CHAPTER II
LITERATURE REVIEW

2.1 Literature Review

2.1.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was invented and introduced by Fred Davis in 1989. It is an extension of its predecessor, the Theory of Reasonable Action. The reason of its creation was to measure and evaluate the aspects and components related to the consumer's acceptance of information systems and technology. In their later work, Venkatesh & Davis (2000) said that a number of empirical studies have consistently shown that the TAM model explains a considerable fraction, approximately 40% of the variance in usage intention and behavior, outperforming the other alternative models like the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB).

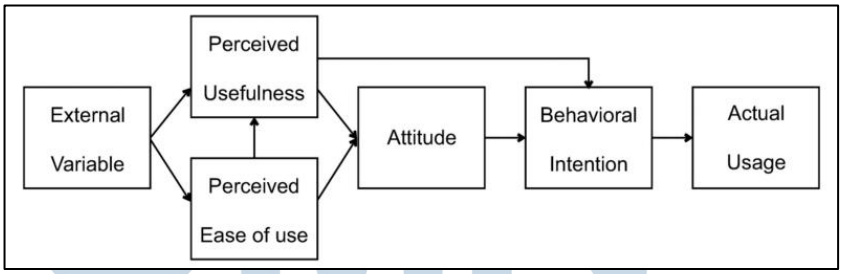

Figure 2.1 Technology Acceptance Model by Davis (1989)

Source: Park & Park (2020)

Approaching the Technology Acceptance Model from a slightly different point of view, Yazid & Jantan (2019) sees TAM as a framework that was initially originated from studies and theories in the field of psychology that has now evolved into a fundamental paradigm for understanding and predicting possible technological acceptance or refusal. According to Davis (1989), in his research when developing

TAM, there were two main considerations for adopting a particular technology or service, namely perceived ease of use and perceived usefulness. A similar statement was stated by Alfadda & Mahdi (2021), where according to the TAM, individuals' behavioral intention to accomplish a specific action which also determines their performance in doing that activity. Two particular factors which are the perceived usefulness and perceived ease of use, are thought to be the primary predictors of user acceptance. TAM has been extensively studied in terms of its main problems, including additional factors that influence technology adoption (Agustian Wardana et al., 2022). Thus, an additional factor which are reward and perceived risk will be integrated to this study as an extension of this model, helping to articulate the usage intention on the DANA E-Wallet among adolescents.

2.1.2 E-Wallet

E-Wallet is a mobile device-based platform which enables cashless payments for sales transactions between consumers and merchants or service providers, either in person or remotely (Ramli & Hamzah, 2021). He also added that an e-wallet does have a similar role when being compared to a traditional wallet and it must be linked to the user's account in order to operate safely. As a result, e-wallets normally demand users to save specific bank and card information. Frequently abbreviated as an E-Wallet, digital/electronic wallet is an electronic service that stores payment instrument data, such as cards and/or electronic money, and can also retain funds for payment (Bank Indonesia, n.d.). According to Phuong et al. (2020), an E-Wallet is a virtual wallet that allows users to preload a predetermined amount into their accounts registered with the E-Wallet's service providers and spend it online and offline to pay for goods and services. Furthermore, Upadhayaya (2012) defines E-wallet as a media that integrates all of the functionality of today's wallets onto a single simple smart card, eliminating the need for multiple cards for regular wallet carriers which

allows users to make electronic transactions in a more time efficient way. Additionally, it is apparent that using an E-Wallet contributes greatly to the present cashless society (Singh et al., 2020).

2.1.3 Perceived Usefulness

Davis (1989) stated that perceived usefulness is a perception that arises when someone believes that using a technology can improve performance in doing some sort of actions. As he also claimed and research has since confirmed, that usefulness is essential to information technology (IT) acceptance. This approach was extended and used to mobile payment. According to Pereira & Tam (2021), perceived usefulness is seen from the extent to which someone believes that using the system helps them improve their work performance. As mentioned by Nguyen (2020), perceived usefulness is a perception that is closely related to how the productivity and effectiveness of a technology can improve the performance of its users. This way, when someone feels that a technology is very useful and has a good attitude towards a technology, their desire to use that technology will also increase. Perceived usefulness is also defined by Yang et al. (2017) as the level of a person's confidence in using a particular system will have a positive impact on the user's desire to use the system

In this research, the definition of perceived usefulness which is used as a reference is quoted from Davis (1989), where perceived usefulness is viewed as a perception that arises when someone believes that using a technology can improve performance in doing some sort of actions or in other words useful for them. This construct will be illustrated and measured with how much an electronic wallet helps people save money, save their time, gives them access to wide range of services, and how useful the service is for them.

2.1.4 Perceived Ease of Use

Perceived ease of use is a perception that arises when someone believes that using a technology can be done easily or is easy to use (Davis, 1989). He further claims that this perception is measured by several indicators, including ease of access, clarity and easy to understand, flexibility, and ease of achieving goals. Hence, perceived ease of use relates to a person's perception that using a specific system will be simple and hassle free. Nguyen (2020) explained that perceived ease of use is a perception that is based on a person's level of confidence that the technology they are using can actually provide freedom and comfort. Moreover, perceived ease of use is considered one of the primary factors of users' attitudes and intentions to adopt and utilize technology (Chawla & Joshi, 2019). Perceived ease of use is a factor that can influence the user's attitude towards the technology they use. Therefore, technology that is easy to use will form a good attitude from users towards the technology itself (Gusni et al., 2020).

In this research, the definition of perceived ease of use which is used as a reference is quoted from Davis (1989), where perceived ease of use is considered as a perception that arises when someone believes that using a technology can be done easily or is easy to use. This construct will then be illustrated and measured with how much a person finds electronic wallet easy as using conventional payment system, how clear and understandable the service is, and how the service is easy to use and is easy to learn.

2.1.5 Perceived Risk

According to Malik & Annuar (2021), risk can be considered as an important factor during the process of operating the latest technology of mobile wallet. As stated by Kamal et al. (2020), In the context of uncertainty and task-related concerns with online services, research has identified seven additional risk factors, namely, time risk, performance

risk, financial risk, social risk, physiological risk, privacy risk, and the overall risk. Following on from that, in this research study the researcher defines perceived risk for electronic payment in terms of performance, privacy, and the overall risk. Perceived risk itself can be considered as a perception of the possible disadvantages or loss that customers might encounter, and the damage that might occur or arise when a they utilize a particular service and/or technology (Nguyen, 2020). Meanwhile, Peng et al. (2019) defined perceived risk refers to the extent to which subjective evaluations made by individuals stem from uncertainty and adverse consequences from adopting and using a new product or service.

In this research, the definition of perceived risk which is used as a reference is quoted from Nguyen (2020), where perceived risk is seen as a perception of the possible disadvantages or loss that customers might encounter, and the damage that might occur or arise when a they utilize a particular service and/or technology. This construct will then be interpreted and measured with how risky people think it is to use an electronic wallet in terms of its performance, how it processes payments correctly, how hesitant people are towards making a payment, the possible fraud when using the service, personal data that can be accessed by unauthorized party, the security system built into the service, and that using the service involves a higher risk.

2.1.6 Reward

According to Ming et al. (2020), the term 'rewards' refers to the benefits that a person might receive from the seller right after their purchase. Saprikis (2018) claims that rewards are seen to be essential for a company if it wishes to build successful relationships with its stakeholders which in this case is the user or consumers. Additionally, Aydin & Burnaz (2016) points out that reward which can motivate

consumers, could come in various forms such as free gifts, coupons, and so on.

In this research, the definition of reward which is used as a reference is quoted from Ming et al. (2020), where reward is considered as a benefit that a person might receive from the seller right after their purchase. Here, the researcher illustrates the subject with the user of DANA E-wallet and purchase as in using the service of electronic wallet. This construct will be interpreted and measured with how much people find special offer or rewards provided by an electronic wallet service important, the importance of the availability of e-coupons redemption, how people would like to gain from the benefits and want to continue the use of service as long as promotions are being offered.

2.1.7 Intention to Use

To understand the definition of intention to use, it is essential to look back to The Theory of Planned Behavior. According to Ajzen (1991), The TPB posits that behavioral intention, influenced by attitude, subjective norm, and perceived behavioral control, is a strong predictor of an actual behavior. While the TPB focuses on a broader range of behaviors, Ajzen acknowledges its applicability to understanding intention to use specific products, services, or technologies. On that note, it was known that TPB is used to predict technology adoption behavior, where the term 'intention to use' is essentially synonymous with behavioral intention within that context, and can be used interchangeably in the context of technology adoption. Furthermore, Venkatesh et al. (2003) explains that in referring to the intention to use a technology, behavioral intention is considered the same as intention to use or adopt. An intention to use can be best described as the interest of consumers and their desire to try out products and/or services (Chelvarayan et al., 2022; Venkatesh et al., 2003). According to Mai et al. (2021), intention itself is the motivation or drive that influences

individual behavior, which shows the willingness or effort made by the individual to carry out that behavior.

In this research, the definition of usage intention which is used as a reference is quoted from Venkatesh et al. (2003), where intention to use can be described as the interest of consumers and their desire to try out and use services. This construct will then be interpreted and measured with how people expect an increase of use in the future, they intend to use the service for future payment, they will use the service frequently, and how they will always try to use service to conduct payments.

2.2 Conceptual Framework

This research implements the conceptual framework from previous research entitled "The Effect of Perceived Usefulness, Perceived Ease of Use, Reward, and Perceived Risk toward E-Wallet Usage Intention" (Malik, A. N. A. and Annuar, S. N. S., 2021).

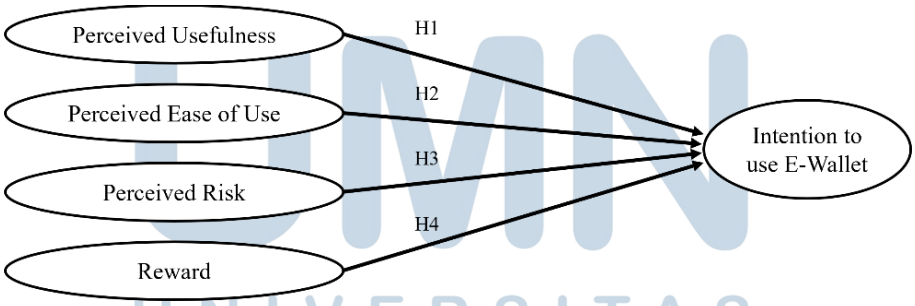

Figure 2.2 Conceptual Framework

Source: Malik & Annuar (2021)

Figure 2.1 above shows the conceptual framework the researcher used for this study. There are no modifications from the original conceptual framework to the framework that is being implemented in this research. All variables and hypotheses from the previous research are fully implemented.

2.3 Hypothesis

Constructed on the formulated problem and research questions that have been explained in the previous chapter, along with the previous research being used as the main journal of this research, therefore four research hypotheses can be developed to be investigated further. Here is the explanation regarding the relation between each variable and their hypothesis development which are elaborated further below.

2.3.1 The effect of Perceived Usefulness towards the Usage Intention of DANA E-Wallet

Through the study conducted by Malik & Annuar (2021), it was found that as one of the predictor, perceived usefulness has a direct positive effect towards the usage intention of an E-Wallet. Furthermore, the study conducted by Nguyen (2020) also discovered that perceived usefulness had a positive impacts on intention to use, which impact was greater than attitude toward the service on customer intention to use. Furthermore, perceived usefulness is positively affecting people's intention to use a specific platform, where the more useful the platform is, the higher the intention to use as well (Saprikis, 2018).

Based upon the findings of these previous studies that have proven the effect of perceived usefulness on usage intention along with the opportunity to further investigate regarding this influence on the research object, therefore the hypothesis formulated is as follows:

H1: Perceived Usefulness has a positive effect on DANA E-Wallet Usage Intention.

2.3.2 The effect of Perceived Ease of Use towards the Usage Intention of DANA E-Wallet

According to the findings of a study conducted by Tugade et al. (2021) which found that people's usage intention is affected by how easy it is to use a banking service. Similarly, the results of the study conducted

by Ming et al. (2020) also discovered that perceived ease of use is positively related to the adoption of e-wallets. In their research, Malik & Annuar (2021) also found perceived ease of use as a predictor that has a significant effect on intention to use. A former study has explored the same variables and also found that users who perceive mobile wallets as easy to use will develop a more positive attitude towards them, which translates to a higher intention to use (Aydin & Burnaz, 2016).

Based upon the findings of these previous studies that have proven the effect of perceived ease of use on usage intention along with the opportunity to further investigate regarding this influence on the research object, therefore the hypothesis formulated is as follows:

H2: Perceived Ease of Use has a positive effect on DANA E-Wallet Usage Intention.

2.3.3 The effect of Perceived Risk towards the Usage Intention of DANA E-Wallet

A study conducted by Mortimer et al. (2015) discovered that perceived risk significantly has a negative impact on a person's intention to use. Whereas, the study conducted by Nguyen (2020) found that a significant level of perceived risks frequently results in a negative attitude toward usage intention. Moreover, Abrahão et al. (2016) also discovered that there is a negative relationship between perceived risk and usage intention, where the higher the perceived risk, the lower the usage intention to use a product.

Based upon the findings of these previous studies that have proven the effect of perceived risk on usage intention along with the opportunity to further investigate regarding this influence on the research object, therefore the hypothesis formulated is as follows:

H3: Perceived Risk has a negative effect on DANA E-Wallet Usage Intention.

2.3.4 The effect of Reward towards the Usage Intention of DANA E-Wallet

Predicated on the study by Ming et al. (2020), there is a significant effect of rewards programs that tend to attract people to use an e-wallet. They also added that potential rewards of e-wallets can be effective strategies to promote their actual adoption. Similar findings were also found in the study conducted by Saprikis (2018) which considers reward as an explanatory value that suggests positive effects toward behavioral intentions (intention to use). The study by Malik & Annuar (2021) also proved that all potential rewards of e-wallets can be an effective strategy to promote and increase future adoption or usage intention of an E-Wallet.

Based upon the findings of these previous studies that have proven the effect of reward on usage intention along with the opportunity to further investigate regarding this influence on the research object, therefore the hypothesis formulated is as follows:

H4: Reward has a positive effect on DANA E-Wallet Usage Intention.

2.4 Previous Studies

No.	Researcher	Publication / Publisher	Title	Findings
1.	Malik, A. N. A. & Annuar, S. N. S.	Springer: Eurasian Studies in Business and Economics (2021)	The Effect of Perceived Usefulness, Perceived Ease of Use, Reward, and Perceived Risk toward E-Wallet Usage Intention	This research found that perceived usefulness, perceived ease of use, and reward had a positive and significant effect on a person's intention to use an e-wallet. However, perceived risk was found to not have a significant effect on e-wallet usage intention in this study. Overall, the study suggests that focusing on the usefulness, ease of use, and potential rewards of e-wallets can be effective strategies to promote and increase future adoption or usage intention.
2.	Tugade, C., Reyes, J. & Nartea, M.	Journal of Asian Finance Economics and Business (2021)	Components Affecting Intention to Use Digital Banking Among Generation Y and Z: An Empirical Study from the Philippines	Perceived ease of use, perceived usefulness, perceived risk, trust, and convenience had a significant effect on intention to use digital banking. Perceived ease of use, perceived usefulness, trust, and convenience had a positive impact towards usage intention. Meanwhile, perceived risk was found to have negative influence on consumer’s usage intention. The results of this study

				heighten the importance of user-friendliness, benefits, building trust, and emphasizing the convenience of digital banking can be effective strategies to encourage digital banking adoption.
3.	Ming, K. L. Y., Jais, M., Wen, C. C. & Zaidi, N. S.	International Journal of Academic Research in Accounting (2020)	Factor Affecting Adoption of E-Wallet in Sarawak	This study discovered that perceived usefulness, perceived ease of use is positively related to the adoption of e-wallets. People who perceive e-wallets as beneficial and easy to use are more likely to adopt them. Moreover, it was also found that found that rewards programs tend to attract people to use e-wallet. This study points out that the usefulness, ease of use, and potential rewards of e-wallets can be effective strategies to promote their adoption.
4.	Saprikis, V.	Proceedings of the 32nd IBIMA Conference (2018)	Examining Behavioral Intention towards Social Commerce: An Empirical Investigation in University Students.	This study found that perceived ease of use, perceived usefulness, enjoyment, reward, and familiarity all have a positive effect on students' intention to engage in social commerce. In other words, students who find social commerce platforms easy to use, valuable,

				enjoyable, and familiar are more likely to use them for shopping. On the other hand, anxiety about social commerce transactions was found to have a negative effect on students' intention to participate.
5.	Mortimer, G., Neale, L., Hasan, S. F. E., & Dunphy, B.	International Journal of Bank Marketing (2015)	Investigating the factors influencing the adoption of m-banking: a cross cultural study.	This study discovered that perceived ease of use and perceived usefulness, and perceived risk were the key drivers of mobile banking adoption among customers. Perceived ease of use and perceived usefulness had a significant positive effect on intention to use. Perceived risk on the other hand significantly has a negative impact on intention to use. However, the study also highlights that understanding cultural factors is important when considering how to encourage people to adopt mobile banking.
6.	Aydin, G. & Burnaz, S.	Journal of Business, Economics and Finance (2016)	Adoption of mobile payment systems: a study on mobile wallets. Reputation as an Intervening Variable.	The study emphasizes that users who perceive mobile wallets as easy to use and valuable will develop a more positive attitude towards them. This positive attitude translates to a higher intention to actually use mobile

				wallets for payments. In addition, somebody with high personal innovativeness usually finds mobile wallets easier to use and ultimately have a stronger intention to adopt them. Overall, this research highlights that user-friendliness and perceived value are crucial factors for mobile wallet adoption, including their openness to technology.
7.	Nguyen, O. T.	Journal of Asian Finance, Economics and Business (2020)	Factors Affecting the Intention to Use Digital Banking in Vietnam.	Perceived usefulness, perceived ease of use, and is found to be an influential variable to usage intention. This research also discovered that people's attitude towards a service plays an essential role in encouraging usage intention. Perceived risk on the contrary has a negative impact on attitude towards the service.
8.	Bregasthian, B. & Herdinata, C.	KnE Social Sciences (2021)	The Effect of Perceived Ease of Use, Usefulness and Risk on Intention to Use the Go-Food Application in Surabaya and Sidoarjo	This research discovered that perceived usefulness, perceived risk, and attitude all had significant effects on usage intention. However, the research also found that perceived ease of use had no significant effect on intention to use. So, in contrast to some other studies

				on technology adoption, perceived ease of use wasn't a major driver for Go-Food in this specific context. Perceived usefulness and perceived risk seem to be more important factors for people in Surabaya and Sidoarjo when considering using Go-Food.
9.	Abrahão, R. D. S., Moriguchi, S. N. & Andrade, D. F.	Innovation and Management Review (2016)	Intention of adoption of mobile payment: An analysis in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT)	The research discovered that perceived risk showed a negative relationship. This means, the higher the perceived risk, the lower the usage intention to use a product.