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# The Adoption of Electronic Payment System Among Small Medium Enterprises (SMEs) in Malaysia

Nuryusmawati Mohd Yusof, Mohd Shamim Che Mohd Hariri, Ahmad Shazeer Mohamed Taheer, Syed Ashrene Syed Omar

*Faculty Business and Management, Universiti Teknologi MARA, Shah Alam, Selangor*

**Abstract** — This study aimed to investigate factors that significantly affect the adoption of electronic payment system (EPS) by local small and medium enterprise (SMEs) in Malaysia. Referring to the Central Bank of Malaysia's report, it has stated that this country would achieve higher economic growth and higher competitiveness by fully migrating from paper-based payment system to electronic payment because the latter provide opportunities to enhance productivity level and lower cost of doing business. These four factors were simplicity, security/privacy, organization culture and top management support and how these factors may have impact on the adoption rate of electronic payment system. The population of this study was all the SMEs that are listed in SME Corporation Bhd, concentrated at all major cities in Malaysia. Proportionate sample was targeted from the company listings from SME Corp. Survey method was adopted in this study to achieve its objectives. A Likert five- point scale questionnaire was developed to collect the required data after reviewing some previous studies that related to the subject of the study. This study revealed that top management support and organizational culture have the strongest impact among the other independent variables on the adoption of EPS by SMEs in Malaysia. For future research, it is suggested that this research can be targeted according to state individually or by industry for better understanding on the adoption of EPS.

**Keywords:** *Adoption, Electronic Payment Systems (EPS), Organizational Culture, Small Medium Enterprise (SME), Malaysia,*

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## 1. Introduction

Electronic payment system (e-payment system) is becoming one of the payment methods in this world as Malaysia is heading towards becoming a cashless society. Electronic Payment System (EPS) is one of the methods of buying goods and services through an electronic medium by using credit or debit card and sans any cash or cheque. In embracing digital economy, the Central Bank has taken various steps to enhance the e-payment platform, hence moving the country towards a cashless society. According to the ex-governor of Bank Negara, Tan Sri Muhammad Ibrahim at the Payment System Forum and Exhibition 2017, the soaring digital economy will need an e-payment method which is a critical component that could increase productivity and be more cost-efficient. Bank Negara has already embarked on the 10-year e-payment road map in 2011 and to date; the total cheque volume has declined 42% from 205 million in 2011 to only 120 million this year. Further electronic fund transfers on have increased from 66 million transactions in 2011 to an estimated 329 million in 2017, from the introduction of wage deposits direct to the account, to operate as a bank that does not handle cash at all (Bátiz-Lazo et al., 2014).

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E-payment system has many benefits for the payers, payees, e-commerce trading, banks, organizations and to the government. These benefits may lead to wider spread of e-payment system usage in the world. Some of these benefits are low cost, convenient means, time saving and an alternative to cash. Innovations in the payment industry have also led to greater financial inclusion, where e-payment service providers help to facilitate payment transactions into the formal financial system even in the absence of banking accounts. The World Bank has also suggested that e-payment is crucial for one country's economic development. Efficient payment systems would also help redeploy resources used for manually or semi-automatically processing payments and help reduce costs related to cash and cheque handling through more intensive use of e-payment (BNM, 2018). Further, Malaysia would achieve higher economic growth and higher competitiveness by fully migrating from paper-based payment systems to e-payments because the latter provides, among other things, opportunities to enhance productivity levels and lower the cost of doing business (BNM, 2018).

While developed countries such as France, the United State and the United Kingdom have fully developed e-payment systems, developing countries in regions such as the Asia-Pacific provide the growth impetus to the industry (Kim et al., 2010). An article issued by Prosser (2014) has proven that most consumer walks away from the store just because merchants does not offer e-payment system. Hence, most merchants have gain some loss to from this situation. With just 9% of its exchanges being cashless in 2007, Malaysia is delegated money-based nation (Denecker et al., 2010). In view of these figures, we can see that Malaysia has and will keep on relying intensely on money and other paper-based instalments. Nonetheless, different consumers in Malaysia, particularly purchasers, are hesitant to completely utilize e-payment innovation.

According to a recent study by online payments service provider PayPal, ninety per cent of the 500 respondents surveyed compared with the regional average of eighty-eight per cent are still prefer cash as their primary mode of payment (Boon, 2017). There is also limited understanding of factors influencing the small medium enterprise (SME) in Malaysia to adopt e-payment method because little research has been undertaken in Malaysia. Therefore, there is a need for a study of this nature and the researcher investigated and examined the factors that influence the adoption of e-payment system in Malaysian small-medium enterprises through answering the main question of this study: What are the main factors that influence the adoption of e-payment system among Malaysian small-medium enterprises (SMEs)?

## **2. Literature Review**

### **2.1 Adoption of electronic payment system**

Due to novelty of this subject the researchers found few studies regarding the impact of adoption of electronic payment system towards Malaysian small-medium enterprise (SMEs). Also, it should be noted that almost all the studies found addressed the subject of the impact of adoption of electronic payment system towards Malaysian SMEs in a general way. Qatawneh et al., (2015) conducted the study to investigate the impact of adoption of electronic payment method towards Malaysian SMEs. The study has been concluded that impact of the system characteristics and organizational aspects in the adoption of e-payment system was not relevant. Both implication does not involve in the adoption of e-payment system. The adoption of e-payment system towards Malaysian SMEs does not involving how attractive or smart the system is. According to (Mohamad, S. A. et al., 2007) merchants need to think to invest in some amount of money to provide the user friendly services to consumers especially for the SMEs. The researcher also recommended that merchants should be expose with a new technology development and show them the benefits of e-payment system. On the other hand, research conducted by (Wali et al., 2014) found that the adoption of cashless policy impact on marketing performance of retail outlets. Based on an article by Prosser (2014) found that one to six consumer walk out from the store in the store does not have any electronic payment method. Most merchants have gain loss from that situation. But in some countries Nigeria, a research conducted by Igbara et al., (2015) found that adoption of electronic payment system has not been relevant at all. The reasons for this situation is because most of SMEs have low capital and most of them does not rely on heavy capital.

### **2.2 SIMPLICITY**

A research conducted by Qatawneh et al., (2015) reveals that simplicity has play an important role in adoption of e-payment system. Which mean, the more simplicity it is, the more adoption of e-payment system you can make. The researcher has concluded that most consumers are attracted to use the system if the system is more clear and direct. Further, research conducted by Sokobe, (2015) found that the ease of use, simplicity and convenience has play an important role in adopting an electronic payment system. The younger generations

embrace electronic installment speedier than the more matured age who set aside opportunity to settle on choice on reception of electronic installment. Comfort is likewise a critical factor as it would make clear records, responsible, ease stream of money and least human development. Moreover it will prevent problems such as mistake in changes limits of commission for the payee and payer. A survey conducted by (Lim et al., 2007; Weiler, 1995) simplicity is critical aspect in adopting a electronic payment system. Most researcher found that the simplicity in their payment system will affect their business's success (Schwartz, 2001). Most researchers also agreed that electronic payment system should be simple and easy to use (Yu et al, 2002).

### **2.3 Security/Privacy**

Security and privacy are two of the factors that influence the adoption of e-payment system. Various researches have been conducted in this topic. One of them is Qatawneh et al., (2015) that concluded security and privacy were not relevant and negative feedback were given towards adoption of e-payment system. According Nwankwo et al.,(2013) have found that most consumers still anxious to adopt E-payment system because of security and privacy. The study also revealed that security and privacy have less impact towards the adoption of e-payment system. Nevertheless, another research by Liao et al., (2004) proved that security and privacy plays an important role in adopting e-payment system. This proved that security implementation towards e-payment system will give positive feedback from the customers. Researchers also recommended to the government to improve their security and privacy to build trust for the consumer to use electronic payment system.

### **2.4 Organizational culture**

Organizational culture is defined as the underlying beliefs, assumptions, values and ways of interacting that contribute to the unique social and psychological environment of an organization. Culture also includes the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits (Needle, 2004). According to Rick (2015) the most essential thing about culture is that it is the main maintainable purpose of distinction for any association. Anybody can duplicate an organization's methodology, yet no one can duplicate their way of life. A conducted research by Qatawneh et al., (2015) found that organizational culture has given less impact towards the adoption of e-payment system. Researchers found that hierarchy cultural characteristic showed a negative correlation with the level of e-payment system adoption in SMEs. These findings by the researchers had proven that SMEs do not rely on organizational culture in the firms itself to adopt e-payment system. Different point of view by another researchers concluded that organizational culture or any other organizational context plays a critical role in adoption of e-payment system (Al-Ma'aitah, 2008; Kock, 2000). Embracing an alternate point of view, this investigation proved that social variables such as organizational culture play a huge part in the moderate take-up of online business in one country.

### **2.5 Top management support**

Top management duty is the tipping point between potential achievement and disappointment when creating and executing business progression administration ventures and frameworks. According to (Qatawneh et al., 2015) top management support is influenced by the individuals themselves whether they can accept technology development or not. Qatawneh et al (2015) also found that fear of changes does not play an important role in adopting technology and concluded that top management support plays a very critical part in adopting e-payment system. In fact, it has the strongest impact towards the adoption in e-payment system. Further, Al-Mamary et al., (2015) proved that top management support have given a positive and relevant feedback since companies will have face many challenges in developing and planning any online application.

## **3. METHODOLOGY**

Descriptive research was chosen for this research study as the purpose of this study is to determine how simplicity, security/privacy, organizational culture and top management support influence small medium enterprise to adopt e-payment system in the near future. Proportionate sample was targeted from the company listings from SME Corp. Survey method was adopted in this study to achieve its objectives. A Likert five-point scale questionnaire was developed to collect the required data after reviewing some previous studies that related

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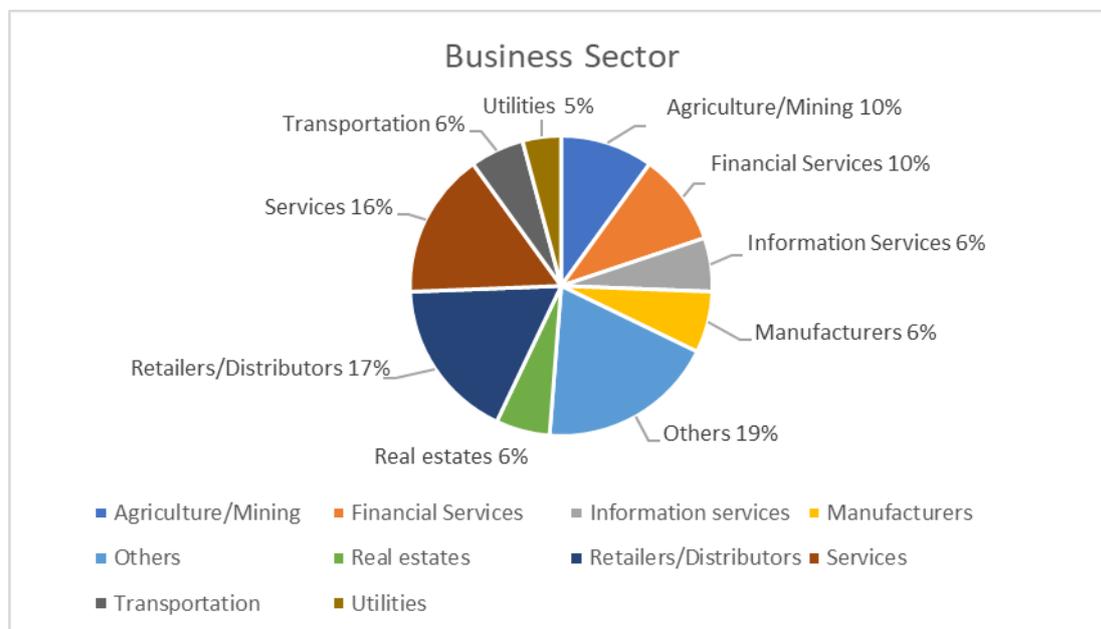
to the subject of the study. A total of 500 questionnaires were sent to potential target respondents. The findings are computed based on the 121 responding candidates. For findings and analysis, the bivariate frequency distribution is used to explain the demographic profiles of the respondents which also include business sectors, yearly sales turnover and years of establishment. To study the factors which significantly affect small medium enterprise to adopt e-payment system.

## 4. Results

### 4.1 Demographic analysis

The population of this study is small medium enterprise in Malaysia. The target respondents are small medium enterprise that focusing more on agriculture and mining, financial services and information services, manufacturers, real estate's, small retailers and distributors, services, transportation, utilities and others that situated major cities in Malaysia.

Table 4.1 Demographics Characteristics of Respondents by Business Sector



From the result, "others" contribute the most which is 19% of the sample. In this study, some example categories of "others" are sector such as tourism and pharmacy. Second biggest contributors on the sample is the retailers and distributors with 17% from the total sample size. The lowest contribution of the business sector is utilities sector. It only contains 4% of the sample. It is also observed that small medium enterprise that contribute most to the research are less than 5 years old in establishment. They contributed almost half of the percentage in this study which constitute 50%. Whereas 23% were contributed by companies that have 5 to 14 years in establishment. And only 6% respondents that has an establishment of more than 25 years. This study also explained that 40% respondents have an annual sales turnover of below than RM100,000 per annum. For the categories of above RM500,000 and RM100,000 to RM300,000 per annum, both respondents are at 22% each. Only 16% from the sample has RM300,000 to RM500,000 total sales per annum. Selangor has dominating the result by 23% of the total respondents while Wilayah Persekutuan Labuan and Pahang contains the lowest percentage than the other states and hence, they contribute only 2% of the sample.

## 4.2 Relationship analysis

To describe the relationship between system characteristics and organizational aspects on the adoption of electronic payment system, Pearson Correlation was applied and is presented below:

Table 4.2 Relationship Analysis

VARIABLES	ADOPTION OF EPS		
	Pearson Correlation	Significance (2-tailed)	Strength
Simplicity	.614	.000	Moderate
Security	.523	.000	Moderate
Organizational Culture	.764	.000	High
Top Management Support	.760	.000	High

\*\* Correlation is significant at the 0.01 level (2-tailed)

The table above shows that there are significant positive relationships between all system characteristics and organizational aspects factors and adoption of EPS. Moreover, the results show that there is a significant relationship between simplicity and adoption of EPS ( $r = 0.614$ ,  $p < 0.01$ ), there is a significant relationship between security and adoption of EPS ( $r = 0.523$ ,  $p < 0.01$ ), there is a significant relationship between organizational culture and adoption of EPS ( $r = 0.764$ ,  $p < 0.01$ ) and there is a significant relationship between top management support and adoption of EPS ( $r = 0.760$ ,  $p < 0.01$ ),

Table 4.3 Model Summary

MODEL	R	R SQUARED	ADJUSTED R SQUARED	STD. ERROR OF THE ESTIMATES
1	.818	.668	.657	.40497

To explore the relationship between system characteristics and organizational aspects on the adoption of electronic payment system, Multiple Regression was applied in this study. Referring to the table above, the R-squared value from model summary is 0.668 which means 66.8% of variation in adoption of EPS is accounted by variation in the four factors namely, Simplicity, Security/Privacy, Organizational Culture and Top Management Support. The results of ANOVA where  $F = 35.488$  and  $p < 0.05$  indicated that the regression model of system characteristics and organizational aspects factors on adoption of EPS system was found statistically significant. That means at least one of the 4 independent variables can be used to explain adoption of electronic payment system among SMEs in Malaysia. This also indicates the regression of job performance on the dimensions expressed through the adjusted R square ( $R - \text{squared (adj.)} = 65.7\%$ ) is statistically significant. These variables accounted for 65.7% of the variance in adoption of electronic payment system. This finding also suggested that other unexplored variables could account for the rest of the variation in adoption of electronic payment system.

Table 4.3 Regression Analysis

Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta		
(CONSTANT)	.338	.263		1.285	.201
SIMPLICITY	.144	.078	.137	1.854	.066

SECURITY	.022	.069	.024	.318	.751
ORGANIZATIONAL CULTURE	.390	.106	.364	3.667	.000
TOP MANAGEMENT SUPPORT	.368	.083	.358	4.461	.000

a. Dependent Variable: Adoption of EPS System

Table 4.3 above presents the influence of system characteristics and organizational aspects factors and adoption of EPS. The results show that organizational culture ( $B = 0.390$ ,  $p < 0.05$ ) and top management support had effect on adoption of electronic payment system among SMEs in Malaysia ( $B = 0.390$ ,  $p < 0.05$ ). Therefore, both of organizational culture and top management support had impact on adoption of electronic payment system. However, there is no significant impact of simplicity on adoption of electronic payment system ( $B = 0.114$ ,  $p > 0.05$ ) and security on adoption of electronic payment system ( $B = 0.022$ ,  $P > 0.05$ ). Therefore, H3 and H4 are accepted, while, H1 and H12 are rejected. Therefore, the results exposed only two of the four factors were found to be significant in this study. The analysis demonstrated that the most significant factor on adoption of electronic payment system was as the first significant factor, organizational culture while, top management support was the second significant factor.

Table 4.4 Hypotheses Results

NAME	HYPOTHESES	RESULT
H1	There is a positive relationship between Simplicity and Adoption of Electronic Payment System	Not Significant
H2	There is a positive relationship between Security/Privacy and Adoption of Electronic Payment System	Not Significant
H3	There is a positive relationship between Organizational Culture and Adoption of Electronic Payment System	Significant
H4	There is a positive relationship between Top Management Support and Adoption of Electronic Payment System	Significant

## 5. Implication of study

The findings of the research may lead to few implications that can be categorized into theoretical implications and practical implications. For theoretical implication, it will affect the new knowledge to literature and for practical implication, it will affect consumers and Small Medium Enterprises (SMEs) directly or indirectly. This study has made a contribution to the research on discovering new knowledge on literature which can be used for future research where simplicity and security/privacy do not influence towards adoption of E-payment system to Malaysian SMEs. While, organizational culture and top management support have positive influences towards adoption of E-payment system for Malaysian SMEs.

This research will impact most to Malaysian SMEs that are trying to adopt E-payment system. This research will help them to indicates the factors that plays an important role such as organizational culture and top management support. This research will also help SMEs to understand more about E-payment system and how E-payment helps merchants to upgrade their business sales turnover. The researcher could say that actually the organization itself must have courage to adapt the changes of technology advancement. The organization itself plays an important role whether to decide e-payment system or not. The researcher hoped that SMEs will adopt E-payment system to benefit all consumers to advance towards developed countries.

After conducting this research, the researcher found that it is essential for other researchers to increase the sample of the population as more sample will lead to better and more accurate findings. In order to get a very precise and accurate result, a way more significant and relevant result, future researcher should step-up the game and take the risk to climb up the sample of the respondent. Future researcher also could focus on rural area to study the business environment and how e-payment system will help them to improve their business and organizations. This will help the SMEs a better understanding and get information about the e-payment system or any technological advancement.

The researcher also found that it is essential for other researcher to do more comprehensive research on this topic with more variables since there were limited literature under this scope of study. Future researcher should focus on the other two factors and conduct a study why Malaysian SMEs do not regard simplicity and security/privacy as factors influencing them to adopt e-payment system. Based on findings, future research is recommended to examine the influence of simplicity and security/privacy and other variables as well towards adoption of E-payment system towards Malaysian SMEs.

## 6. Conclusion

This research has also contributed to theoretical and practical implications. In terms of theoretical, new knowledge on literature which can be used for future research where simplicity and security/privacy have not influences towards adoption of e-payment system to Malaysian SMEs. While, organizational culture and top management support have positive influences towards adoption of e-payment system to Malaysian SMEs. For practical implications, this research has provided more awareness towards SMEs itself on how they can build up their organizational culture and top management support to engage e-payment system. Top management must develop methods to increase the motivation of using e-payment system. Some examples can be incentives to be paperless, training and support group and other method as well. Leaders and managers must lead by examples in giving the lower subordinates some motivation to do the same. Further, the researchers also feel that e-payment system service provider to strengthen up their security to reduce the risk of cyber hacking and at the same time they can encourage consumers to use E-payment system.

This research also have limitations which is language barrier. The researcher have to translate the questionnaire since most of the SMEs owners are coming from rural areas. Another limitation is limitation of previous research. There were very large scale of research that studied the adoption of E-payment system but the problem is to find the exact and well-managed research especially from a Malaysian SMEs' perspective is a bit tough. However with determination and perseverance, the research was finally completed.

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