β)	Adjusted R value	R Square (r^2)
cloud security and data privacy	-0.565	0.305	0.319**
cost effectiveness	0.694	0.471	0.482**
Internet reliability	-0.371	0.144	0.161**
top management support	0.777	0.595	0.603**
competitive pressure	0.540	0.277	0.292**
	Service Sector		
	Standardized Coefficient, Beta (β)	Adjusted R value	R Square (r^2)
cloud security and data privacy	-0.480	0.215	0.231**
cost effectiveness	0.599	0.346	0.359**
Internet reliability	-0.372	0.121	0.139**
top management support	0.560	0.299	0.313**
competitive pressure	0.569	0.309	0.323**

** significant at the 0.01 level; * significant at the 0.05 level.

Table 6 Multiple Regression Analysis

Independent Variable	Manufacturing Sector			
	Standardized Coefficient (β)	T-Value	R value	R Square (r^2)
Cloud security and data privacy	0.048	0.330		
Cost effectiveness	0.299	1.485		
Internet reliability	-0.181	1.405	0.586	0.627
Top management support	0.626	3.470*		
Competitive pressure	-0.29	-0.211		
	Service Sector			
	Standardized Coefficient (β)	T-Value	R value	R Square (r^2)
Cloud security and data privacy	-0.044	-.227		
Cost effectiveness	0.336	1.207		
Internet reliability	0.075	.522	0.329	0.396
Top management support	0.078	.323		
Competitive pressure	0.254	1.346		

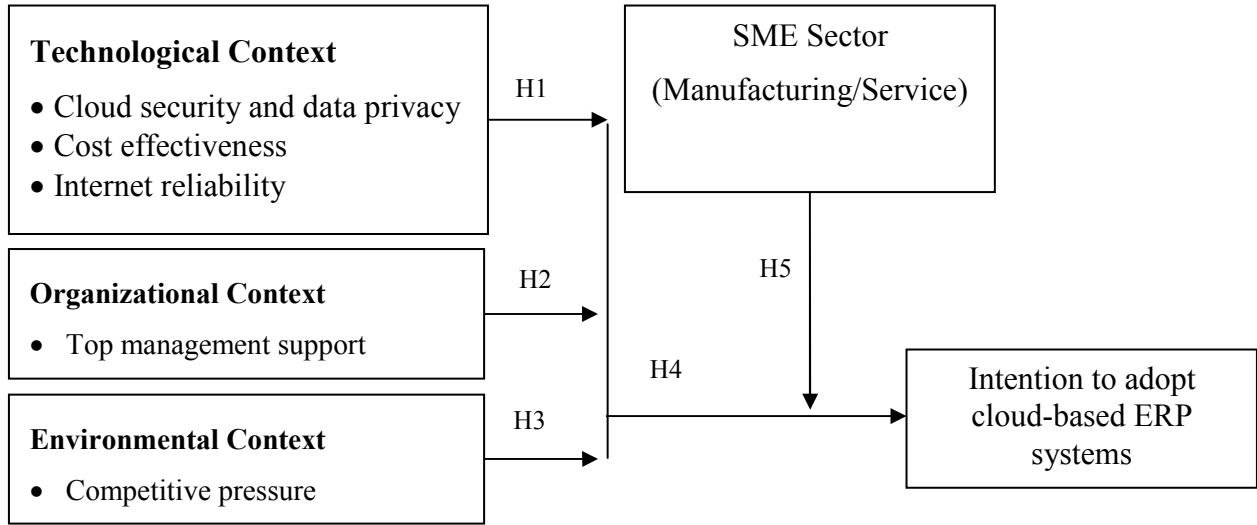** significant at the 0.01 level; * significant at the 0.05 level.

Technological Context

- Cloud security and data privacy
- Cost effectiveness
- Internet reliability

H1 →

SME Sector
(Manufacturing/Service)

H5

Organizational Context

- Top management support

H2 →

Environmental Context

- Competitive pressure

H3 →

H4

Intention to adopt cloud-based ERP systems

Figure 1 The Conceptual Framework

Table 7 Survey Questionnaire

Factor	Item Measure
Cloud security and data privacy	Cloud ERP service provided is free from data loss.
	Cloud ERP server and data centers are secured.
	Our company cares about the risks of phishing and cyber-attacks by adopting cloud ERP.
	My company wants to adopt cloud ERP because it is secured.
	By adopting cloud ERP, my company does not need to worry about the malicious intruders intrude into my company systems.
	The data privacy of cloud ERP can affect our company not to adopt it.
	Our company concerns on the data privacy of cloud ERP services.
	We strongly believe that cloud ERP provider will not disclose our company data to third party.
	Personal Data Protection Act 2010 implemented by Malaysian Government can avoid the data disclosure to happen.
Cost effectiveness	By adopting cloud ERP, it will save money and time of my company.
	Cloud ERP adoption will lower my company maintenance costs.
	My company wants to adopt cloud ERP because it saves costs.
	My company does not need to pay extra to buy the whole system by adopting cloud ERP.
	The pay-as-you-go type of payment attracts our company to adopt cloud ERP.

Internet reliability	Internet down will affect us not to adopt cloud ERP.
	In order to trace the company data in cloud ERP, we cannot lack of Internet.
	Our work can perform well without Internet.
	Internet connection in our company is always good and we seldom have Internet downtime.
Top management support	Top management deems cloud ERP is essential in the operations of company.
	The decision of top management is vital for company to adopt cloud ERP.
	Top management plans to adopt cloud ERP.
	Top management will support cloud ERP adoption.
	Top management support is important to provide the resources for company to adopt cloud ERP.
Competitive pressure	Our competitors are adopting cloud ERP which give our company pressure to adopt it too as they can perform their tasks efficiently by adopting it.
	Our key competitors get many advantages through adopting cloud ERP technology.
	Among the competitors, our company often is the first to adopt new technologies such as cloud ERP.
	We are aware of our competitors who have adopted cloud ERP which is perceived favorably by others in our industry.
	Many of our competitors are going to adopt cloud ERP in the near future.