Understanding the factors influencing the adoption of e-wallets by Malaysian youth

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Article Info	ABSTRACT
	E-wallets have become increasingly popular around the world. This research was conducted to study the relationship between the factors and adoption of e-wallet. The population that involved in this research is youths at Teluk Intan, Perak. This study will investigate the relationship between independent variable with dependent variable. The independent variables for this research are social influence, perceived security and trust while the dependent variable is adoption of e-wallet. To ensure that the study purpose is archived, quantitative research was used for the analysis to analyse the result and the sampling technique. A set of 379 questionnaire will be used to collect data from the selected respondent among youths at Teluk Intan, Perak. The 379 respondents were from different age, gender and hometown. Thus, this research is to identify the factors that affecting the adoption of E-wallet among youths at Teluk Intan, Perak. The result for this research has been proven by using the reliability analysis, descriptive analysis and Pearson's correlation. All hypothesis also approved for this research. According this research, the factors of social influence, perceived security and trust were significant and it influence the youths towards the adoption of e-wallet.

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1. INTRODUCTION

Nowadays, because the advent in the current technology used world over in e-wallet, payments have grown to be one of the innovative topics in the fields of economics, finance, technology, business and retailing [1]. The development of e-wallets varies by country. For example, e-wallet services are provided by large retailers such as Starbucks in the United States (US), which allows customer to get used to them and then to influence others to start to use them [1]. E-wallets are technology apps and software that use electronic devices such as computers or mobile devices to conduct online transactions without the use of cash or money [2], [3].

Malaysia is becoming a nation that is adopting the evolution of telecommunications. 70% of the world's population owns at least one cell phone [4]. Bank Negara Malaysia (BNM) data shows that e-wallet transactions surged 131% year-on-year to RM600 million (US$145.95 million) from RM300 million (US$72.98 million) in 2019. In fact, e-wallet accounts for 33% of total e-payments in Malaysia, with e-wallet liabilities more than double from RM500 million (US$121.63 million) to RM1.6 billion (US$389.2 million) over the last five years. While the pandemic did catalyse the increase of cashless transactions, using e-wallet has been progressively growing over the last five years regardless, recording a double-digit increase over the period.

Over the last few years, the number of e-wallet applications has increased in Malaysia. According from BNM, there are about 53 e-wallets in the country that occupy 19% of the Fintech space in Malaysia. In Malaysia, this latest trend will continue to increase because it is in line with the objective of the central bank to make Malaysia a cashless society by 2020. BNM has laid out a blueprint underlining its mission [5]. People easily affected to the attitude of people around them towards the use of new technology. It is supported by [6], [7]. Alternative methods for paying for goods or services directly from a device by managing e-wallets. E-wallet is a type of e-money is not stored on the chip of the card or on the computer, but on the central server at the issuer of the e-money [8].

Users prefer to use an e-wallet when making a purchase because it is simple and easy to use. The term "e-wallet" refers to a type of digital wallet that a person can use. It is to link debit or credit cards to the digital wallet in order to conduct any transactions [9]. People are moving into cashless society rather than using the physical banknotes or coins. Different generations are different of the acceptance towards the different trends, new innovation and new technology. People are using e-wallets to replace cash. e-payment systems can be used anywhere and at any time as long as there are devices and data to support the payment system [10]. In Malaysia, the youth societies and youth development Act 2007 [11] is the principal law regulating youth activities and development. The law describes youth as an individual not less than 15 years of age and not more than 40 years [12]. Youths are the individuals that more exposed to the e-wallet and they are the person that using e-wallet in their daily life.

a. Problem statement

Aji *et al.* [8], Covid-19 allows people want to use e-wallets. Individuals are reluctant to make physical contact with others, so during this pandemic they switch into cashless payment and e-payment. In making the transaction, they plan to use the e-wallet. People are afraid to make physical contact with others so that they move into cashless payment and e-payment. World Health Organization (WHO) advises that to prevent the spread of the virus, customers can use digital money where possible? If the droplets fall on some material near an infected individual and things, novel coronavirus can be easily transmitted to other people.

Previous research already identified many factors affecting adoption of e-wallet around a world for example in Indonesia [13]-[15], Thailand [16], [17], India [18]-[21], Bahrain [22], China [7]. However, limited study about factors affection adoption by Malaysian youths to use the e-wallet services. Hence, the factors of resistance of e-wallet usage among Malaysians were examined to address the gap.

The impact of the Covid-19 pandemic on the way consumers makes payments remained limited and began to shift to making payments via e-wallet. Before this outbreak, cashless payment via smartphones had been popular n several developing countries [23] such as Thailand, Vietnam, and Indonesia. According to PwC [24], Thailand has a 67% or 19% increase in customers who have already engaged in a mobile payment transaction, following by Vietnam and the Middle East countries by 24% and 20%. However, in Malaysia, growth was only 17%, from 23% in 2018 to 40% in 2019. Malaysian e-wallet adoption is still in its early stages when compared to Indonesia [24].

To fight the outbreak of coronavirus pandemic, Malaysia government requests Malaysians to practice the "new normal" which emphasises on social distancing and personal sanitation. Cashless transactions through e-wallets a way to help in curbing the spread of virus through cash or bills [25]. In March, 2020, the subscribers of e-wallets and contactless payments increase substantially, during the movement control order (MCO) in Malaysia due to coronavirus outbreak and people are concerned that novel coronavirus can be spread through physical money [26].

Despite the abundance number of researches on user's acceptance towards the m-banking and m-payment, there is no comprehensive study conducted to investigate the factors influence the implementation of e-wallet in Malaysia, especially regarding to the young generation who are more familiar to e-wallet. It would be interesting to investigate these factors especially among the Malaysian youths, due to the fascinating developments of e-wallet and the prediction of its grow within the subsequent years. The main reason for focusing on the youth is that they are more willing to accept new technology than the older generation [13]. The objective of this study is to investigate the factors affecting adoption of e-wallet among Teluk Intan, Perak youths. To meet the main objective of this study, there are three variable that been chosen for this study which is social influence (SI), perceived security (PS), and trust (T).

b. Significant of the study

- Individual

This study is helpful for entrepreneurs who like to be part of the e-wallet service in Malaysia. This study offers details on the factors that affect people's use of e-wallets. It can help them assess the acceptance of the business and their prospects in Malaysia. It can help the entrepreneur develop the business. The results of this study may help entrepreneurs to understand the important factors that affect the adoption of an e-wallet that are social influence, perceived security and trust.

- Organisation

Other than that, this study can be use by an organisation such as financial institutions, developers of e-wallet and software development companies. They can use the information in this study to know and

understand what they need to improve towards the e-wallet application before develop and introduce in Malaysia. The organisation that develops an e-wallet application must make sure that their applications are suitable and fit their targeted users. They can enhance the relevant features when designing e-wallet application to satisfy the users by using the information of this study.

- Future researcher

In addition, this study is important for students and future researchers. They will use this study as a guide to further investigate the factors that affect the adoption of the e-wallet. This analysis provides the student and potential researcher with details on the e-wallet. They can gain a better understanding of the e-wallet market in Malaysia by reading this study. As we can see, the use of e-wallets in Malaysia has increased so that it will draw more future researchers to carry out research on this related topic.

2. LITERATURE REVIEW
2.1. Technology acceptance model (TAM)

The TAM is a significant paradigm for the recognition of technology acceptance. This theory has been used in this study. Several previous studies have used this model to produce accurate results. The purpose of the TAM is to visualize the effect of external variables on internal values, behaviours and intentions [7]. TAM variables are perfectly fit for a decision to consider new variables. For this study, there are related factors identify to examine the relationship between the factors towards the adoption of e-wallet among Teluk Intan, Perak youths. TAM variables are perfectly fit for a decision to consider new variables. In technology, TAM is considered to be well-recognized extensions in academic research to study the acceptance and use purpose of emerging technologies [9]. This model commonly used by various researchers in their analysis to understand the intention of customers to use an information system [6]. Previous study mention that the variable which is social influence, perceived security and trust have relationship towards TAM.

2.2. Adoption of e-wallet

Adoption theory shows the individual and their choices that they make to accept or reject an innovation [27]. People intend to adapt new invention such as e-payment in daily life. Adoption can refer as a process; an event or situation and it is full of the positive values. The term of adoption is the oldest and it is used widely by people [28]. Malaysian government launched the 'cashless society' in 2018 to make sure there are transparency in any transaction. Since e-wallet are being introduce in Malaysia, people slowly change into e-payment. E-wallet adoption is the utilization of mobile payment services using e-wallet by people. It shows that the adoption of e-wallet is influenced by factors such as trust, usefulness and security [29]. The dependent variable for this study is e-wallet adoption. The variable can be related to the independent variable and can give this research a good result. This is a good dependent variable that should be used in a study.

2.3. Social influence

Social influence refers to the level of influence that one's opinion will have an effect on the acceptance of a new technology. It known as an important predictor in affecting the use of new technology. People depend on online social communication due to the acceptance of mobile phones. People can spot others behaviour and search for feedback from them [30]. Social influence is the perceived influence of others who are motivating other people in the transaction that using the mobile technology [31]. People that influence others can be their families, colleagues, friends and neighbours. They are people who can influence people to use e-wallets, and they are people who can make use of e-wallets in their lives. Social factor or norm when user have the social relationship like their families or close peers that influence their beliefs to use the e-wallet transaction [32]. This study also mention that social influence is one of the keys to give impact on the behavioural intention to use the new technology. Social influence towards the young consumers refers to the influence and inspiration motivated by their peer's opinions [33]. It shows that social influence is the key motivation among the young people to use the new technology which is e-wallet. Social influence is the independent variable for this study. This is the factors that will influencing youths into the usage of e-wallet in their daily transaction. Social influence will have the relationship towards the dependent variable which is adoption of e-wallet. Previous research show that the intention towards the new technology is influence by others voice. People can easily influence people to get involved with the new technology. It can trigger people to use e-wallet.

2.4. Perceived security

Perceived security is defined as online consumer perception of how they are protected from risk that related to security [34]. Perceived security is perception by the online consumer of how they protected from the risk that related to the security issue. The research also mention that e-wallet platform are fulfils the safety demands of the user in every area [34]. Security are become a vital issue when new technologies such as e-payment

are adopted in our daily life. There are some people think that e-payment was insecure to be used. The usage intention towards the system would have security issue by the user. E-wallet transactions require a contactless transaction. The mobile device of the customer is held next to the receiving sensor at the point of sale and there is a wireless link between the mobile device and the sensor. People will have a problem with the security of the software they use to make the transaction [35]. Perceived security is the independent variable for this study. There will be relationship between perceived security and the adoption of e-wallet among Malaysian youths. Perceived security is one of the intentions why people use e-wallet is due to the continuous development of technologies and the effort to promote them [36]. User will be feeling safer while using it if there are any tools to protect the payment system if there are any undesired actions happen.

Electronic payment systems must follow an efficient security protocol that ensures high security for online transactions in order to be generally accepted payment method around the world. Based on the previous work of [37], two common procedures for ensuring secure e-commerce transactions have been found include security socket layer protocol (SSL) and secure electronic transaction (SET). SSL is more commonly used e-commerce transactions protocol and it works by encoding the whole session amongst computers so that it enables to provide a safer communication over the internet. SSL encrypts the online communication between web servers and a client by using public-key technology. On the other hand, SET protocol works by avoiding consumer's entire credit card number from traveling across the internet instead allows pieces of it to flow through web communication. SET also offers information integration, coding of sensitive information, and verification of all business data by using modern technologies such as digital signature and data coding. Ismaili *et al.*[38] have explored some other requirements that must be exhibited by the electronic such as:
- Payment systems, these include;
- Confidentiality of information shared by consumers
- Data integrity
- Authentication of all the participants
- Non-repudiation
- End-user requirements that include usability, flexibility, affordability, reliability, speed of transactions, and availability

One of the greatest issues facing mobile payment systems, according to Karp [39] is the rising rate of cyber-crime, which leads to data theft and cyber-attacks on financial data. Security issues related to mobile payments can also be characterised as emerging or traditional. The use of this payment channel in terrorist funding and money laundering are emerging hazards, while traditional risks include data and service theft, income loss, customer base loss, and brand reputation loss.

2.5. Trust

Trust can be defined as the willingness of a party or individual to be exposed to the actions of another party or individual bases on the expectation that the other will perform an action important to the trustor, irrespective of the ability to monitor or handle the other party [40]. Trust is the degree to which a person trusts that it is secure to use m-commerce and does not have any privacy risks [41]. To such psychological forces as beliefs, behaviours, willingness and perceived likelihood, trust is highly conducive. Previous research indicates that the trust of consumers has a positive impact on perceived usefulness and perceived ease of use. Once the user has faith in the transaction that will be used, they trust that it is secure to use and that the user has no privacy risks [42], [43] show more information that trust in e-payment is important so that the online transaction will not be uncertain and risky. In any case, if there is no trust in the form of transaction, e-payment will not achieve greater use. Bauman and Bachmann [44] showed that trust is not the only influence to give impact towards the acceptance of e-wallet. Trust will be an important role in the online environment as user are not easily trust and ready towards the online transaction. So related companies are need to develop a multilayer security system so the risk towards the new technology will be minimize and trust can be increase towards the new system [6]. Previous study showed that trust have a relationship towards the adoption of e-wallet among Malaysian young adults.

2.6. Research hypothesis

The hypothesis of this study is based on the factor of social influence, perceived security and trust that affecting the adoption of e-wallet among Teluk Intan, Perak youths. Based on the study, the hypothesis will be created and to be tested:
- H1　:　There is a significant relationship between social influence and adoption of e-wallet among Teluk Intan, Perak youths.
- H2　:　There is a significant relationship between perceived security and adoption of e-wallet among Teluk Intan, Perak youths.
- H3　:　There is a significant relationship between trust and adoption of e-wallet among Teluk Intan, Perak youths.

2.7. Research framework

The following conceptual framework is adapted from the TAM. It is a theory that suited for a decision regarding to accept new technology. After adjusting the related components and modified it into the suite components based on the research topic. The dependent variable of the conceptual framework is adoption of e-wallet. The independent variable of this study is social influence, perceived security and trust. The proposed conceptual framework is portrayed in Figure 1.
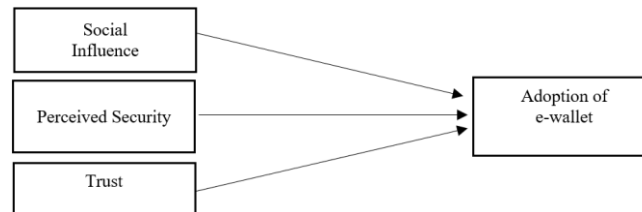
Figure 1. Conceptual framework

3.   METHODS
3.1. Construct measurement

Quantitative approaches are being used in this study. Using this technique, the relationship between the variables was analysed. By using specialized methodologies and techniques, quantitative analysis quantifies relationships between multiple variables [45]. Convenience sampling is the most effective technique for this analysis. In general, respondents were selected at the right time as they were in the right place. There are three measurement of the variable which is nominal scale, interval scale and ordinal scale. Nominal scale is the scale that most often used with the qualitative variables. Interval scale is measured in the quantitative attributes. 5-point Likert scale is designed to examine how strongly the statement are agree or disagree. Ordinal scale had been used in this research for the question 2 in part A (demographic profile). 30 sets of questionnaires are being distributed among target respondents for the purpose of pilot test. Pilot test will test on subgroups within the sample that needed for the research.

3.2. Data collection

Data collection is the process of collecting and measuring information on variables of interest. One of the key data tools for this analysis is the questionnaire. Primary data are new data that will be obtained and used for particular research purpose. Methods for data collection for this study are primary data. Each set of questionnaires will consist of 25 questions in total and the survey questionnaire will be separated into two main parts. In part A, the questions are mainly related to demographic information which includes the usage of smartphone. Part B includes 15 questions, 5 questions will be tested for each independent variable. The research target demographic is youth between the ages of 15 and not more than 40 years of age who live in Teluk Intan, Perak. The reason for choosing this population is because youths are the person that always with their smartphone so they intend to use e-wallet. A part from that, according to [25], the youth group are more willing to accept new technology as compared to the older generation. Sampling size is the total samples in research. For this study, the population was drawn from the city population website. It listed a total of 23,504 youths in Teluk Intan, Perak. The sample size from Krejcie and Morgan's table, the number of at least 379 will be suggested for this study. The total sample size use is 379.

3.3. Data analysis

Data analysis refer to the process of transforming and interpreting the data in order to find the useful information which could provide helps in making conclusion and support the decision making. Statistical package for social sciences (SPSS) was used for this study. The questionnaire that already collected would be analysed and explained by using descriptive analysis, reliability analysis and pearson correlation analysis.

4.   DATA ANALYSIS AND FINDINGS
4.1. Descriptive analysis

Table 1 showed the overall descriptive statistics for the respondent's demographic. There are five questions for the demographic section. There are 379 respondents through Google form that are successfully collected from the youths at Teluk Intan, Perak. The number of respondents that using smartphone was 100%

and they also 100% consider of using e-wallet. The highest gender female with 71.2%. The highest number of age respondents was under category between 21-30 years old with the total of 231 from 379 respondents. The highest number of respondents for the hometown was from Kampung Bahagia with the total 27.2% of the respondents.

Table 1. The demographic characteristic of the respondents

Demographic characteristics	Category	Frequency	Percentage (%)
Using smartphone	Yes	379	100
	No	0	0
Consider of using e-wallet	Yes	379	100
	No	0	0
Gender	Male	109	28.8
	Female	270	71.2
Age	15–20	35	9.2
	21–30	231	60.9
	31–40	113	29.8
Hometown	Kampung Bahagia	103	27.2
	Kampung Padang Tembak	85	22.4
	Kampung Selabak	81	21.4
	Kampung Batak Rabit	30	7.9
	Kampung Banjar	28	7.4
	Kampung Sungai Tungku	19	5.0
	Kampung Sungai Kerawai	16	4.2
	Kampung Pasir Berdamar	12	3.2
	Kampung Sungai Suli	5	1.3

Table 2 showed descriptive statistics for variables which including adoption of e-wallet, social influence, perceived security and trust. Descriptive statistics was using five points for Likert scale. It calculates and summarize depend on data. Table 2 showed that the mean values range between 3.6311 to 4.3367. Therefore, trust reflects the highest level of acceptance for factor that affecting the adoption of e-wallet while social influence was the lowest mean towards the adoption of e-wallet.

Table 2. Overall means analysis

Item	N	Mean	Standard deviation
DV: Adoption of e-wallet	379	4.3367	0.7938
IV 1: Social influence	379	3.6311	1.13084
IV 2: Perceived security	379	3.6517	1.05424
IV 3: Trust	379	3.7625	0.96619

4.2. Reliability analysis

Table 3 gives the results of reliability analysis for the study variables. As illustrated above, the Cronbach's alpha for adoption of e-wallet is 0.907 (dependent variable), social influence is 0.898, perceived security is 0.897 and trust is 0.907 (independent variable). Adoption of e-wallet is the dependent variable in this study, since calculated value is 0.907, the variables used were good and able to measure the factors affecting adoption of e-wallet. Two independent variable obtained acceptable values because the score result was over 0.70, which is social influence is 0.898 and perceived security is 0.897 while and trust is good with 0.907 As a conclusion, the Cronbach's alpha reliability coefficients of variables in this study were approximates to acceptable and positively correlated one to another.

Table 3. Reliability statistics of independent variable and dependent variables

Item	Cronbach's alpha	Number of items
DV: Adoption of e-wallet	0.907	5
IV 1: Social influence	0.898	5
IV 2: Perceived security	0.897	5
IV 3: Trust	0.907	5

4.3. Pearson correlation coefficient analysis

Based on the Table 4, it shows the correlation between the social influence and adoption of e-wallet in Teluk Intan, Perak. The r value of social influence is 0.484. The result indicates there is low positive correlation between social influence and adoption of e-wallet. Besides that, the table shows the correlation

between perceived security and adoption of e-wallet. The r value is higher compare to social influence which is 0.612. This indicates that perceived security has moderate positive correlation. Lastly, the table shows the correlation between the trust and adoption of e-wallet in Teluk Intan, Perak. The r value for trust is the higher compare to social influence and perceived security. Youths are really concern regarding the application e- wallet before and while using it. The result indicates there is moderate positive correlation.

Table 4. Summary of pearson correlation

		Social influence	Perceived security	Trust	Adoption of e-wallet
Social influence	Pearson correlation	1	.584**	.535**	.484**
	Sig. (2-tailed)		.000	.000	.000
	N	379	379	379	379
Perceived security	Pearson correlation	.584**	1	.820**	.612**
	Sig. (2-tailed)	.000		.000	.000
	N	379	379	379	379
Trust	Pearson correlation	.535**	.820**	1	.624**
	Sig. (2-tailed)	.000	.000		.000
	N	379	379	379	379
Adoption of e-wallet	Pearson correlation	.484**	.612**	.624**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	379	379	379	379

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

5. DISCUSSION AND RECOMMENDATION

The main aim for this research is to examine the factors that effecting adoption of e-wallet among youths at Teluk Intan, Perak. There are three variable that been using as the factors which is social influence, perceived security and trust. The final result for this study is there are relationship between social influence, perceived security and trust towards the adoption e-wallet among Teluk Intan, Perak youths. Nowadays, the number of users for e-wallet become increasing. This study uses three factors which is social influence, perceived security and trust to see the relationship between those factors towards the adoption of e-wallet. There is positive effect for social influence that make it as an effect that influence the adoption of e-wallet among youths. Social effect is the perceived power of others using mobile devices to inspire consumers in the transaction. Families, friends, co-workers and neighbors are the group of people who might be control the users of e-wallets. E-wallet is one of the new technologies around us so the social influence is one the effect to youths to use e-wallet.

Besides that, there are positive relationship between perceived security and adoption of e-wallet among youths at Teluk Intan, Perak. Consumers are believing that all their personal information is secure and safe while using the platform. People believe that the platform is secure to use and people are aware of the security. Data analysis shows that perceived security has a positive relationship towards the adoption of the e-wallet. Next, there are positive relationship between trust and adoption of e-wallet among youths at Teluk Intan, Perak. Consumer started to trust the e-wallet system as it is secure to use and the platform system also trustworthy. Any transaction that involved with the online payment and the Internet will be have trust issue to the people. Trust is important for a vendor to influence consumer to their products or services. If there is no trust in each people towards the system by e-wallet, the number of the consumer will not increase.

There are some limitations occurs throughout the process of study. Added more generations in the future research can make the results more to representing all stages of age. Youths not the only target respondent that suitable for this topic. There will be no limit regarding the selected respondents. All generation might be the one who is using the e-wallet. There are many improvements that future researcher needs to take place regarding the choosing of variable for the research. Future researcher can consider other factors adoption of e-wallet other than social influence, perceived security and trust. There are many previous researches that using other variable such as behavioural intention, perceived usefulness, ease of use and others. Other factors might have a good relationship towards the adoption of e-wallet. So, by added and include more variable in the future research, the research can be different compare to the previous research. Last recommendation is to add some demographic questions in the questionnaire. Income and education background can influence people to use e-wallet as their transaction. The higher income and education can make the individuals can accept the benefits of being cashless.

6. CONCLUSION

In conclusion, youths at Teluk Intan, Perak are using cashless system while making a transaction. They are using e-wallet because of their social influence, perceived security and trust. E-wallet is one of a good digital transaction that they choose while making a payment and any transaction. Total 379 questionnaire have been using for this research and have been distributed to the selected population. All the data of the research was analysed by using descriptive analysis and pearson correlation analysis. The objectives of this research are to investigate the independent variable which is social influence, perceived security and trust towards the adoption of e-wallet. Youth was chosen in this research because based on previous study, youth was the person that accept the new technology and new service in their life. So, researcher choose youth as the population of this study. This research was using a model to support the information regarding this topic. The model that has been used is TAM.

As stated in finding, the reliability analysis was excellent for the independent variables and dependent variables. The reliability analysis for social influence, perceived security, trust and adoption of e-wallet were 0.898, 0.897, 0.907 and 0.907 respectively. The results show it was excellent in strength of association according to the rules of thumb about Cronbach's alpha coefficient size. This shows that the result could be accepted. This research also can define the real way to analyse the data. Some of limitation of the study can give chance to researcher to give more recommendation to improve the quality of the research. The results obtained from this research can be used in future for further studies and helps to justify that the factors did influence youths towards the adoption of e-wallet and hopefully will have new studies over time about the subject.

This study will help e-wallet users and providers, marketers, and policymakers understand the key characteristics, opportunities, and challenges so that they can improve the e-wallet system's service quality. The findings will benefit policymakers and e-wallet service providers in developing effective strategies for e-wallets to grow in Malaysia. Efforts of policy makers are to make this system technologically integrated and financially more resilient so that it can continue to contribute to economic growth. Synergies will result in a significant advancement in e-wallet with the co-competitive endeavour of all participants in an e-wallet ecosystem.

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