A Comparative and Psychological Study Between Indonesian and Malaysian on Society's Intention to Use the Eps

Lim Kim Yew[1], Poh Kiong Tee[2*], Tan Owee Kowang [3], Ling Chai Wong[4] Alvin Naldo Grady[5]

[1]Associate Professor, Faculty of Business and Communication, INTI International University, Nilai, Malaysia. Email Id: - kimyew.lim@newinti.edu.my.
[2]Senior Lecturer, Asia Pacific University of Technology and Innovation, Malaysia. Email Id: - poh.kiong@apu.edu.my.
[3]Associate Professor, Faculty of Management, University Teknologi Malaysia, Johor Bahru, Johor, Malaysia. Email Id: - oktan@utm.my.
[4]Lecturer, Asia Pacific University of Technology and Innovation, Malaysia. Email Id: - wong.lingchai@apu.edu.my.
[5]PhD Scholar, Asia Pacific University of Technology and Innovation, Malaysia. Email Id: - seanteepk@gmail.com.

Abstract – This study will look at what makes people want to use electronic payment systems (EPS) and what might make them more likely to use these systems as process innovation in the country. People from towns in Malaysia and Indonesia took part in this study. This poll was taken by 568 people from Malaysia and 259 people from Indonesia. The SPSS 23 programmed was used to look at data from people in Indonesia & Malaysia to find out which country was more likely to use online transfers. Based on this study, more people in Indonesia use online payment ways than in Malaysia. Along with what the results of the study mean, the flaws and possible directions for future research are looked at.

Keywords – Comparative Study, Perceived Ease of Use, Development Government, Perceived Usefulness (PU), Perceived Risk, Behavioral Intention, EPS.

1. INTRODUCTION

The rapid development of information & communication technology (ICT) and the Fourth Industrial Revolution (Sima et al., 2020; Suwunniponth, 2016; Tee et al., 2023a) are changing how people live. E-commerce and online marketing, which are built on the internet (Pramesti et al., 2020), are easy to apply because of how the internet functions. Additionally, it is now possible to buy, sell, and make payments through the Internet, which is largely used to find and distribute information. (Junadi et al., Liu et al., 2015; 2016) Digital payment systems based on the internet have sped up and improved the effectiveness of e-commerce. Tan (2018) and Tham (2017) claim that most people and businesses no longer use cash to make payments. Instead, they use phone payments or cashless digital transactions.

According to Nzaro and Magidi (2014) and Tee, Gharleghi, and Chan (2014), an electronic payment system is a way to pay using a digital or electronic platform that lets people do financial transactions online using tools like cryptography and internet networks. Masihuddin et al. (2017) say that there are two main types of electronic payment methods. On the internet, you can pay for things with debit cards, credit cards, smart cards, & electronic cash. Electronic transaction-based payment methods include cybercash, net bills, first virtual holdings, & secure electronic transactions. Since bank cards, credit cards, electronic money, & digital wallets are the most common ways to pay online in Indonesia & Malaysia, that's what this study was mostly about.

According to the majority of studies (Oney, Guven, and Rizvi, 2017; Singh and Rana, 2017; Wong et al., 2023a), using cash is not as efficient as utilising electronic payment methods. This is because using an internet payment method makes transactions easier, faster, safer, and more convenient. In addition, it was found that Asia is seeing a rise in use of mobile payment systems. By 2025, 84% of urban Asian consumers, according to De Sartiges et al. (2020), will adopt digital payment systems. Approximately 69% of urban Asian consumers currently use digital payment methods. The COVID-19 problem, which has significantly increased online shopping & home delivery, might speed up the procedure. You can use a debit card, a credit card, virtual

currency, or a digital wallet to pay for online transactions. Aisyah (2018), Aigbe (2014), Hermansyah (2018), Ruangkanjanases & Sirikulprasert (2018), & Masihuddin et al. (2017) are a few examples. These electronic payment options all have benefits that are essentially the same, such as global accessibility, convenience, and ease of daily life. The same online payment methods are being used more frequently in Malaysia and Indonesia.

Bank Indonesia data from Statista (2018b) show that most Indonesians (172,212,593) use e-money & digital wallets. Next are debit cards (152,623,900) & credit cards (17,280,602). Most Malaysians (54,908,000) use digital money and digital accounts, just like people in other countries. (2018a, Statista) Then there are 41,900,000 bank cards and 10,303,00 credit cards. (Pramesti et al., 2020) says that debit and credit cards are being replaced by e-money and digital accounts as the most common ways to pay without cash. Because there are so many options that make it easy. Bank Indonesia says that between 2017 and 2018, the number of digital wallet payments went up by 209.83%. Businesses and the government of Malaysia have tried to get more people, especially young people, to use e-wallets and buy things online (Teo, Law, and Koo, 2020). For instance, on January 15, 2020, the Malaysian government started the RM450 million e-Tunai Rakyat plan (Ministry of Finance Malaysia, 2020) to help small retail businesses use e-wallets. E-money and digital cash are being used by more and more people in both countries.

The goal of this inquiry is to ascertain the motivations behind electronic payment preferences in Malaysia and Indonesia. This is because it's so interesting to see how online payment options are developing in both countries. We also want to know whether country is more likely to employ an online payment system and whether the two countries see each prediction's importance differently (Tee et al., 2022a; 2023b).

2. LITERATURE REVIEW

2.1 Intention to Use (IU) the EPS

EPS has become more challenging to operate since it was introduced in the 1960s (Bezhovski, 2016; Pramagista & Indrawati, 2018; Sumanjeet, 2009). According to Briggs & Brooks (2011), Kaur & Pathak (2015), Adeoti and Osotimehin (2012), & Kaur & Pathak (2015), an electronic payment mechanism is any way to send & receive money digitally or online. People can buy and sell things online from any place and at any time. There are many ways to pay online now, such as with a digital wallet, a bank card, or a credit card. Research from the past (Aigbe & Akpojaro, 2014; Masihuddin et al., 2017; Miliani, Purwanegara, & Indriani, 2013) shows that the main benefits of most EPS, like how easy they are to use & how widely they can be used, are similar. Although EPS are in many respects better than their predecessors, certain communities remain reluctant to adopt them. Studies (Bezhovski, 2016, Joseph & Richard, 2015, Oney, Guven, & Rizvi, 2017) have shown that people still have a variety of opinions about using electronic payment systems, especially in regards to security, privacy, and other issues. Additionally, it is challenging to change this ingrained belief or behaviour because people, particularly older people, are used to paying in cash (Kousalya & Shankar, 2018). There hasn't been much research on the variables that affect how EPS are used in Malaysia & Indonesia, much alone a study that looks at how much of these variables apply in both countries. It would be advantageous to get a deeper understanding of these subjects because the electronic payment system has seen fascinating changes & is probably going to keep growing in the upcoming years. The main idea behind this project is the TAM (Davis, 1989). It looks at the reasons why people in Indonesia and Malaysia want to buy things online. Compare how people in Indonesia and Malaysia feel about their plans to use internet payments to get a better idea of how important these things are. These include how easy it seems to use, how useful it seems to be, and how dangerous it seems to be. The experts also try to figure out which groups are most likely to use internet payments.

2.2 Technology Acceptance Model (TAM)

The Davis TAM, created in 1989, served as the foundation for this programme. TAM, according to Davis in 1989, is the most reliable way for gauging whether people will accept and use new information systems and technologies. When Surendran (2012) and Wong et al. (2012b) looked at the TAM, they found that its usability and utility were its most crucial features. PEU stands for "perceived ease of use," which describes how

straightforward a person thinks using an instrument would be. Davis (1989) and Olushola and Abiola (2017) defined PU as the degree to which a person thinks that employing a certain tool would allow them to carry out a task more efficiently or effectively. Additionally, it was mentioned that social, cultural, and value aspects from other contexts or nations can affect how straightforward and practical something seems. These outside influences can affect how important users think the usability and utility of a system are when making a decision to utilise it (Davis, 1989). Public relations have been more significant in recent years. Public relations (PR) are one of the most important indicators of why people behave as they do, according to Pavlou's (2003) Technology Acceptance Model. Researchers Jarvenpaa, Tractinsky, and Vitale in 2000 and Lai and Zainal in 2015 found that a person's opinions and feelings towards a gadget were significantly influenced by how dangerous they perceived it to be.

In this study, the TAM was changed so that the main reasons a society might want to use EPS could be found. We want to talk about how people's ideas about how useful, easy to use, and dangerous EPS are affected how they use them in Indonesia & Malaysia.

2.3 Perceived Ease of Use (PEU) and Intention to Use the Electronic Payment System

In 1989, Davis claimed that a person's sense of how simple a tool is to use is correct. Numerous studies have demonstrated that one of the key factors influencing whether or not individuals intend to utilise EPS is their perceived usability. More people will adopt and continue to use the electronic payment system if it is easy to understand and use (Barkhordari et al., 2017; Eyübolu & Sevim, 2017; Niranjan et al., 2016; Omol, Abeka, & Wauyo, 2017; Suwunniponth, 2016; Ting et al., 2016).

Some studies didn't agree with the idea that how easy something seems to use has a big impact on how likely people are to use electronic payment systems. Their study (Chandra, Srivastava, and Theng, 2010; Daştan and Gürler, 2016) shows that how people feel about an electronic payment system depends a lot on how easy they think it will be to use. But the strength of this effect changes from country to country and culture to culture. Indonesia and Malaysia are ready to use EPS because they seem easy to use. To show this, it's important to look at how other countries' cultures have changed their own.

H1a: The likelihood that people will use a method significantly depends on how usable they think it is.
H1b: There is a strong connection between how easy it seems to use electronic payment methods in Malaysia and how likely people are to use them.
H1c: Indonesians and Malaysians have quite different opinions on how simple it is to use internet banking products.

2.4 Perceived Usefulness (PU) and Intention to Use Electronic Payment System

In 1989, Fred Davis made something called "PU," which is like "perceived ease of use." Davis (1989) says that a person's sense of success is based on how much they think that using a certain tool would help them do better. How useful the electronic payment system seems could be a factor in whether or not someone decides to use it. Using the internet to pay for things has been shown to make a person more productive and save them time.

According to research (Bousnina & Ettis, 2016; Mun, Khalid, & Nadarajah, 2017; Suwunniponth, 2016; Tella & Olasina, 2017), the likelihood of an electronic payment system's adoption is correlated with how beneficial people consider it to be. This claim is untrue, as shown by studies by Phonthanukitithaworn, Sellitto, & Fong (2016) & Yan et al. (2009). They found that whether or not people think electronic payment methods are useful has no influence on where they desire to utilise them. The researchers want to know whether perceived utility has a substantial association with the willingness to use such systems in Indonesian and Malaysian communities because people in different nations have different attitudes and notions surrounding the use of EPS. The recommendations that followed were given.

H2a: In Indonesia, the plan to use an EPS is closely tied to the idea that it would be helpful.

H2b: In Malaysia, there is a strong connection between how useful someone thinks an online payment method is and how likely they are to use it.

H2c: Indonesians and Malaysians view the usefulness of internet payment options from quite different angles.

2.5 Perceived Risk (PR) and Intention to Use Electronic Payment System

Bauer was the first person to talk about "perceived risk," which is also talked about by Quan and Nam (2017). Bauer found that a consumer's sense of danger might explain how they feel about a product or service, like if they have bad or unpleasant experiences after using it. Yang et al. (2014) found that a person's sense of danger may have a big effect on whether or not they use an online payment method. Chang and Chen (2008) also said that a person's "perceived risk" is how unsure they feel when they use a certain tool and how much they think it will hurt them.

Research shows that how people feel about how safe the electronic payment system is having a big effect on whether they use it or not. People talked about the work of Lesa & Timbo (2016), Ng et al., Baganzi & Lau (2017), & others. Chen & a group of others. Additionally, even if the research was carried out in different nations or cultures, as far as the experts are aware, no earlier studies have shown that the section concerning perceived dangers is not important. The sense of danger is a key predictor of whether or not consumers would use online payment methods, the researchers have concluded.

H3a: People in Indonesia are more likely to pay for things online if they think it is less risky.

H3b: Malaysians are more likely to use online payment methods if they believe they are secure.

H3c: People in Indonesia and Malaysia have very different ideas about how dangerous it is to pay with a computer.

2.6 Intention to Use (IU) the Electronic Payment System between Indonesian and Malaysian

A nation's culture and morals have an impact on the importance of all three predictors when it comes to embracing new technologies, according to Davis (1989) and Pavlou (2003). The purpose of this study is to ascertain whether Malaysians and Indonesians are more or less likely to use mobile payment options. So, here is what we've decided:

H4: Malaysians and Indonesians have very different ideas about how they want to use internet payment options.

Based on the results of the literature evaluation we just finished, Figure 3 shows how the research for this topic will be organised. Depending on how simple it is to use, how useful it is, and how dangerous it is, there are three different methods to use it. The fact that you intend to employ (IU) is essential. The experts are also interested in learning whether people's expectations for using electronic payments vary. Tradition, societal beliefs and attitudes, as well as other outside influences, may have an impact on people's intentions.
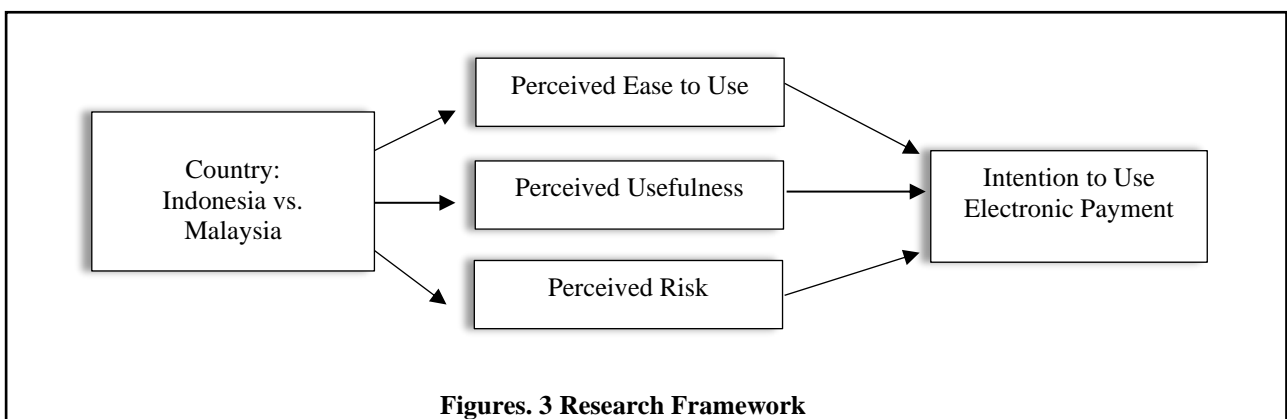
Figures. 3 Research Framework

3.METHODOLOGY

3.1 Population and Sample Size

The focus of this study is on the people who live in Indonesian and Malaysian big towns. Statista says that in 2018, there were 147,674,788 people living in cities in Indonesia and 24,380,427 living in cities in Malaysia. In 1970, Krejcie and Morgan came up with a way to figure out how many people should be in this study's group. Each country could choose from 246 sample units using this method. Indonesia has about eight times as many people as Malaysia, so we needed a bigger sample number from there. Then, people from 259 societies in Malaysia and 568 societies in Indonesia gave their answers. A self-filled questionnaire and a method called "propensity sampling" were used to get information from the people being interviewed. The study only includes Malaysians and Indonesians between the ages of 18 and 65 who live in a city.

The majority of respondents (46.7% in Indonesia and 43.2% in Malaysia) are between the ages of 18 and 25. Next in line are respondents between the ages of 26 and 35 (29.4% in Indonesia and 20.1% in Malaysia), followed by respondents between the ages of 36 and 45 (10.6% in Indonesia and 19.8% in Malaysia), those between the ages of 46 and 55 (7.8% in Indonesia and 11.2% in Malaysia), and respondents 56 and older (5.5% in Indonesia and 5.3% in Malaysia). Men, not women, made up the majority of responders (38% in Indonesia and 47.5% in Malaysia). Additionally, 31.5% of Indonesians use digital wallets, 15.6% use debit cards, 39% use credit cards, and 13.9% don't utilise any electronic payment methods at all. In Malaysia, however, the majority of consumers utilise debit cards (15.8%), credit cards (32.1%), or digital wallets (41.8%). In Malaysia, only 10.3% of people lack access to online payment methods.

3.2 Data Analysis and Interpretation

IBM SPSS 21.0 was used to look at the data. In the study, numbers were used to both describe and figure out what was going on. Multiple regression analyses were done to show that the factors did have a link and to support the ideas. The average results of the two groups to the three independent factors and the dependent variable were also compared using a one-way ANOVA.

4. RESULTS AND DISCUSSION

4.1 Correlations Analysis for Indonesian's Intention to Use

The findings of the correlation analysis, which are shown in Table 2, show a significant relationship between all three of the independent variables (PEU, PU, & PR) and the dependent variable (intention to use; $p < 0.05$). Indonesians are more inclined to use the electronic method of payment ($r = 0.691$) if they believe it to be advantageous and easy to use. Surprisingly, there is no relationship between people's desire to use something and how dangerous they believe it to be ($p > 0.05$). This proves that Indonesian society is capable of accepting the risks associated with the system of electronic payments while still using it. This leads us to the conclusion that while H1a, H2a, and H3a were all fine, H3a was not. Concerning how individuals want to use electronic payment systems, Eyübolu & Sevim (2017), Mun, Khalid, & Nadarajah (2017), Omol, Abeka, & Wauyo (2017), & Suwunniponth (2016) have come to similar results.

Table 2

Summary of Pearson Correlation Analysis - Indonesian

No	Variables	IU	PEU	PU	PR
1	Intention to use	1			
2	Perceived ease of use	0.638**	1		
3	Perceived usefulness	0.691**	0.794**	1	

| 4 | Perceived risk | -0.031 | 0.133** | 0.138** | 1 |

*Note: **, Correlation is significant at the 0.01 level (2-tailed).*

The model is significant, as shown in Table 3, and according to the R square value of 0.49, the three components account for around 50% of the change in intention to use.

Table 3
Multiple Regression Analysis – Model Summary for Indonesian

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.707[a]	.499	.497	2.13887	2.060

Note: df = 3; F = 187.387; p =0.000
   a. *Predictors: (Constant), PR-SUM, PEOU_SUM, PU_SUM*
   b. *Dependent Variables: BI_SUM*

4.2 Correlation Analysis for Malaysian's Intention to Use

Table 4 shows that there was a statistically significant ($p < 0.05$) link between the three independent factors (PEU, PU, and PR) and the desire to use Malaysia's electronic payment system. The biggest positive link was found between how well people thought the electronic payment system worked and how easy it was to use ($r = 6.72$). But there was a small and negative correlation ($r = -0.116$) between perceived risk and the desire to use the electronic payment method. There is no link between the two, so it seems that Malaysians are more worried about imagined threats than Indonesians. The less likely Malaysians are to use an online payment method, the more dangerous it is. Since it has been shown that H1b, H2b, and H3b are all true, we can say that they are all true. Several other studies, such as Chen et al. (2018), Eyübolu and Sevim (2017), Mun, Khalid, and Nadarajah (2017), and Quan and Nam (2017), back up these results.

Table 4
Summary of Pearson Correlation Analysis - Malaysian

No	Variables	IU	PEU	PU	PR
1	Intention to use	1			
2	Perceived ease of use	0.638**	1		
3	Perceived usefulness	0.672**	0.756**	1	
4	Perceived risk	-0.116**	-0.121**	-0.132**	1

*Note: **, Correlation is significant at the 0.01 level (2-tailed).*

Multiple regression analysis determined the model to be significant, and Table 5 reveals that the three factors accounted for approximately 50% (R square = 0.493) of the change in intention to use.

Table 5
Multiple Regression Analysis – Model Summary for Malaysian

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.702[a]	.493	.491	2.11187	2.010

Note: df = 3; F = 82.750; p =0.000

a. *Predictors: (Constant), PR-SUM, PEOU_SUM, PU_SUM*
b. *Dependent Variables: BI_SUM*
c.

4.3 Comparison between Indonesian and Malaysian Behavioral Intention

We compare Indonesian and Malaysian perspectives on the predictors (i.e., PEU, PU, and PR) and behavioural intention (IU) using an independent T-test. The perception of perceived ease of use & perceived danger varied between respondents from Indonesia & Malaysia (p< 0.05), but not that of perceived utility (p > 0.05). In a similar vein, there are significant differences between Malaysian & Indonesian plans for using electronic payment methods. Indonesians have higher mean values for PEU (μ = 23.73 > 22.76), PU (μ = 37.64 > 36.66) and IU (μ = 13.92 > 13.16). than Malaysians. Malaysians are more concerned than Indonesians about perceived dangers (μ = 20.47 vs. μ = 18.61). All of the theories (H1c, H3c, & H4) about the differences between Malaysians and Indonesians were true, except for H2c, which was about how useful something was seen to be. Table 6 shows a summary of the independent T-test results for Indonesia and Malaysia, as well as a comparison of how important the predictors (PEU, PU, and PR) were seen to be in relation to the action intention (IU).

Table 6
Summary for independent T-test between Indonesian and Malaysian

Hypotheses	Variables	Country	Mean	Findings	Decisions
H1c	PEU	Indonesia	23.73	p = 0.009*	Supported
		Malaysia	22.76	N =827	
H2c	PU	Indonesia	37.64	p = 0.83	
		Malaysia	36.66	N = 827	Not supported
H3c	PR	Indonesia	18.61	p = 0.000*	Supported
		Malaysia	20.47	N = 827	
H4	IU	Indonesia	13.92	p = 0.001*	Supported
		Malaysia	13.16	N = 827	

Note: significant at p < 0.05*

5 IMPLICATIONS OF RESEARCH

Theoretically, this study went farther than TAM because it looked into the motivations behind people's desires for online transfers in two different countries. According to experts, most research on how people plan to utilise EPS have only looked at people from one country. Nobody looked at how people from other nations responded. This study may help future researchers who are interested in understanding how people think and what they intend to do, specifically on the reasons why individuals utilise electronic payment systems, by taking into account the influences of diverse cultures and nations.

Findings from both countries show that how useful people think electronic payment methods will be is the main reason why they plan to use them or not. So, companies and the government should focus on getting the word out about how good or easy online payment methods are. By linking daily spending to the payment system, marketers can show how easy electronic payments are to use, how much time and money they save, and how much money they save. Some experts say that groups should support the fact that the electronic payment system can do more than one thing (Febriani et al., 2012; Mahalakshmi & Kalaiyarasi, 2016; Odia & Mamudu, 2017; Singh & Rana, 2016). This means that deals should be easy & quick no matter where or when they take place.

6. LIMITATION AND FURTHER RESEARCH

First, all of the data for this study came from a small number of people who were chosen at random. This means that the poll results can't be used to say anything about the whole group. There is a chance that either too few or too many people will be shown. In this situation, stratified sampling is better than random sampling because it

splits the population being studied into groups before picking people at random from those groups. As was already said, Indonesia has about eight times as many people living in towns as Malaysia. Second, comparing Indonesia and Malaysia to show how cultural differences effect people wouldn't work because, especially when it comes to Eastern culture, both countries have more cultural similarities than differences (Tee et al., 2023b). Tee et al. (2021) and Uchida and Kitayama (2009) say that in the future, researchers should compare and contrast people from the East & the West. This is because people in the East & West have different ways of thinking, believing, and acting.

7. CONCLUSION

This study looks at how the three factors (PEU, PU, and PR) affect people's plans to use an electronic payment system in Indonesia and Malaysia. The study's results show that Malaysians and Indonesians use Internet payment methods in very different ways. The products can be used in the classroom and in the real world. To change the way their people (or customers) act, organization's (like marketing and government) need to use a range of methods that take into account the differences between people in different (cultural/national) settings.

ACKNOWLEDGEMENTS

REFERENCES

1. Adeoti, O., and Osotimehin, K. (2012) 'Adoption of point of sales terminals in Nigeria: Assessment of consumers' level of satisfaction, *Research Journal of Finance and Accounting,* 3(1), pp. 1-6.
2. Aigbe, P., and Akpojaro, J. (2014) 'Analysis of security issues in electronic payment systems, *International Journal of Computer Applications,* 10, pp.10-14.
3. Aisyah, R. (2018) 'Bank Indonesia to launch QR code payment regulation', *The Jakarta Post,* 4 April [Online]. Available at: http://www.thejakartapost.com/news/2018/04/04/bi-to-launch-qr-code-payment-regulation.html [Accessed: 5 November 2020]
4. Baganzi, R., and Lau, A. K. W. (2017) 'Examining trust and risk in mobile money acceptance in Uganda,' *Sustainability, 9,* pp.1-22.
5. Bank Indonesia, 'Payment System Statistics', 2019. [Online]. Available: https://www.bi.go.id/en/statistik/sistem-pembayaran/uang-elektronik/contents/transaksi.aspx. [Accessed: 25-Oct-2019].
6. Bank Negara Malaysia. (2018a) 'Payment statistics: Malaysia's payment statistics', [Online] Available at: http://www.bnm.gov.my/index.php?ch=ps&pg=ps_stats&lang=en [Accessed: 8 October 2020]
7. Bank Negara Malaysia. (2018b) 'Payment systems: Electronic payments on the rise; Initiatives and achievements,' [Online] Available at: http://www.bnm.gov.my/index.php?ch=ps&pg=ps_mep_rise&ac=195&lang=en [Accessed: 7 October 2020]
8. Barkhordari, M., Nourollah, Z., Mashayekhi, H., Mashayekhi, Y., and Ahangar, M. S. (2017) 'Factors influencing adoption of e-payment systems: An empirical study on Iranian customers, *Information Systems and E-Business Management,* [Online] 15(1), pp. 89-116. Available at: https://link.springer.com/article/10.1007/s10257-016-0311-1
9. Bezhovski, Z. (2016) 'The future of the mobile payment as an electronic payment system,' *European Journal of Business and Management,* 8(8), pp. 127-132.
10. Bousnina, Z., and Ettis, S. (2016) 'Credit Card for Payment Purposes: An Exploration of Influencing Factors Among Tunisian.' *Proceedings of the Marketing Spring Colloquy,* pp. 120-136.
11. Briggs, A., and Brooks, L. (2011) 'Electronic payment systems development in a developing country: Comparison between Malaysia vs. Indonesia.' Available at: https://countryeconomy.com/countries/compare/malaysia/indonesia?sc=XE23

12. Chandra, S., Srivastava, S. C., and Theng, Y. (2010) 'Evaluating the role of trust in consumer adoption of mobile payment systems: An empirical analysis, *Communications of the Association for Information Systems,* 27(29), pp. 561-588.

13. Chang, H. H., and Chen, S. W. (2008) 'The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator, *Online Information Review. 32*(6), pp. 818-841.

14. Chen, X., Carpenter, D., Li, X., Chen, C. C., and Hung, S. (2018) 'Why do individuals continue using mobile payments – A quantitative study in China,' *Proceedings of the 51st Hawaii International Conference on System Sciences. Hawaii,* pp. 1452-1461.

15. Daştan, İ., and Gürler, C. (2016) 'Factors affecting the adoption of mobile payment systems: An empirical analysis, *Emerging Market Journal,* 6(1), pp. 17-24.

16. Davis, F. D. (1989) 'Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly,* 13(3), pp. 319-340.

17. Eyüboğlu, K., and Sevim, U. (2017) 'Determinants of contactless credit card acceptance in Turkey,' *International Journal of Management Economics and Business,* 13(2), pp. 331-346.

18. Febriani, Agushinta, D., Rasal, I., Herawan, H., and Farhat. (2012) 'Towards ubiquitous computing in Indonesia: Mobile payment system through NFC technology, *International Journal of Computer Networks and Wireless Communications 2*(2), pp. 249-254.

19. Hermansyah, A. (2018) 'QR code payment standardization to be completed this year,' *The Jakarta Post,* 31 July [Online]. Available at: http://www.thejakartapost.com/news/2018/07/31/qr-code-payment-standardization-to-be-completed-this-year.html [Accessed: 10 October 2020]

20. Jarvenpaa, S. L., Tractinsky, N., and Vitale, M. (2000) 'Consumer trust in an internet store,' *Information Technology and Management,* 1(1/2), pp. 45-71.

21. Joseph, O., and Richard, I. (2015) 'Electronic payment system in Nigeria: Its economic benefits and challenges, *Journal of Education and Practice,* 6(16), pp. 56-62.

22. Junadi, and Sfenrianto. (2015) 'A model of factors influencing consumer's intention to use e-payment system in Indonesia', *Procedia Computer Science,* 56, pp. 214-220.

23. Kaur, K., and Pathak, A. (2015) 'E-payment system on e-commerce in India', *International Journal of Engineering Research and Applications,* 5(2), pp. 79-87.

24. Kousalya, P. R., and Shankar, R. G. (2018) 'Cashless economy/transaction,' *Indian Journal of Applied Research,* 8(2), pp. 40-42.

25. Krejcie, R. V., and Morgan, D. W. (1970) 'Determining sample size for research activities, *Educational and Psychological Measurement, 30,* pp. 607-610.

26. Lai, P. C., and Zainal, A. A. (2015) 'Perceived risk as an extension to TAM model: Consumers' intention to use a single platform e-payment,' *Australian Journal of Basic and Applied Sciences,* 9(2), pp. 323-331.

27. Lesa, E., and Tembo, S. (2016) 'Study on factors affecting mobile payment systems diffusion in Zambia,' *Management, 6*(2), pp. 36-45.

28. Liu, G. S., and Tai, P.T. (2016) 'A study of factors affecting the intention to use mobile payment services in Vietnam*,' Econ. World,* 4(6), pp. 249–273.

29. Mahalakshmi, M. and P. Kalaiyarasi. (2016) 'A study on the use of mobile banking and customer satisfaction with special reference to Trichy region,' *Imperial journal of interdisciplinary research, 2.*

30. Masihuddin, M., Khan, B. U. I., Mattoo, M. M. U. I., and Olanrewaju, R. F. (2017) 'A survey on e-payment systems: Elements, adoption, architecture, challenges and security concepts,' *Indian Journal of Science and Technology,* 10(20), pp. 1-19.

31. Miliani, L., Purwanegara, M. S., and Indriani, M. T. D. (2013) 'Adoption behavior of e-money usage,' *Information Management and Business Review, 5*(7), pp. 369-378.

32. Ministry of Finance Malaysia (2020) 'Thee-Tunai Rakyat initiative.' [Online] Available at: https://www1.treasury.gov.my/index.php/en/gallery-activities/press-release/item/5784-press-release-the-e-tunai-rakyat-initiative.html. [Accessed: 18 October 2020]

33. Mun, Y. P., Khalid, H., Nadarajah, D. (2017) Millennials' Perception on Mobile Payment Services in Malaysia. Procedia Computer Science. 124 P. 397-404.

---

34. Ng, C.P., Cheong, L.T., Tee, P.K., Lim, K.Y., Hai S.T., Wong, C.H., & Ng, A.H.H. (2022). Will perceived behavioral control influence Malaysian generation Y and Z to join in stock market? *NeuroQuantology,* 20(6), 60-70.

35. Niranjan, I., Saravanan, A. S., Patwa, N., and Reddy, S. K. (2016) 'Consumer perceptions in adopting e-money in developed markets, *International Journal of Academic Research,* 4(4), pp. 246-270.

36. Nzaro, R., and Magidi, N. (2014) 'Assessing the role of electronic payment systems in financial institutions: A case of a savings bank in Zimbabwe,' *Global Journal of Management and Business Research,* 14(2), pp. 45-49.

37. Odia, OE, and Mamudu, G.O. (2017) 'Customer satisfaction and electric payment systems in the Nigerian banking sector, *International Journal of Management Science Research, 3*(1), pp. 23-36.

38. Olushola, T., and Abiola, J. O. (2017) 'The efficacy of technology acceptance model: A review of applicable theoretical models in information technology researches,' *Journal of Research in Business and Management, 4*(11), pp. 70-83.

39. Omol, E., Abeka, S., and Wauyo, F. (2017) 'Factors influencing acceptance of mobile money applications in enterprise management: A case study of micro and small enterprise owners in Kisumu central business district, Kenya,' *International Journal of Advanced Research in Computer and Communication Engineering,* 6(1), pp. 208-219.

40. Oney, E., Guven, G. O., and Rizvi, W. H. (2017) 'The determinants of electronic payment system usage from consumers' perspective, *Economic Research,* 30(1), pp. 394-415.

41. Pavlou, P. A. (2003) 'Consumer acceptance of electronic commerce: Integrating trust and risk with the Technology Acceptance Model', *International Journal of Electronic Commerce,* 7(3), pp. 101-134.

42. Phonthanukitithaworn, C., Sellitto, C., and Fong, M. W. L. (2016) 'A comparative study of current and potential users of mobile payment services,' *SAGE Journal. 6*(4), pp. 1-14.

43. Pramagista, A., and Indrawati. (2018) 'Exploring factors influencing electronic money adoption: Qualitative study of line pay e-cash in Jabodetabek,' *International Journal of Science and Research, 7*(2), pp. 1297-1300.

44. Pramesti, D.A., Pratiwi, E.K., Pambuko, Z.B., and Medias, Fahmi. (2020) 'Digital payment: User experience in Indonesia', *Test Engineering and Management,* 83(May-June), pp. 22536-22541.

45. Quan, V. D. H., and Nam, T. H. (2017) 'Perceived risk and the intention to use credit cards. *International Journal of Finance and Economics, 159.* Pp. 76-89.

46. Rahman, M. M., and Sloan, T. (2017) 'User adoption of mobile commerce in Bangladesh: Integrating perceived risk, perceived cost and personal awareness with TAM,' *The International Technology Management Review. 6*(3), pp. 103-124.

47. Robi'in, B., Wardana, L. A., and Suyoto. (2017) 'New solutions for instant payment problem in Indonesia', *International Journal on Advanced Science Engineering Information Technology,* 7(4), pp. 1191-1197.

48. Ruangkanjanases, A., and Sirikulprasert, N. (2018) 'Predicting consumer intention to adopt near field communication-enabled mobile payment in Thailand', *Journal of Telecommunication, Electronic, and Computer Engineering,* 10(2-7), pp. 147-152.

49. Sima, V., Gheorghe, IG, Subic, J., and Nancu, D. (2020) 'Influence of the industry 4.0 revolution on the human capital development and consumer behavior: A systematic review', *Sustainability,* 12(10), pp. 1-28. https://doi.org/10.3390/su12104035

50. Singh, S., and Rana, R. (2017) "Study of consumer perception of digital payment mode', *Journal of Internet Banking and Commerce,* 22(3), pp. 1-14.

51. Statista. (2018a) 'Digital payments: Malaysia. [Online]. Available at: https://www.statista.com/outlook/296/122/digital-payments/malaysia [Accessed: 8 October 2020]

52. Statista. (2018b) 'Mobile P.O.S. payments: Indonesia. [Online]. Available at: https://www.statista.com/outlook/331/120/mobile-pos-payments/indonesia [Accessed: 8 October 2020]

53. Subramaniam, M., Zameni, A., Yu, O. T., & Tee, P. K**.** (2022). Generation Y's Intention to Invest in Retirement Planning. *International Journal of Academic Research in Accounting Finance and Management Sciences. 12*(2), 495 – 509

54. Sumanjeet, S. (2009) 'Emergence of payment systems in the age of electronic commerce: The state of the art,' *Global Journal of International Business Research,* 2(2), pp.17-36.

55. Surendran, P. (2012) 'Technology acceptance model: A survey of the literature, *International Journal of Business and Social Research,* 2(4), pp. 175-178.

56. Tan, Y. (2018) 'E-wallet race heats up,' *The Star Online.* 17 March [Online]. Available at: https://www.thestar.com.my/business/business-news/2018/03/17/ewallet-race-heats-up/ [Accessed: 7 October 2018]

57. Tee, P.K., Cham, T.H., Low, M.P., & Lau, T.C. (2022a). The role of perceived employability in the relationship between protean career attitude and career success, *Australian Journal of Career Development, 32*(1), 66-76

58. Tee, P.K., Cham, T.H., Low, M.P., & Lau, T.C. (2021). The role of organizational career management: Comparing the academic staff' perception of internal and external employability in determining success in academia. *Malaysian Online Journal of Educational Management, 9*(3), 41-58. https://ejournal.um.edu.my/index.php/MOJEM/article/view/30570/13109

59. Tee, P.K., Gharleghi, B., & Chan, Y.F. (2014). E-Ticketing in airline industries among Malaysian: the determinants. *International Journal of Business & Social Science.* 5(9), 168-174.

60. Tee, P.K., Lim, K.Y., Ng, C.P., & Wong, L.C. (2022b). Trust in green advertising: Mediating role of environmental involvement. *International Journal of Academic Research in Business and Social Sciences, 12*(1), 1771–1786

61. Tee, P.K., Vashu, D., Wong, L.C., & Ng, C.P. (2023a). Customer Engagement in Instagram: The Mediating Role of Perceived Advertising Value. In: Al-Sharafi, M.A., Al-Emran, M., Al-Kabi, M.N., Shaalan, K. (eds), *Proceedings of the 2nd International Conference on Emerging Technologies and Intelligent Systems.* ICETIS 2022. Lecture Notes in Networks and Systems, 584. Springer, Cham. https://doi.org/10.1007/978-3-031-25274-7_25

62. Tee, P.K., Lim, K.Y., Sam, T.H., Tan, O.K., Aleksandra, F., Vasudevan, A., & Xu, R. (2023b). The impact of cultural customization and locational congruity on attitude toward location-based advertisement. *Res Militaris, 13*(2), 1841-1851

63. Tella, A., and Abdulmumin, I. (2015) 'Predictors of users' satisfaction with e-payment System: A Case Study of Staff at the University of Ilorin, Nigeria. Journal of Management, Informatics and Human Resource. 48(4) P. 272-286.

64. Tella, A., and Olasina, G. (2014) 'Predicting users' continuance intention towards e-payment system: An extension of the technology acceptance model.' *International Journal of Information Systems and Social Change, 5*(1), pp. 47-67.

65. Teo, S.C., Law, PL, and Koo, A.C. (2020) 'Factor affecting adoption of e-wallets among youths in Malaysia', *Journal of Information System and Technology Management,* 5(19), pp. 39-50

66. Tham, I. (2017) 'E-payment firms in race to roll out unifying platform,' *The Straits Times*, 15 September [Online]. Available at: https://www.straitstimes.com/singapore/e-payment-firms-in-race-to-roll-out-unifying-platform. [Accessed: 29 July 2018]

67. The Star Online. (2017) 'Malaysia moving towards a cashless society, *The Star Online.* 9 November [Online]. Available at: https://www.thestar.com.my/business/business-news/2017/12/09/malaysia-moving-towards-cashless-society/ [Accessed: 7 October 2020].

68. Ting, H., Yacob, Y., Liew, L., and Lau W. M. (2016) 'Intention to use the mobile system: A cash of developing market by ethnicity, *Procedia – Social and Behavioural Sciences,* 224, pp. 368-375.

69. Uchida, Y., and Kitayama, S. (2009) 'Happiness and unhappiness in East and West: Themes and variations,' *Emotion, 9* (4), pp. 441 456.

70. Wong, L. C., Tee, P. K., Yap, C. K., & Cham, T. H. (2023a). Examining Intentions to Use Mobile Check-in for Airlines Services: A View from East Malaysia Consumers. In Al-Emran, M., Al-Sharafi, M.A., & Shaalan, K. (eds) International Conference on Information Systems & Intelligent Applications, ICISIA 2022. *Lecture Note in Network and Systems, 550* (pp. 151-162). Springer, Cham

71. Wong, L. C., Tee, P. K., Cham, T. H., & Lim, M. F. (2023b). Online Learning During Covid-19 Pandemic: A View of Undergraduate Student Perspective in Malaysia. In Al-Emran, M., Al-Sharafi, M.A., &

Shaalan, K. (eds) International Conference on Information Systems & Intelligent Applications, ICISIA 2022. *Lecture Note in Network and Systems, 550* (pp. 415-426). Springer, Cham. (Scopus Indexed)

72. Yan, A. W., Md-Nor, K., Abu-Shanab, E., and Sutanonpaiboon, J. (2009) 'Factors that affect mobile telephone users to use mobile payment solution.*' International Journal of Economics and Management, 3*(1), pp. 37-49.