

# Understanding Determinants of Use Behavior of E-Payment: An Analysis of the Success of the System During a Pandemic

Muhammad Noor Ardiansah<sup>1\*</sup>, Nabilla Nur Azmi<sup>2</sup> and Indah Anisykulillah<sup>3</sup>

<sup>1</sup>Department of Accounting, Politeknik Negeri Semarang, Semarang, Central Java, Indonesia

<sup>2</sup>Customer Specialist, NCS Line Worldwide, Semarang, Central Java, Indonesia

<sup>3</sup>Department of Accounting, Universitas Negeri Semarang, Semarang, Central Java, Indonesia

## ABSTRACT

This study examined the determinants of e-payment usage behaviour using the UTAUT model influenced by the COVID-19 pandemic in Indonesia. This study focussed on e-payment applications used by Generation Z, the most significant portion of Indonesia's population in the last five years. The SEM method was used to analyze the UTAUT framework as a system success model. The findings demonstrated that user behavior was strongly influenced by intention to use, determined by experience, voluntariness of use, and moderate experience in facilitating conditions, including other factors. The results also described how Generation Z had characteristics that valued enchanting experiences and their intention to utilise e-payments conveniently. The research findings also showed the pandemic behaviour of Generation Z, which tended to be adaptive and flexible in using e-payments. Therefore, companies that use e-payments and need to prioritise this without overlooking privacy and security. It can be an exciting focus for further research. This research focuses on the factors determining Generation Z's use of e-payments and the efficient and effective practical characteristics inherent in post-pandemic behaviour.

**Keywords:** Electronic Payment, UTAUT Model, System Success, Z Generation

---

### ARTICLE INFO

#### **Article History:**

*Received: 30 October 2023*

*Accepted: 02 February 2024*

*Available online: 01 April 2024*

---

\* Corresponding Author: M. N. Ardiansah; Jl Prof Sudharto Tembalang Semarang Central Java Indonesia; Email: mnardiansah@polines.ac.id; Tel: +628122821603

## INTRODUCTION

Innovation in information technology has been recognised as an important factor in achieving e-business strategy advantage, especially the capability to modify human behaviour in responding to their needs (Yu & Tao, 2009). Information technology development has provided convenience and simplicity for humans to maintain all aspects of their lives more efficiently and successfully. The critical success impact for IT is how to support sustainable usage behavior, resulting in behavioral factors becoming an increasingly crucial practical area (Hong et al., 2006). One of the most discussed topics in innovative financial technology (fintech) is how to reshape the intermediary financial structure based on the internet and improve financial services' efficiency (Broby, 2021).

Fintech improves the financial system process by integrating the technological features of various information and communication technology devices, such as smartphone cameras, near-field communication (NFC), barcodes, or QR codes (Haritha, 2022). Additionally, fintech encourages the development of new business models based on social networking, smartphone devices, credit ratings, mobile messaging, credit cards, and electronic bank accounts (Broby, 2021). Among these services, electronic payment, or e-payment, is widely recognized as critical to developing electronic financial services. Moreover, e-payments, also known as e-wallet and e-money, which usually refers to payment methods, are operated under financial regulations through advanced mobile devices to substitute cash, debit card, credit card, or check paper methods (Dahlberg et al., 2008). The e-payments used as an essential stage in financial activities are increasing because they provide flexibility anytime, anywhere, with any smartphone e-payment application. The importance of e-payment has consequences for security and privacy in addition to the system's success, so it needs to be prioritised (Kim et al., 2010; Thompson, 2017)

Several researchers have examined the factors influencing the success of e-payment applications with the information system success model (Kabir et al., 2015; Liébana-cabanillas et al., 2015; Hossain & Zhou, 2018; Liu et al., 2019). The study is interesting because of the sensitivity of e-payment applications to the daily practice of human life ( Hassan et al., 2020; Ardiansah et al., 2022) which is an element of an electric payment system,

to get the pattern of using this service. This research presents a review of 131 research articles published on electronic payment between 2010 and 2020 that uses a qualitative method of answering the research questions (RQ). A successful e-payment application system will enable people to have a better life. The most frequently studied is the Unified Theory of Acceptance and Use of Technology (UTAUT) model, which explains user behavior towards information technology (Venkatesh & Bala, 2008). In many empirical studies, usage behaviour is often considered a consequence of factors (Yousafzai et al., 2010; Putri et al., 2017) which combines UTAUT (Unified Theory of Acceptance and Use of Technology). The consequence is that system usage behaviour, such as e-payment use, indicates the existence of successful information technology acceptance.

The UTAUT model development is based on an extensive social, economic, environmental, and technological context; however, it does not apply to pandemic conditions (Alswaigh & Aloud, 2021). Pandemic conditions have created an economic depression atmosphere, such as the COVID-19 pandemic that happened at the beginning of 2020 and resulted in a significant change in consumer behaviour. Because of the economic depression affecting everyone, people have developed new behaviours that are not hedonistic and do not increase reliance on the price of a commodity. This research contextualized Generation Z in Indonesia, which has the second largest proportion after the millennial generation at 27.94% and will become the largest middle class in Indonesia, reaching 56.76% in the next five years (Ardiansah et al., 2022).

Circumstance setting offers an interesting argument for investigating the appealing UTAUT model, which investigates the factors influencing consumer behaviour. However, studies on the implementation of the UTAUT model on the use of e-payment technology in Generation Z during the COVID-19 pandemic are relatively limited (Alswaigh & Aloud, 2021; Napitupulu et al., 2021; Ponsree et al., 2021). In the case of Indonesia, this is even more encouraging because the existence and potential of Generation Z as a demographic bonus in 2023 make it interesting to understand the determinants of their e-payment usage behaviour. This study examined the determinants of e-payment usage behaviour using the UTAUT model influenced by the COVID-19 pandemic in Indonesia. This research was designed to provide an additional empirical reference for e-payment use

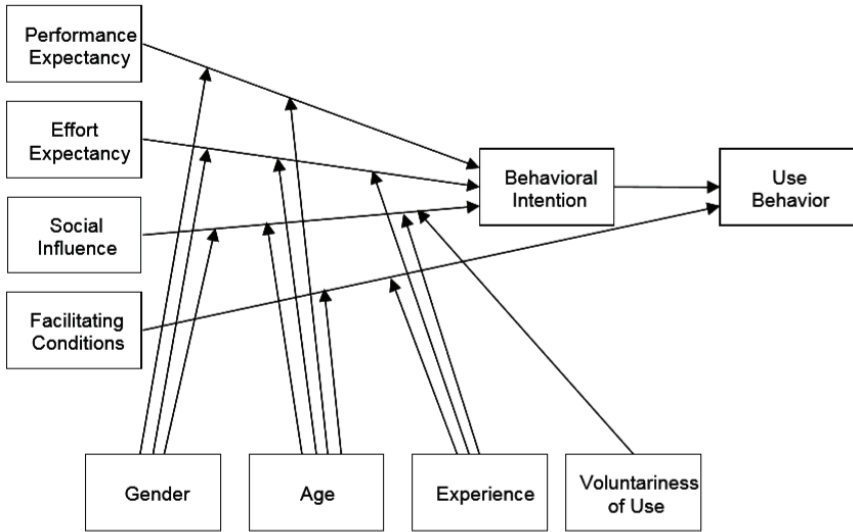
behaviour research in the pandemic era, specifically about e-payment success system acceptance, in addition to the existing empirical relation. The findings can be used to review the e-payment issues and consider how it must be regarded efficiently and effectively.

## LITERATURE REVIEW

### The UTAUT Model

Technology acceptance model studies produced several competing models, each with different determinants. Venkatesh et al. (2003) emerged intending to review and discuss the literature on adopting new information technology from the main existing models, comparing them empirically, formulating a unified model, and validating it empirically.

The UTAUT is a continuously evolving model that has been extensively studied (Rahman et al., 2017; Alswaigh & Aloud, 2021). UTAUT's second model was created by adding hedonic motivation, price value, and habit, and UTAUT's third model increased perceived innovation. UTAUT explains user behaviour towards information technology (Patil et al., 2017). The last model used in this study, combining the previous eight models, was developed successfully. This model showed that behavioural Intention (IB) and the behaviour to use (UB) were influenced by performance expectancy (PE), effort expectancy (EE), social Influence (SI), and facilitating conditions (FC). The supposed factors were moderated by gender (GR), age (AG), experience (EP), and voluntariness of use (VU). The few studies that have adopted the model showed mixed results findings, among others by Li (2010), Haryanti & Subriadi (2021) and Napitupulu et al. (2021) many researchers have found that information technology is underutilized in many organizations, causing huge economic loss to their businesses. As a result, many technology acceptance theories and models have been developed or used to study information technology acceptance. These models include: The Theory of Reasoned Action (Fishbein et al., 1975). The model is illustrated below:



**Figure 1: The Unified Theory of Acceptance and Use of Technology Model**  
(Venkatesh et al., 2012)

## Hypothesis Development

The individual’s perception that using e-payment will help to attain benefits in performing payment tasks may thus influence the behavioural intention to adopt e-payment. Previous research has shown that the more the customer believes using e-payment will be helpful the more will be its use (Syafinaz et al., 2020; Falana et al., 2021; Alzoubi et al., 2022; Chen & Arkansas, 2023)e-payment systems have been introducing. So, the use of electronic payment systems is being increasing day by day for people to complete their task quickly ineffective way. The result of the study shows that there is a relationship between dependent variables (effort expectancy and social influence. Interestingly, empirical evidence from past literature confirmed that age and gender significantly moderated the influence of performance expectancy on behavioural intention. Theoretically, it assumed that gender will reduce the interaction between performance expectation and intention. According to researchers comparing the genders, males were typically more challenged than women. Therefore, the hypothesis developed was:

*H1: Gender moderates the effect of performance expectations on behavioral intentions.*

Individual performance expectations result from the expectation of improved performance when they have adopted the system in their organisation (Barnett et al., 2015). There is reason to expect that the relationship between performance expectancy and intention will be moderated by age (Lau et al., 2019; Haryanti & Subriadi, 2021). Hence, Lee et al. (2019) and Singh, et al. (2021) defined that younger generations will be highly concerned about their expectations of the performance of technology, which affects the intention to use technology. Consequently, the following hypothesis was formed :

*H2: Age moderates the effect of performance expectancy on behavioural intention.*

Effort expectancy is the perceived ease of using a particular technology (Barnett et al., 2015; Ponsree et al., 2021; Slade et al., 2015). If an individual perceives using a particular technology as easy, they will be more inclined to use it. Previous research has shown that more customers believed that using e-payment was effortless (Yeh et al., 2015; Ardiansah et al., 2020). Prior research supports that constructs related to effort expectancy will be more robust determinants of individual intention for women (Li, 2010). Therefore, Barnett et al. (2015) and Dalla Via et al. (2019) suggested that effort expectations will differ between males and females, which is particularly critical for females because of the higher need for fulfillment. Consequently, the following hypothesis was conceived :

*H3: Gender moderates the effect of effort expectancy on behavioural intention.*

Effort expectancy is interpreted as a realized ease of use of technology in a defined activity (Venkatesh et al., 2003; Dalla Via et al., 2019). Effort constructs are expected to accentuate effort in the early stages of new behaviour, when the process is challenging and complicated by measurement instrumentality issues (Davis et al., 1989; Slade et al., 2015). Prior research supports that constructs related to effort expectancy will be more robust determinants of individuals' intentions for older persons (Venkatesh et al.,

2003). Younger age will strongly influence the effort expectancy towards behavioural intention. As a necessary consequence, the following hypothesis was conceived:

*H4: Age moderates the effect of effort expectancy on behavioural intention.*

If individuals perceive using a particular technology as convenient, they will adopt it, creating an experience that determines their subsequent behaviour (Haryanti & Subriadi, 2021; Melović et al., 2021). Based on the arguments, the influence of effort expectancy towards behavioural intention in the context of effort expectancy will be moderated by experience. People with experience using the system will make more effort to use the system (Rahman et al., 2017). This resulted in hypothesis

*H5: Experience moderates the effect of effort expectancy on behavioural intention.*

Social influence relates to the pressure placed on an individual by their close friends and family members who are a part of their social surroundings to adopt or not use a particular innovation (Syafinaz et al., 2020; Ponsree et al., 2021). This factor has proven its significance as a predictor of technology acceptance in various contexts. Research confirms that social comparison influences people's use of e-payment systems. According to the literature, women are more likely to keep in mind the opinions of others when deciding whether or not to adopt a new technology (Brown et al., 2008; Alswaigh & Aloud, 2021). Therefore, social influence on behavioural intention will be moderated by gender. Because of this, the hypothesis was developed :

*H6: Gender moderates the effect of social influence on behavioural intention.*

Social influence is the degree to which an individual perceives that others believe they should use the new system innovation (Bugshan & Attar, 2020; Syafinaz et al., 2020). A meta-analytic review of age effects concluded that affiliation needs to increase. This fact suggests that older workers are more likely to place increased salience on social influences, with the effect declining with experience (Brown et al., 2008). Therefore, social influence on behavioural intention will be moderated by age. In consideration of this that the hypothesis was created:

*H7: Age moderates the effect of social influence on behavioural intention.*

Social influence was reported by research to impact behavioural intentions significantly (Hong et al., 2006; Haritha, 2022). It's believed that the significance of social influence as a driver of technology acceptance arises from the presumption that individuals tend to consult with essential people in their environment to reduce the anxiety attached to the use of innovation (Slade et al., 2013). Therefore, social influence on behavioural intention will be moderated by the voluntariness of use and because of this, the hypothesis was created :

*H8: Voluntariness of use moderates the effect of social influence on behavioural intention.*

Social influence is the pressure exerted by members of the social surroundings of an individual to perform or not perform the behaviour in question (Moreno et al., 2016; Zakaria et al., 2019). Social factors influence customers' behaviour in three ways: identification, internalization, and compliance. While the earlier two factors refer to alterations in an individual's belief structure in the hope of a potential status gain, compliance refers to a change in an individual's belief structure caused by social pressure (Robertson, 2015; Lai et al., 2016). Experience will be a moderating factor in the relationship between social influence and behavioural intention. The hypothesis developed was:

*H9: Experience moderates the effect of social influence on behavioural intention.*

Facilitating conditions refers to consumers' perceptions of the resources and support available to perform a behaviour (Brown et al., 2008). As technology adoption is a technology-specific domain, the abundance and ubiquity of mobile technology would be considered essential for the adoption process, emphasizing facilitating conditions as a predictor of behavioural intention. Organizational psychologists have noted that older workers attach more importance to receiving help and assistance on the job. Therefore, the influence of facilitating conditions on use behaviour will be moderated by age.



In this context, the hypothesis was created:

*H10: Age moderates the effect of facilitating conditions on use behaviour.*

Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support the system (Alswaigh & Aloud, 2021; Napitupulu et al., 2021; Haritha, 2022). The effect is expected to increase with experience as technology users find multiple avenues for help and support throughout the organization, thereby removing impediments to sustained usage. These arguments align with empirical evidence from Venkatesh et al. (2003). Therefore, when moderated by experience, facilitating conditions will significantly influence use behaviour. Because of the above, the hypothesis was developed :

*H11: Experience moderates the effect of facilitating conditions on use behaviour*

Consistent with the underlying theory for all intention models discussed, we expect behavioural intention to influence technology usage significantly. Because of this, the hypothesis was developed in:

*H12: Behavioral intention influences use behaviour.*

This study used the UTAUT model, which integratively suggested that usage behavior and intention are presumed to be determined by a combination of several factors: performance expectancy, effort expectancy, social influence, and facilitating conditions, moderated by gender, age, experience, and voluntary usage.

## **METHODOLOGY**

This quantitative research focussed on the determinant factors of e-payment use behaviour. The e-payment application used as a study object was not limited to specific brands but was regularly used by consumers, including Ovo, Dana, Link Aja, and Go-Pay. The population was college students from the Z generation who use e-payment for their daily purchases. The sample was obtained online using snowballing techniques over September

– December 2020 to fulfill data analysis requirements. The instrument was provided online to respondents with initial consent and an obligation to maintain confidentiality. These instruments were distributed to measure five Likert scales of variables in the UTAUT origin model: behavioural intention and use behaviour as endogen, performance expectancy, effort expectancy, social influence, and facilitating condition as exogen, and age, gender, experience, and voluntariness of use as moderating variable.

Performance expectancy is the degree to which an individual believes that using the system will help them attain gains in job performance (Venkatesh et al., 2003; Smith, 2008). Effort expectancy is the perceived ease of using a particular technology (Venkatesh et al., 2003). Social influence is the degree to which an individual perceives those essential others believe they should use the new system (Venkatesh et al., 2003; Lee et al., 2019) each with different sets of acceptance determinants. In this paper, we (1. Facilitating conditions are the degree to which an individual believes that an organizational and technical infrastructure exists to support the system (Venkatesh et al., 2003; Alswaigh & Aloud, 2021). Moderating variables in this research were age, gender, experience, and voluntariness of use. All the concepts concluded that different ages or genders would be another intention towards new technology. Experience and voluntariness of use can have an effect.

This study used PLS-SEM to investigate the determinants of e-payment use behaviour, which followed these steps: (1) Outer model analysis was used to examine the validity and reliability of each construct. Validity testing can be performed on a valid construct if each indicator's loading and cross factors are comparatively higher than 0.70 or if the average variance extracted is higher than 0.5 for each indicator. The reliability testing on the Cronbach Alpha was more significant than 0.6, and the composite reliability was greater than 0.7 for a reliable construct. (2) Inner model analysis examines the structural relationship construct based on theory, which is evaluated using R-Square. (3) The significance of hypothesis testing can be seen in the t-statistics and the probability value for 5 %. Testing for moderating and mediating relationships is conceivable because SEM directly analyses the value and significance of their structural relationship.

## RESULTS AND DISCUSSION

### Result

Respondents who completed the online survey in its entirety within the given deadline were 196 individuals, and their character descriptions are shown in Table 1.

**Table 1: Characteristics of Respondents**

Characteristics		N	Percentage (%)
Gender	Male	84	43.00
	Female	112	57.00
Age	18 - 19	49	25.00
	20 - 21	69	35.00
	22 - 23	78	40.00
E-Payment app	Go-Pay	86	44.00
	Ovo	70	36.00
	Dana	27	14.00
	Link Aja	13	6.00

Source: primary data, 2020

Most respondents were women (57%). Most respondents were between the ages of 22 and 23, representing 40 percent, which indicated that they were representatives of Generation Z. The Go-Pay application was used as an e-payment method by most respondents (44 percent). Incorporated within the Gojek application, a web-based delivery business had expanded to include various other services such as food delivery, courier products, prescription drug delivery, cleaning services, and other offerings. Ovo, Dana, and Link Aja are independent e-payment applications compatible with various financial services systems, making them suitable for payment.

SEM analysis began with evaluating the outer model, considering loading and cross-loading factors. Testing showed the value of all cross-loading indicators against the construction was more than 0.7; subsequently, it was concluded that each indicator supported each valid structure. The valid result in cross-loading was also supported by the AVE value of each construct that was more than 0.5. Further reliability tests as shown in Table 3

also showed that Cronbach alpha construct values were more than 0.6 except for effort expectancy constructs. However, this was acceptable because the Composite Reliability value of each construct, including Effort Expectancy, was more than 0.7. Both Tables supported the outer model result that each construct was valid and reliable in the UTAUT model.

**Table 2: AVE Test & Reliability Test**

<b>Construct</b>	<b>AVE</b>	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>
Performance Expectancy (PE)	0.587	0.768	0.850
Effort Expectancy (EE)	0.689	0.566	0.815
Social Influence (SI)	0.783	0.862	0.915
Facilitating Condition (FC)	0.817	0.783	0.899
Experience (EP)	0.750	0.889	0.923
Voluntariness of Use (VU)	0.694	0.852	0.901
Behavioral Intention (BI)	0.688	0.849	0.898
Use Behavior (UB)	0.656	0.824	0.884

Sources: primary data, 2020

The outputs of the inner model’s evaluation, considered necessary in the goodness of fit model, showed that the R2 values in endogenous variables, Behavioral Intention was 0.718 and Use behaviour was 0.654, respectively. The R2 values of the two constructs mainly supported the equation model, which was a significant finding. The result was substantiated by the model’s SRMR value of 0.085, its d ULS value of 3.141, its chi-square value of 745.684, and its NFI value of 0.636, all of which were affirmative. Such empirical results supported the conclusion that the equation model could be used for further investigation.

The hypothesis testing stage was done by assessing the significance of the t value, as presented in Table 3. That Table describes the t value of the direct relationship and the moderating of each determinant to behaviour intention and uses behaviour.

**Table 3: Hypothesis Testing**

		<b>t</b>	<b>p</b>
PE	→ BI	0.331	0.741
EE	→ BI	0.443	0.658
SI	→ BI	0.726	0.468
EP	→ BI	0.2691	<b>0.007*</b>
VU	→ BI	4.940	<b>0.000*</b>
AG	→ BI	0.321	0.748
GR	→ BI	0.792	0.429
FC	→ UB	0.409	0.683
EP	→ WEB	1.393	0.164
AG	→ UB	0.816	0.414
BI	→ UB	7.099	<b>0.000*</b>
PE*GR	→ BI	1.054	0.292
PE*AG	→ BI	0.796	0.426
EE*GR	→ BI	0.026	0.979
EE*AG	→ BI	0.122	0.903
EE*EP	→ BI	0.908	0.364
SI*GR	→ BI	0.929	0.353
SI*AG	→ BI	0.491	0.624
SI*VU	→ BI	0.374	0.708
SI*EP	→ BI	0.018	0.985
FC*AG	→UB	1.046	0.296
FC*EP	→UB	2.931	<b>0.003*</b>
PE*GR	→ BI	1.054	0.292
PE*AG	→ BI	0.796	0.426

Sources: primary data, 2020

As shown in the Table significant behavioural intention determinants included experience (0.2691 p=0.007) and voluntariness of use (4,940 p=0.000). The direct effect of behavioural intentions on behavioural use was significant, with t= 7,099 (p=0.000). The moderating impact indicated that only the moderation facilitating condition (FC) to experience (EP) was effective at 5% alpha (2,931, p=0.003). Gender and age did not significantly moderate behavioural intention.

## DISCUSSION

The finding showed that the e-payment use behaviour by Generation Z was determined by its intention; however, the supporting facilities had no effect. This finding emphasises that the identified characteristics of Generation Z are more determined by convenience and understandable perceptions of the use of information technology (Ponsree et al., 2021). The decision to use e-payment by Generation Z can be understandably determined by a preference based on experience and the perceived voluntariness of use. The desire to make payments with e-payments is influenced by the comfortable conditions experienced and the awareness of voluntariness of use (Alswaigh & Aloud, 2021). The Z generation's intention to use e-payment significantly considered experience and voluntariness of use. They will intensively utilize e-payment empirically influenced by previous experience and voluntariness of use. Following that, this experience delivers a human benchmark for performing activities or reacting to everything in the future (Rahman et al., 2017).

Interestingly, facilitating conditions did not affect desire but strengthened the good experience received. It is understood from these findings that various support structures, technological infrastructure facilities, and practical regulations to increase the use of e-payments in various transactions in Indonesia had less impact on the behaviour of using e-payments directly. The various support facilities form a better understanding and experience in use and support the desire to use in the future. Regarding e-payments, the organizational and technological infrastructure support of e-payment did not impact the decisions to utilize e-payment. This finding follows Hossain and Zhou (2018). Generation Z considers the development and advancement of information technology that supports e-payment transactions a reasonable precondition for providing convenience. This condition is an appropriate development of payment technology (Dahlberg et al., 2008). Still, do not necessarily take advantage of it because there are several other alternatives: credit cards, debit cards, mobile banking, SMS banking, and other digital payments.

Many scholars have argued that one of the most critical factors in determining actual behavior is the intention to perform a specific behaviour. Zhou (2016) specifically argued that the user's intention is the most crucial

factor determining user acceptance and use of technology such as mobile payment. Although the issue of behavioral intention has received much interest in the background, mainly in the field of information systems research, more investigation is still required to comprehend the phenomenon correctly. In most cases, expanding the scope of the various models found in prior research improves the predictive validity of those models beyond their initial design.

In the theory of acceptance of information systems, the voluntariness of users to use the approval system is one of the variables that can moderate the use of the system. Still, its role as a moderator is challenging to avoid (Antwi et al., 2015) the interest and patronage seem to have waned drastically. The study examines the effectiveness of that form of electronic payment system in the Tamale metropolis in Ghana. The study adopts questionnaire administration to ascertain the common types of e-payment systems, the level of adoption of e-ZWICH, and the factors affecting its effectiveness. This study reveals that there is low patronage of the e-ZWICH smart card due to frequent link failures, long queues in banking halls and limited point-of-sale devices. This has stalled the effective adoption and use of the system. The study recommends that the innovators and regulators introduce measures to renew the interest of stakeholders through sensitization workshops, making the point-of-sale devices more available and enhancing the smooth operation of the devices.

1.0 Introduction

The rapid development in information and communication technology (ICT. Voluntariness is how someone uses technology at his own will without coercion. Voluntariness on an environmental basis refers to the freedom to adopt an information system. Meanwhile, volunteerism on the user base focuses on space, which refers to the user's perception of adopting the system and its intrinsic nature. According to Sumak et al. (2016), the use of technology in education is not mandatory. Still, it is voluntary; namely, its use depends on the volunteerism of its users and the situation that is happening. Volunteerism of users can moderate other factors in the use of the system.

The facilitating condition is the degree to which an individual believes that an organizational and technical infrastructure exists to support the system (Venkatesh & Bala, 2008) like UTAUT's facilitating conditions in past models and theories, TPB's perceived behavioural control, DOI's compatibility, and TAM-TPB's facilitating conditions. Ironically,

performance and effort expectancies diminish the influence of facilitating conditions on behavioural intentions. However, empirical evidence proved that the impact is more substantial for experienced older workers; thus, age and experience are hypothesized to moderate the effect (Venkatesh et al., 2003). Human sensing of the environment will produce experience. This experience becomes a human benchmark for doing activities or responding to everything in the future (Tamunomiebi & Miebaka, 2021). The experience is like a reference containing everything needed to be used as a foundation for human beings' intake attitude and decisions in every segment of life. In the theory of acceptance of information systems, experience is one of the variables that can moderate the use of the system.

## CONCLUSION

This study showed that in a pandemic, Generation Z's decision to use e-payments is directly determined by behavioural intention while facilitating conditions do not significantly affect the use behaviour. Behavioural intention was found to be directly influenced by experience and willingness to use e-payments, which showed the character of Generation Z, whose use perception was shaped by experience. In addition, Generation Z had flexibility in their choices and was not single-oriented towards a feature that supports the voluntariness of use to form behavioural intention. Performance expectation variables and the results of using e-payment and social influence in the UTAUT model were not determinants of behavioural intention directly or use behaviour indirectly.

This study provides important insights that the study of the successful use of e-payments as a form of fintech innovation trends needs to pay attention to the user context, in this instance, Generation Z, which will dominate the proportion of the Indonesian population in the future. Practically, this study can obtain some essential points of policies that support the implementation of e-payments for Generation Z, which need to provide experience, freedom of use, and infrastructure that supports it. Based on the results, the suggestions that could be given are as follows: The sample for further research can be expanded for its age level from adolescence to adulthood. The sample in this study was only college students 18 – 24 years old. However, nowadays, e-payment is used by children, teenagers,



and adults. Further research can use a variance age sample. The objects from e-payment can be more specified. There are so many e-payments in Indonesia and further research can focus on only one e-payment because the result may be more specified.

## REFERENCES

- Alswaigh, N. Y., & Aloud, M. E. (2021). Factors Affecting User Adoption of E-Payment Services Available in Mobile Wallets in Saudi Arabia. *IJCSNS International Journal of Computer Science and Network Security*, 21(6), 222. <https://doi.org/10.22937/IJCSNS.2021.21.6.29>
- Alzoubi, H. M., Alshurideh, M. T., Kurdi, B. Al, Alhyasat, K. M. K., & Ghazal, T. M. (2022). The effect of e-payment and online shopping on sales growth: Evidence from banking industry. *International Journal of Data and Network Science*, 6(4), 1369–1380. <https://doi.org/10.5267/j.ijdns.2022.5.014>
- Antwi, S. K., Hamza, K., & Bavoh, S. W. (2015). Examining the Effectiveness of Electronic Payment System in Ghana: The Case of e-ZWICH in the Tamale Metropolis. *Research Journal of Finance and Accounting(Online)*, 6(2), 2222–2847.
- Ardiansah, M. N., Chariri, A., Rahardja, S., & Udin, U. (2020). The effect of electronic payments security on e-commerce consumer perception : An extended model of technology acceptance. *Management Science Letter*, 10(7), 1473–1480. <https://doi.org/10.5267/j.msl.2019.12.020>
- Ardiansah, M. N., Murtiasri, E., Sarana, Suwondo, A., & Sadida, A. (2022). Understanding E-Payment Security Behavior Z Generation’s Perceived Explanation. *Proceedings of the International Conference on Applied Science and Technology on Social Science 2022 (ICAST-SS 2022)*, 392–396. [https://doi.org/10.2991/978-2-494069-83-1\\_71](https://doi.org/10.2991/978-2-494069-83-1_71)
- Barnett, T., Pearson, A. W., Pearson, R., & Kellermanns, F. W. (2015). Five-Factor Model Personality Traits as Predictors of Perceived and Actual Usage of Technology. *European Journal of Information Systems*, 24(4), 374–390. <https://doi.org/10.1057/ejis.2014.10>

- Broby, D. (2021). Financial technology and the future of banking. *Financial Innovation*, 7(1), 47. <https://doi.org/10.1186/s40854-021-00264-y>
- Brown, S. A., Venkatesh, V., Kuruzovich, J., & Massey, A. P. (2008). Expectation Confirmation: An Examination of Three Competing Models. *Organizational Behavior and Human Decision Processes*, 105(1), 52–66. <https://doi.org/10.1016/j.obhdp.2006.09.008>
- Bugshan, H., & Attar, R. W. (2020). Social commerce information sharing and their impact on consumers. *Technological Forecasting and Social Change*, 153(December 2019), 119875. <https://doi.org/10.1016/j.techfore.2019.119875>
- Chen, A., & Arkansas, C. (2023). Usage Behavior of E-Payment Services By Chinese Millennials ( Generation Y ) and Zoomers (Generation Z). *Journal of Business Administration Online*, 17(01).
- Dahlberg, T., Mallat, N., Ondrus, J., & Zmijewska, A. (2008). Past, present and future of mobile payments research: A literature review. *Electronic Commerce Research and Applications*, 7(2), 165–181. <https://doi.org/10.1016/j.elerap.2007.02.001>
- Dalla Via, N., Perego, P., & van Rinsum, M. (2019). How accountability type influences information search processes and decision quality. *Accounting, Organizations and Society*, 75, 79–91. <https://doi.org/10.1016/j.aos.2018.10.001>
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35(8), 982–1003. <https://doi.org/10.1287/mnsc.35.8.982>
- Falana, T., Renner, J., Adekoya, A., & Abolurin, O. (2021). Artificial Intelligence and Healthcare: The Effects of COVID-19 on Nigerians. In *Studies in Systems, Decision and Control* (Vol. 334). [https://doi.org/10.1007/978-3-030-67151-8\\_7](https://doi.org/10.1007/978-3-030-67151-8_7)

- García-Moreno, M. B., García-Moreno, S., Nájera-Sánchez, J. J., & De Pables-Heredero, C. (2016). An explanatory model of the organisational factors that explain the adoption of e-business. *Journal of Industrial Engineering and Management*, 9(2), 547–581. <https://doi.org/10.3926/jiem.1917>
- Haritha, P. (2022). Mobile payment service adoption: understanding customers for an application of emerging financial technology. *Information & Computer Security, ahead-of-p*(ahead-of-print). <https://doi.org/10.1108/ICS-04-2022-0058>
- Haryanti, T., & Subriadi, A. P. (2021). E-commerce acceptance in the dimension of sustainability. *Journal of Modelling in Management, ahead-of-p*(ahead-of-print). <https://doi.org/10.1108/JM2-05-2020-0141>
- Hassan, M. A., Shukur, Z., Hasan, M. K., & Al-Khaleefa, A. S. (2020). A Review on Electronic Payments Security. *Symmetry*, 12(June), 1–29. <https://doi.org/10.3390/sym12050852>
- Hong, S. J., Thong, J. Y. L., & Tam, K. Y. (2006). Understanding continued information technology usage behavior: A comparison of three models in the context of mobile internet. *Decision Support Systems*, 42(3), 1819–1834. <https://doi.org/10.1016/j.dss.2006.03.009>
- Hossain, M. S., & Zhou, X. (2018). Impact of m-payments on purchase intention and customer satisfaction : perceived flow as mediator. *International Journal of Science and Business*, 2(3), 503–517. <https://doi.org/10.5281/zenodo.1408692>
- Kabir, M. A., Saidin, S. Z., & Ahmi, A. (2015). Adoption of e-Payment Systems : A Review of Literature. *Proceedings of the International Conference on E-Commerce (ICoEC) 2015, 2012*, 112–120.
- Kim, C., Tao, W., Shin, N., & Kim, K. S. (2010). An empirical study of customers' perceptions of security and trust in e-payment systems. *Electronic Commerce Research and Applications*, 9(1), 84–95. <https://doi.org/10.1016/j.elerap.2009.04.014>

- Lai, V. S., Lai, F., & Lowry, P. B. (2016). Technology Evaluation and Imitation: Do They Have Differential or Dichotomous Effects on ERP Adoption and Assimilation in China? *Journal of Management Information Systems*, 33(4), 1209–1251. <https://doi.org/10.1080/07421222.2016.1267534>
- Lau, M. M., Lam, A. Y. C., Cheung, R., & Leung, T. F. (2019). Understanding determinants of customer behavioral intention in using mobile payment at convenience stores. *ACM International Conference Proceeding Series*, 357–362. <https://doi.org/10.1145/3306500.3306549>
- Lee, S. W., Sung, H. J., & Jeon, H. M. (2019). Determinants of continuous intention on food delivery apps: Extending UTAUT2 with information quality. *Sustainability (Switzerland)*, 11(11). <https://doi.org/10.3390/su11113141>
- Li, L. (2010). A Critical Review of Technology Acceptance Literature. *Southwest Decision Sciences Institute*, 22. [http://www.swdsi.org/swdsi2010/SW2010\\_Preceedings/papers/PA104.pdf](http://www.swdsi.org/swdsi2010/SW2010_Preceedings/papers/PA104.pdf)
- Liébana-cabanillas, F., Muñoz-leiva, F., & Sánchez, J. (2015). Behavioral Model of Younger Users in M-Payment Systems. *Journal of Organizational Computing and Electronic Commerce*, 9392(November). <https://doi.org/10.1080/10919392.2015.1033947>
- Liu, Z., Ben, S., & Zhang, R. (2019). Factors affecting consumers' mobile payment behavior: a meta-analysis. *Electronic Commerce Research*, 0123456789. <https://doi.org/10.1007/s10660-019-09349-4>
- Melović, B., Šehović, D., Karadžić, V., Dabić, M., & Ćirović, D. (2021). Determinants of Millennials' behavior in online shopping – Implications on consumers' satisfaction and e-business development. *Technology in Society*, 65(December 2020). <https://doi.org/10.1016/j.techsoc.2021.101561>
- Napitupulu, D., Yacub, R., & Putra, A. H. P. K. (2021). Factor Influencing of Telehealth Acceptance During COVID-19 Outbreak: Extending UTAUT Model. *International Journal of Intelligent Engineering and Systems*, 14(3), 267–281. <https://doi.org/10.22266/ijies2021.0630.23>

- Patil, P. P., Dwivedi, Y. K., & Rana, N. P. (2017). Digital payments adoption: An analysis of literature. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 10595 LNCS, 61–70. [https://doi.org/10.1007/978-3-319-68557-1\\_7](https://doi.org/10.1007/978-3-319-68557-1_7)
- Ponsree, K., Phongpaew, T., & Narhutaradhol, P. (2021). A comparative evidence of income levels reflecting gen Z's digital payments intention and usage. *Frontiers in Artificial Intelligence and Applications*, 341, 205–212. <https://doi.org/10.3233/FAIA210249>
- Putri, N., Rahadi, R. A., Resti, N., Putri, R., & Murtaqi, I. (2017). A Conceptual Study on the Use of Electronic Payment Instruments among Generation Z in Bandung City. *Journal of Global Business and Social Entrepreneurship (GBSE)*, 3(9), 32–40. <https://www.researchgate.net/publication/322356949>
- Rahman, M. M., Lesch, M. F., Horrey, W. J., & Strawderman, L. (2017). Assessing the utility of TAM, TPB, and UTAUT for Advanced Driver Assistance Systems. *Accident Analysis and Prevention*, 108, 361–373. <https://doi.org/10.1016/j.aap.2017.09.011>
- Robertson, D. C. (2015). Social Determinants of Information Systems Use. *Journal of Management Information Systems*, 5(4), 55–71. <https://doi.org/10.1080/07421222.1989.11517839>
- Singh, S., Sahni, M. M., & Kovid, R. K. (2021). Exploring trust and responsiveness as antecedents for intention to use FinTech services. *International Journal of Economics and Business Research*, 21(2), 254–268. <https://doi.org/10.1504/IJEER.2021.113152>
- Slade, E. L., Dwivedi, Y. K., Piercy, N. C., & Williams, M. D. (2015). Modeling Consumers' Adoption Intentions of Remote Mobile Payments in the United Kingdom : Extending UTAUT with Innovativeness, Risk, and University of Bristol - Explor. *Psychology and Marketing*, 32(5), 860–873. <https://doi.org/10.1002/mar.20823/abstract>.

- Slade, E. L., Williams, M. D., & Dwivedi, Y. K. (2013). Mobile payment adoption: Classification and review of the extant literature. *The Marketing Review*, 13(2), 167–190. <https://doi.org/10.1362/146934713x13699019904687>
- Smith, T. I. (2008). An investigation into the impact of information technology bank examiners' community knowledge sharing sessions on their individual performance. In *Dissertation Abstracts International*.
- Sumak, B., Hericko, M., Budimac, Z., & Pusnik, M. (2016). Investigation of moderator factors in e-business adoption: A quantitative meta-analysis of moderating effects on the drivers of intention and behavior. *Computer Science and Information Systems*, 14(1), 75–102. <https://doi.org/10.2298/csis160902033s>
- Syafinaz, I., Shafie, M., Liza, Y., Yusof, M., Mahmood, A. N., Jamal, H. Z., Hidayatul, N., & Kasim, A. A. (2020). Factors Influencing the Adoption of E-Payment: An Empirical Study in Malaysia. *Advances in Business Research International Journal*, 4(2), 53–62. <https://myjms.mohe.gov.my/index.php/ABRIJ/article/view/10009>
- Tamunomiebi, D., & Miebaka, D. (2021). Pandemic Disruptions: The Need for Teleworking: Challenges And Prospects. In *TProceedings of the 15th Annual International Conference*.
- Thompson, B. S. (2017). Can Financial Technology Innovate Benefit Distribution in Payments for Ecosystem Services and REDD+? *Ecological Economics*, 139, 150–157. <https://doi.org/https://doi.org/10.1016/j.ecolecon.2017.04.008>
- Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences*, 39(2), 273–315.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.1017/CBO9781107415324.004>

- Venkatesh, V., Thong, J. Y. L., & Xin Xu. (2012). Consumer Sebuah Ceptance dan Use Of saya Informasi Technology : Extending The Unified Theory. *MIS Quarterly*, 36(1), 157–178.
- Yeh, C. H., Lee, G. G., & Pai, J. C. (2015). Using a Technology Organization Environment Framework to Investigate the Factors Influencing e-Business Information Technology Capabilities. *Information Development*, 31(5), 435–450. <https://doi.org/10.1177/0266666913516027>
- Yousafzai, S. Y., Foxall, G. R., & Pallister, J. G. (2010). Explaining Internet Banking Behavior: Theory of Reasoned Action, Theory of Planned Behavior, or Technology Acceptance Model? *Journal of Applied Social Psychology*, 40(5), 1172–1202. <https://doi.org/10.1111/j.1559-1816.2010.00615.x>
- Yu, C. S., & Tao, Y. H. (2009). Understanding Business-Level Innovation Technology Adoption. *Technovation*, 29(2), 92–109. <https://doi.org/10.1016/j.technovation.2008.07.007>
- Zakaria, N. B., Nordin, M. F., Yunos, R. M., & Said, J. (2019). The Integrity of Local Enforcement Officers: Self Proclaim vs Colleague Perception. *International Journal of Financial Research*, 10(5). <https://doi.org/10.5430/ijfr.v10n5p288>
- Zhou, B. (2016). Lean principles, practices, and impacts: a study on small and medium-sized enterprises (SMEs). *Annals of Operations Research*, 241(1–2), 457–474. <https://doi.org/10.1007/s10479-012-1177-3>

