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Implications Of The Unified Theory Of Acceptance And Use Of Technology 2 (Utaut2) Model On Cryptocurrency Investment Intentions Among Generation Z In Jayapura City With Financial Literacy As A Moderator

Isma Shalihi Ahlia[1] , Musa Kris Payokwa[2] , Aprianto La'lang Kuddy[1] , Fanny Kristin Tantyah Sitompul[4] , Iriando Wijaya[5]

[1, 2, 3, 4,5] Cenderawasih University, Indonesia

Email: isma.ahlia@feb.uncen.ac.id ,kuddy.keuda@gmail.com ,musa.payokwa@feb.uncen.ac.id ,fanny.sitompul@feb.uncen.ac.id ,iriando.wijaya@feb.uncen.ac.id

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UTAUT2, financial literacy, investment intention, cryptocurrency, Generation Z

Abstract

This study aims to analyze the effect of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) construct on the intention to invest in cryptocurrency among Generation Z in Jayapura City, with financial literacy as a moderating variable. This study uses a quantitative approach with an explanatory method. Data were obtained from 210 respondents aged 18–30 years through probability sampling techniques. Data analysis was performed using Structural Equation Modelling–Partial Least Squares (SEM–PLS) with the assistance of SmartPLS 4.0 software. The results showed that of the eight variables tested, only financial literacy had a positive and significant effect on cryptocurrency investment intentions. Meanwhile, the seven primary constructs of UTAUT2—performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit—had no significant effect. In addition, financial literacy was found to act as a moderating variable that strengthens the influence of hedonic motivation and weakens the influence of facilitating conditions on investment intentions. These findings indicate that Generation Z's investment decisions in Jayapura are more influenced by their level of financial knowledge and readiness than by technological readiness. Theoretically, this study expands the UTAUT2 model by adding financial literacy as a relevant contextual variable in explaining digital investment behaviour in developing regions. Practically, the results of this study emphasise the importance of strengthening digital financial literacy programs for young investors, developing educational content on investment platforms, and integrating digital financial literacy into college curricula to encourage rational and sustainable investment behaviour.

INTRODUCTION

The digital revolution has driven significant changes in the global financial system, including in Indonesia. Innovations in information and communication technology have created a new digital-based financial ecosystem that has given rise to various unconventional investment instruments, one of which is cryptocurrency. Cryptocurrency not only functions as a virtual medium of exchange but also as an investment instrument that offers high potential returns(OJK, 2024). However, price volatility and lack of regulation make it high-risk for investors with low financial literacy. According to data from the Commodity Futures Trading Regulatory Agency(Bappepti, 2024), the number of cryptocurrency investors in Indonesia reached 20.24 million people as of June 2024, an increase of 490,000 from the previous month. The transaction value reached IDR 301.75 trillion in the first six months of 2024, nearly double that of 2023.

Interestingly, around 60% of investors come from Generation Z (aged 18–30 years), a group known as digital natives with a high level of technology adoption. Although Gen Z has broad access to technology and information, many of them do not yet have mature financial management skills, making them vulnerable to speculative investment decisions. In this context, financial literacy is an important factor in shaping rational and sustainable investment behaviour. Ali & Nasuha (2023) emphasise that financial literacy can strengthen the relationship between performance expectations and investment intentions. Meanwhile, the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model developed by Venkatesh et al. (2012) offers a comprehensive theoretical framework for explaining technology acceptance behaviour, including in the context of digital finance such as cryptocurrency.

The UTAUT2 model identifies seven key constructs that influence technology adoption behaviour, namely performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit (2012). A number of empirical studies have demonstrated the relevance of this model in explaining digital financial adoption behaviour. Alalwan (2017) found that performance expectancy and ease of use significantly influence the adoption of mobile banking in Jordan, while Ladia (2024) in the Indonesian context reported that all UTAUT2 constructs have a positive influence on the intention to invest in cryptocurrency. In addition to technological factors, financial literacy was also identified as an important variable in explaining investment intentions. Xiao (2016) emphasised that individuals with high levels of financial literacy are better able to understand risks, manage personal finances, and make rational investment decisions, while Huston (2010) referred to financial literacy as a cognitive and behavioural component that directly influences an individual's financial well-being. In the context of digital investment, financial literacy serves as an important foundation so that individuals not only follow technological trends but are also able to assess the risks and benefits of investment proportionally. However, most studies integrating UTAUT2 and financial literacy are still limited to the context of large cities in Indonesia with high levels of technology adoption. At the same time, regions such as Jayapura, which have different social characteristics and digital infrastructure, are still rarely the focus of study.

Most previous studies also assumed that the UTAUT2 construct had a uniform influence on digital investment behaviour, without considering differences in financial literacy levels between regions. However, in areas such as Jayapura, infrastructure constraints, limited access to information, and low financial literacy can change the pattern of acceptance of technology (Gunawan et al., 2022). Thus, an approach that focuses only on technological factors is insufficient to explain Gen Z's intention to invest in cryptocurrency in this region. Furthermore, although studies such as Ali and Nasuha (2023) and Abbasi et al. (2020) have highlighted the role of financial literacy as a moderating variable in the adoption of financial technology, no study has explicitly examined how financial literacy can strengthen or weaken the influence of each UTAUT2 construct on the intention to invest in cryptocurrency. Therefore, this study seeks to fill this theoretical and empirical gap by using an integrative approach between UTAUT2 and financial literacy in the context of Gen Z in Jayapura.

Based on this rationale, this study aims to analyse the influence of the UTAUT2 construct on Gen Z's intention to invest in cryptocurrency in Jayapura City and to examine the role of financial literacy as a moderating variable in the relationship between the UTAUT2 construct and the intention to invest in cryptocurrency. By referring to the social context and characteristics of the younger generation in eastern Indonesia, this study is expected to provide theoretical

contributions through the expansion of the UTAUT2 model that integrates aspects of financial literacy, as well as practical contributions to regulators, digital platform providers, and educational institutions in designing strategies to improve financial literacy to encourage healthy and sustainable digital investment behaviour.

METHODS

This study uses an explanatory quantitative approach to examine the causal relationship between the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) construct and the intention to invest in cryptocurrency, with financial literacy as a moderating variable. This approach was chosen because it is capable of explaining the empirical relationship between latent variables using the Structural Equation Modelling–Partial Least Squares (SEM–PLS) statistical model. The research was conducted using a cross-sectional survey design with 210 Generation Z respondents aged 18–30 years in Jayapura City. Respondents were selected using probability sampling, with the following inclusion criteria: residing in Jayapura, having an interest in or experience with digital investment, and using applications such as Indodax, Pintu, or Binance. The number of respondents met the minimum sample-to-indicator ratio requirement of five times the number of indicators (Hair et al., 2019). The operational definitions of the variables are described based on the following indicators:

1. Performance Expectancy (PE): the perception that using digital investment applications improves investment performance, measured through transaction efficiency, decision-making effectiveness, increased investment returns, and ease of monitoring portfolios.
2. Effort Expectancy (EE): the level of ease of use of the application, measured through ease of learning, application navigation, feature comprehension, and comfort of use.
3. Social Influence (SI): the extent to which the social environment influences investment decisions, measured through support from friends, family, community, and social media.
4. Facilitating Conditions (FC): the availability of resources that support digital investment, measured by internet access, technological devices, customer service, and system reliability.
5. Hedonic Motivation (HM): enjoyment and satisfaction in using investment applications, measured through feelings of pleasure, interest, positive experiences, and emotional involvement.
6. Price Value (PV): the perception of balance between the benefits and costs of digital investment, measured through transaction cost efficiency, relative returns, perceived added value, and price fairness.
7. Habit (HB): the level of habit and routine in using investment applications, measured through frequency of use, behaviour automation, convenience, and attachment to the platform.

8. Financial Literacy (FL): the level of an individual's knowledge, skills, and attitudes in managing finances and risks, measured by the ability to understand financial products, make rational investment decisions, and manage risks.
9. Investment Intent (II): an individual's desire and readiness to invest in cryptocurrency, measured through interest, plans, intentions, and decisions to invest.

Data analysis was performed using SmartPLS 4.0 through two stages: evaluation of *the outer model* to test the validity and reliability of the construct, and *the inner model* to test the causal relationship between variables and the moderating effect of financial literacy. Significance testing was performed using the *bootstrapping* method (t-statistic > 1.96; p < 0.05). The results show that the dependent variable "intention to invest in cryptocurrency" has an R^2 value *of 0.752,* which means that the UTAUT2 construct and financial literacy explain 75.2% of the variation.

The conceptual framework of this study is described as follows:

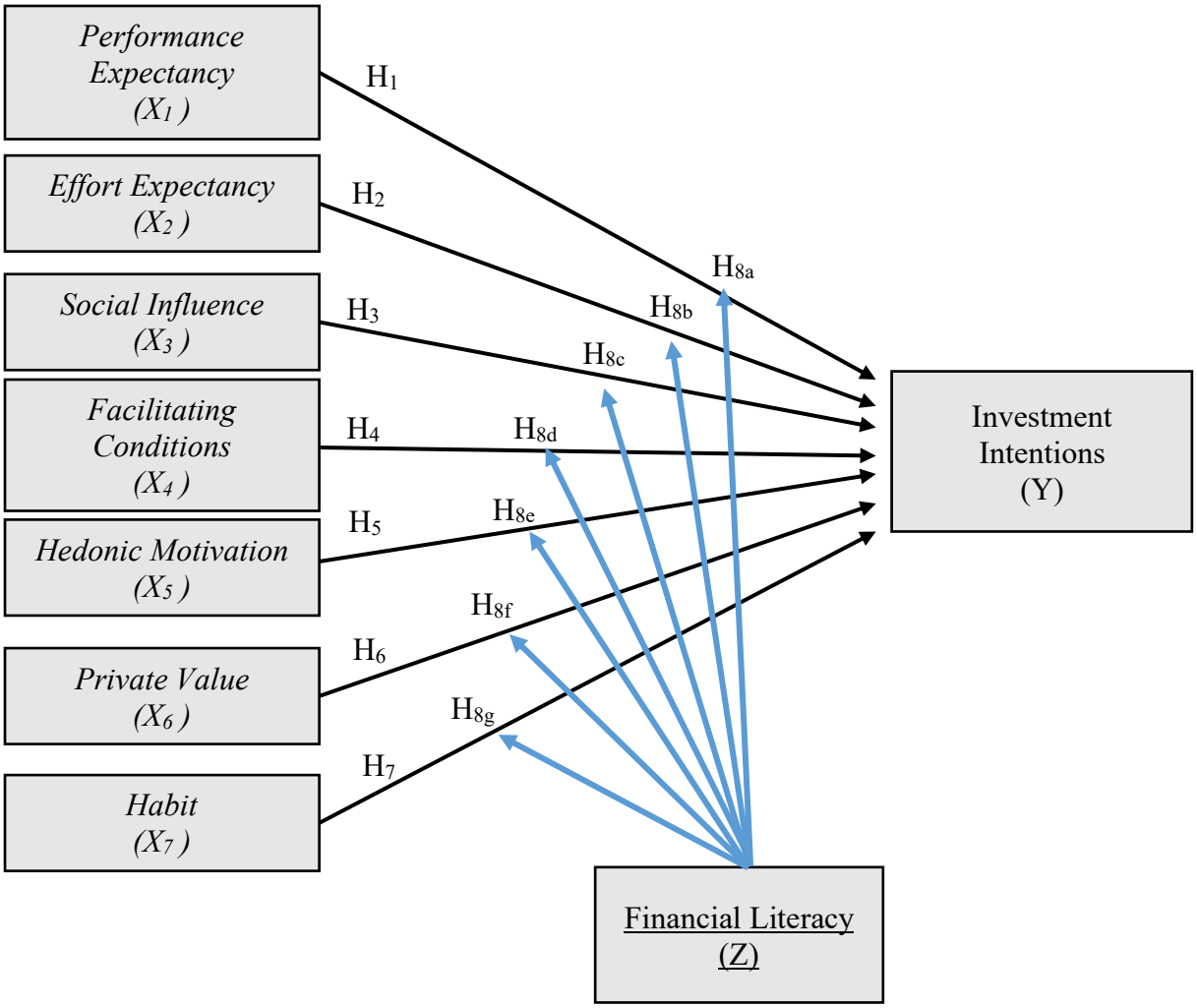

Figure 1. Conceptual Framework

Source: Processed Data 2025

Based on the developed framework, the research hypotheses are as follows:

- **H1:** *Performance expectancy* has a positive effect on the intention to invest in cryptocurrency.
- **H2:** *Effort expectancy* has a positive effect on cryptocurrency investment intention.
- **H3:** *Social influence* has a positive effect on cryptocurrency investment intention.
- **H4:** *Facilitating conditions* have a positive effect on cryptocurrency investment intention.
- **H5:** *Hedonic motivation* has a positive effect on cryptocurrency investment intention.
- **H6:** *Price value* has a positive effect on cryptocurrency investment intention.
- **H7:** *Habit* has a positive effect on cryptocurrency investment intention.
- **H8:** Financial literacy has a positive effect on cryptocurrency investment intention.
- **$H8_{a-g}$**: Financial literacy strengthens the influence of the UTAUT2 construct on the intention to invest in cryptocurrency.

RESULTS AND DISCUSSION

Respondent Characteristics

This study involved 210 Generation Z respondents in Jayapura City aged between 18 and 30 years. Based on demographic distribution, the majority of respondents were aged 22–25 years (58.6%), while 43.8% had never used a digital investment application. This fact shows that most respondents are still in the exploratory stage of technology-based investment, despite having a reasonably high interest in crypto assets. This condition reflects the distinctive characteristics of Generation Z in eastern Indonesia, which is adaptive to digital developments but still limited in its investment experience.

Validity and Reliability Test Results (Outer Model)

The results of the validity and reliability analysis show that all constructs in the research model meet the eligibility criteria. The outer loading value of each indicator is above 0.70, the Average Variance Extracted (AVE) is above 0.50, and the Composite Reliability (CR) is in the range of 0.84–0.93. This indicates that all indicators have good internal consistency and are able to represent the constructs of each variable validly. Thus, the measurement model (outer model) is declared feasible for use in further analysis using Structural Equation Modelling–Partial Least Squares (SEM–PLS).

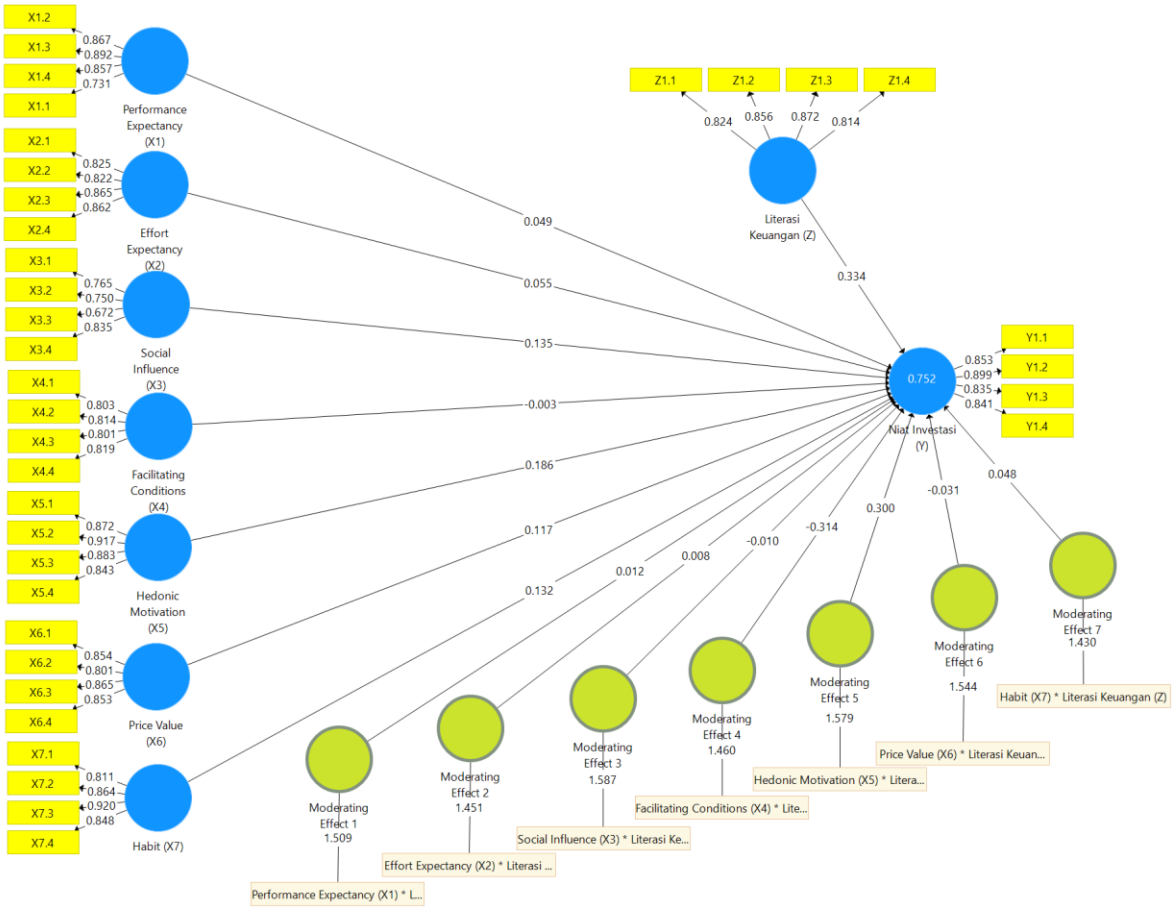

Figure 1. Outer Model

Source: SmartPLS Output, 2025

Structural Model Evaluation (Inner Model)

The results of the structural model testing show a coefficient of determination (R^2) value of 0.752, which means that the independent variables in the model can explain 75.2% of the variation in cryptocurrency investment intentions. This value indicates a strong predictive power for the digital investment behaviour of Generation Z in Jayapura City. From the results of direct hypothesis testing, only financial literacy was proven to have a positive and significant effect on cryptocurrency investment intention ($\beta = 0.334$; $t = 3.786$; $p < 0.001$). Meanwhile, the seven primary constructs of *UTAUT2—performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and* habit—did not show a significant effect ($p > 0.05$).

These findings indicate that Generation Z's investment behaviour in Jayapura is influenced more by their level of financial understanding than by their perception of the ease or usefulness of technology. This condition illustrates that financial literacy is a dominant factor shaping more rational investment intentions, especially among users who are new to the world of digital investment.

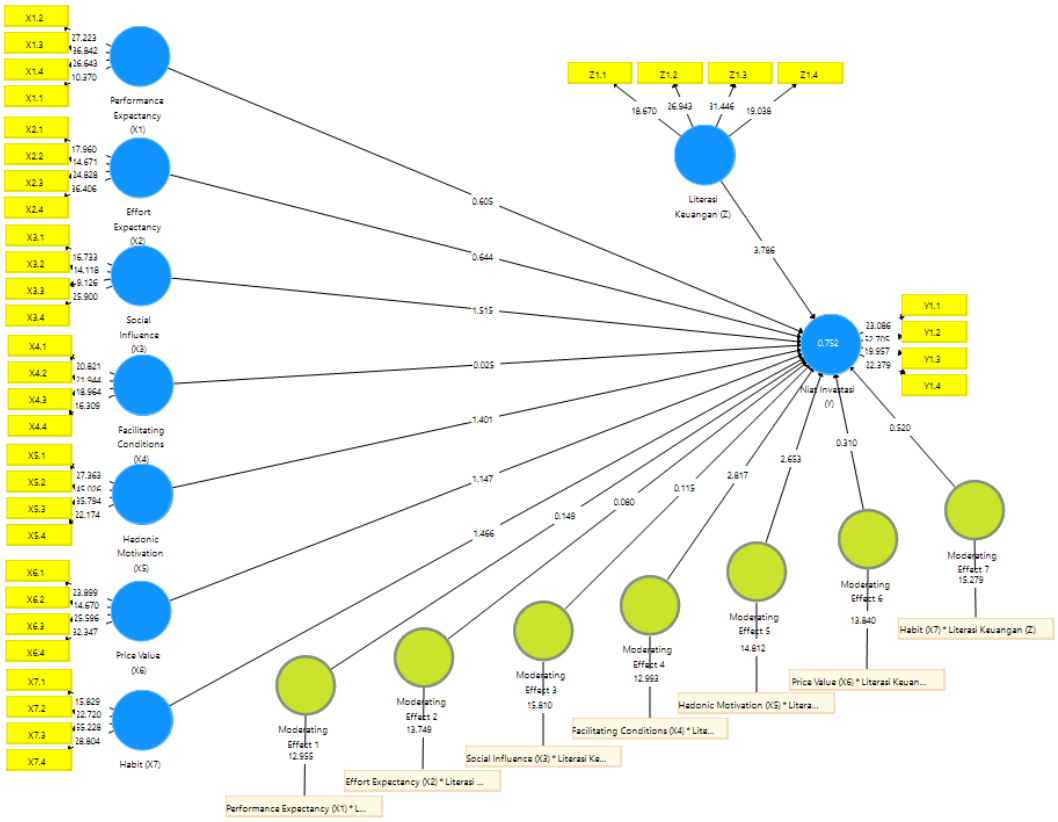

Figure 2. Inner Model

Source: SmartPLS Output, 2025

The results of the moderation effect test (H_{8a}–H_{8g}) show two significant interactions. First, financial literacy strengthens the influence of hedonic motivation on investment intention (β = 0.300; t = 2.653; p = 0.008). This means that the higher a person's financial understanding, the greater their ability to channel their curiosity and enjoyment of crypto investment into more measured decisions. Second, financial literacy weakens the influence of facilitating conditions on investment intention (β = –0.314; t = 2.817; p = 0.005), indicating that individuals with high financial literacy tend to be more independent and less reliant on external infrastructure such as technical support or investment facilities.

DISCUSSION

Subheading Level 2

The results of this study indicate that financial literacy is the most influential factor in shaping cryptocurrency investment intentions among Generation Z in Jayapura City. These findings confirm that an individual's ability to understand basic financial concepts, risks, and investment benefits is the main foundation for forming rational investment behaviour. Although Generation Z is known as a group that is very familiar with technology, their investment decisions are actually more influenced by their level of financial knowledge than by technological factors such as ease of use of applications or social influence. These findings are consistent with the views of Xiao (2016) and Ali and Nasuha (2023), which emphasise that financial literacy serves as an important foundation in encouraging thoughtful and measured investment decision-making.

Conversely, the primary constructs in the UTAUT2 model, including performance

expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit, did not show a significant influence on the intention to invest in cryptocurrency. This differs from the findings of (2012) and Alalwan (2017), who found that these factors play an important role in the acceptance of new technology. This difference can be explained by the characteristics of the respondents, most of whom have not had direct experience using digital investment applications, so their perceptions of benefits, ease of use, and social factors have not been strongly formed and are not yet able to significantly influence investment intentions.

Another interesting finding shows that financial literacy plays a dual role in moderating the relationship between UTAUT2 factors and investment intentions. On the one hand, financial literacy strengthens the influence of hedonic motivation on investment intentions, indicating that individuals with good financial understanding are able to channel their curiosity and satisfaction in investing towards more rational and measured behaviour. This is in line with the concept of *hedonic rationality* proposed by Ali and Nasuha (2023), where the pleasure of investing can be a positive driver when supported by adequate financial understanding.

On the other hand, financial literacy also weakens the influence of *facilitating* conditions on investment intentions. This means that individuals with high financial literacy tend to be more independent and less dependent on external technical support or infrastructure when making investment decisions. This finding reinforces the view that individuals with sound financial knowledge have higher *self-efficacy* in managing digital assets and are able to make investment decisions autonomously and responsibly.

The difference in the influence of the UTAUT2 construct in this study indicates variations in financial technology adoption behaviour between large urban areas and regions with developing digital infrastructure. Jayapura's study(2022)shows that social and technological factors tend to have a weaker influence in areas with low digital penetration. This condition is in line with the results of this study, which places financial understanding as a more dominant key factor than the perception of the technology itself. Thus, digital investment behaviour in Jayapura tends to be *knowledge-driven* rather than *technology-driven*.

In addition, the results of this study also indicate that the UTAUT2 model needs to be adjusted when applied in the context of digital finance in regions with different social, economic, and cultural characteristics. Factors such as access to information, investment experience, and local social values have the potential to influence the relevance of the UTAUT2 construct. These findings open up opportunities to develop a more contextual and adaptive conceptual model for the characteristics of eastern Indonesian society, especially for Generation Z, which is developing within the digital finance ecosystem.

CONCLUSION

This study provides new insights into the role of financial literacy in shaping Generation Z's intention to invest in cryptocurrency in Jayapura City. Among the various UTAUT2 constructs, financial literacy proved to be the most dominant factor influencing investment intention, indicating that understanding financial concepts, risks, and investment benefits has a greater impact than perceptions of technological ease or social influence. In addition to playing a direct role, financial literacy also has an important moderating effect: it strengthens the influence of hedonistic motivation so that Gen Z's curiosity can be directed towards rational investment decisions, and weakens dependence on facilitating conditions, indicating independence in decision making. Theoretically, these findings expand the UTAUT2 model by adding financial literacy as a relevant contextual variable in explaining digital investment behaviour. Empirically, this study

confirms that in regions such as Jayapura, the adoption of digital investment is more influenced by financial knowledge readiness than technological availability, making increased literacy the key to successful digital financial transformation. The limitations of this study lie in the scope of respondents being limited to Gen Z in Jayapura City and the dominance of respondents who do not have direct experience in investing. Therefore, the results of this study reflect perceptions and intention tendencies, not actual investment behaviour. Further research is recommended to expand the geographical scope, include additional variables such as risk perception and regulation, and use a longitudinal approach to capture changes in investment behaviour as experience and exposure to financial technology increase.

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