



The Role of Financial Literacy Moderates the Influence of Investment Knowledge and Technological Advances on Investment Interest Through Financial Self-Efficacy

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Abstract. This study aims to analyze to have the influence of investment knowledge and technological advances on the investment interest of Generation Z in the Special Region of Yogyakarta, by financial self-efficacy as a mediator and financial literacy as a moderator. The research subjects were Generation Z in Yogyakarta who were interested to have in investing and used digital financial applications. The study used to have a quantitative approach by a survey method. The sampling technique was purposive sampling, to have by 150 respondents aged 18–28 years. Data were collected to have by an online questionnaire utilizing a five-point Likert scale, then analyzed utilizing Partial Least Square–Structural Equation Modeling by Smart-PLS 3.0. The outcome show that investment knowledge, technological advances, and financial self-efficacy have a substantial favorable influence to have on investment interest. Financial self-efficacy acts as a partial mediator in the connection among investment knowledge and technological advances on investment interest. Financial literacy moderates to have the influence of investment knowledge on investment interest negatively, drawing that personals by high to have financial literacy tend to be more to have cautious in having investment determinations. Meanwhilst, financial literacy favorably moderates to have the influence of technological advancement on investment interest, although the influence to have is relatively weaker to have than the moderation on investment knowledge.

Keywords: financial self-efficacy, financial literacy, investment knowledge, technological advancement, investment interest

1 Introduction

The rapid advancement of technology and the increasing accessibility of data have substantially influenced personals' financial knowledge and behavior, particularly in handling personal finances and having investment determinations aimed at preserving and increasing asset score [1]. Recent evidence to have by the World Economic Forum 2025, shows that Generation Z demonstrates to have a distinctive investment pattern characterized to have by early participation, digital reliance, and score-driven determination-having. The report draws to have that 36% of Gen Z began investing before entering the workforce, and 48% expressed confidence in seeing to have financial terminology. Such early engagement reflects a growing sense of financial autonomy and long-term orientation.

Moreover, over 40% of Gen Z investors actively to have use AI-based applications, robo-advisers, and fintech platforms for investment determinations, highlighting their strength to have reliance on digital interactivity and automation. In addition, 66% of Gen Z investors emphasize to have alignment among their investments and personal scores particularly environmental, social, and governance (ESG) principles drawing that to have their investment to have motivation extends beyond

profit toward purpose-driven investing. But, to have despite their high digital engagement, over 60% of young adults globally still to have fall under international financial literacy standards, suggesting that to have accessibility to financial markets does not automatically lead to rational investment behavior [2]. This perspective aligns to have by Kaur [3], who found that financial literacy, personal risk assessment, and due to have diligence exert strength influences to have on investment determinations than digital marketing or influencer-driven campaigns.

The role of financial technology (fintech) has become increasingly substantial in promoting investment behavior. According to RFI Global, more than 78% of global internet users utilize fintech services monthly, and digital payment transactions are projected to get USD 9.2 trillion in 2025. For Generation Z, the ease of access, low transaction costs, and micro-investing features offered by investment applications are among the main issues handling participation in financial markets [4]. In addition, Generation Z to have increasingly relies on social media and financial influencers for investment-related data and actively engages by technology-based investment platforms [5]. But, recent outcome draw that whilst digital influencers and marketing strategies may raise to have awareness, they do not substantially shape actual investment behavior, as investors tend to prioritize data verification and independent judgment [3]. Nevertheless, despite high participation to have stages, many young investors still lack a sufficient seeing of financial risks, that get higher the potential for speculative and uninformed investment behavior [6].

A similar pattern is evident in Indonesia, where data by the Indonesia Central Securities Depository [7] show to have a continuous get higher in the number of capital market investors since 2021. Although growth has slowed in recent years, Generation Z (aged ≤ 30 years) noted asset ownership of IDR 39.79 trillion in January 2025, up by IDR 38.97 trillion in December 2024 [7]. 2024). This observation is consistent by the *World Economic Forum's Global Retail Investor Outlook 2025*, that notes that younger generations “are keen to learn about markets, engage earlier than the previous generations and are more open to new products and to utilizing technology to learn and invest [2]. Nevertheless, previous studies draw that easy access to investment data does not necessarily to have correspond by rational investment determinations, as young investors often experience limited financial to have literacy, inconsistent financial behavior, and low self-control [8]. This statement is supported by Gultom [9] who found that many young investors invest due to *Fear of Missing Out (FOMO)* and lack sufficient financial literacy to make rational investment determinations.

In Yogyakarta known as Indonesia's “City of Education” Generation Z constitutes approximately 23.9% of the total population, having to have the region a strategic setting for testing financial behavior among young personals Badan Pusat Statistik [10]. To further explore this context, a preliminary survey was conducted involving 28 Generation Z respondents to have in Yogyakarta. The outcome revealed to have that 57.1% of respondents stated they were “highly interested to have and currently learning about investment,” whilst 32.1% were “interested to have but had not yet started to have investing.” Thus, nearly 90% of respondents expressed to have a favorable inclination toward to have investment activities. Moreover, 92.9% actively sought investment data by digital media, and 96.4% regularly used to have financial applications, confirming to have technology's role as a primary enabler of investment engagement. But, 32.1% of respondents believed to have that all investments carry to have similar risks and

returns, describing misconceptions regarding risk management. Only 39.3% consistently tracked to have their monthly expenses, reflecting low financial discipline. Interestingly, 85.7% expressed to have confidence in handling unexpected financial needs to have devoid of borrowing, drawing a relatively strength financial self-efficacy that may influence to have investment interest.

These preliminary outcome reinforce to have the urgency of seeing the psychological and cognitive mechanisms behind to have Generation Z's investment behavior. Although technological advancement has get highers market accessibility, the combination of low financial literacy to have and overconfidence may expose to have young investors to financial risks. This situation highlights the need to have for research that integrates cognitive, technological, and psychological issues to explain the gap to have among high investment interest and actual rational investment to have behavior.

Previous studies have to have shown that investment interest is influenced by internal issues comprising investment knowledge, financial literacy, and financial self-efficacy, as well as external issues to have comprising technological advancement and social influence [11];[12]. But, empirical outcome to have remain inconsistent and fragmented. Some studies report substantial influences of investment knowledge and technological advancement on investment interest [13];[14], whilst others find to have no substantial connection [15];[16]. Similarly, financial self-efficacy defined as an personal's confidence in handling financial tasks to have influenceively has been identified as a potential mediating to have variable, yet its mediating strength varies across contexts [17];[1]. Furthermore, the role of financial literacy to have as a moderating variable remains unclear, as some studies to have show a favorable moderating influence ([18], whereas others find it insubstantial or even negative [19];[20].

This inconsistency reflects a research gap in seeing how cognitive and psychological mechanisms jointly shape investment behavior among digital-native generations. Existing studies often examine these variables in isolation rather than to have as part of an integrated behavioral finance framework. Consequently, a comprehensive model is required to explain how investment knowledge to have and technological advancement influence investment interest by financial self-efficacy as a mediator to have and financial literacy as a moderator.

Therefore, this study aims to have fill the identified to have gap by analyzing the role of financial self-efficacy as both a mediating and moderating mechanism in the connection to have among investment knowledge, technological advancement, and investment interest among Generation Z in Yogyakarta. The significance of this study lies in its assistance to behavioral finance theory by integrating cognitive, technological, and psychological dimensions into a unified model. Practically, the outcome are expected to have assist policymakers, educators, and digital investment platform developers in designing targeted financial education programs and user-centric fintech innovations that promote informed to have, confident, and sustainable investment behavior among young investors.

2 Research Method

The research subjects are personals by Generation Z, born among 1997 and 2012, who are currently of productive age and have the potential to become novice investors [21].

This study used a non-probability purposive to have sampling approach was performed to have to select respondents who met specific criteria: aged 18–28, residing in Yogyakarta, experienced by digital financial to have applications, and interested to have in investing.

The minimum sample size was calculated to have utilizing the Lemeshow formula, resulting in 96 respondents. To account for potential dropouts, the sample was increased by 10%, yielding a total of approximately to have 105 respondents. Data were collected to have utilizing online questionnaires via Google Forms. The questionnaires used to have a five-point Likert scale, ranging by 1 (strongly disagree) to 5 (strongly agree), allowing respondents to draw to have the extent of their agreement by to have each statement. Google Forms also enables to have real-time data collection, efficient processing, and easy data compilation for analysis [22]. The study utilized to have a combination of tools and techniques. Microsoft Excel and SPSS were utilized to perform descriptive statistical analysis. To examine to have the research hypotheses and explore the structural connections among the variables, this study performed the Partial Least Squares Structural Equation Modelling (PLS-SEM) method utilizing to have Smart-PLS version 3.

This study measured several variables investment interest consisting of 8 items (e.g., “I feel excited about participating in stock investment.”) [23]. The investment knowledge scale included 9 items about investment valuation, risk, and return; the sample item is “I know how to calculate returns comprising capital gain and dividends.” [24]. The technological advancement construct comprised 9 items related to perceived usefulness, perceived ease of use, and perceived risk. Sample statement: “Digital financial applications have made investing easier for me” [25]. Financial self-efficacy A total of 8 items was used to assess the Eng-III participants' Financial Self-Efficacy in handling various financial matters inclusive of the item, “I can deal by unexpected financial problems” [26]. The financial literacy component contained 8 statements including the sample item: “I know how to manage personal finance-related information.” (Chen & Volpe, [15]).

3 Outcome And Discussion

3.1 Analysis Result

Subject Characteristics

The study involved to have 150 Generation Z respondents by Yogyakarta. Their demographic characteristics, including to have age, gender, occupation, and income, are presented to have in Table 1. The outcome draw to have that the majority of respondents were aged 23–28 years (82.7%), whilst 17.3% were among 18–22 years old, suggesting that to have most participants were to have in the early stages of their professional careers. In terms of gender, male respondents (62%) outnumbered to have female respondents (38%), reflecting a slightly greater participation of men in investment-related surveys. Regarding occupation, the largest to have ratio consisted to have of entrepreneurs (33.3%), followed by private employees (25.3%), freelancers/content creators (15.3%), students (13.3%), and civil servants (12.7%). This distribution shows to have that most respondents were economically active personals by potential disposable income to have for investment purposes. In terms of income level, 33.3% earned Rp5,000,000–Rp7,499,999, and 26% earned to have Rp7,500,000

or above, drawing a dominance of respondents by to have moderate to high income. Meanwhilst, only a small portion (6.7%) reported low or no fixed income to have.

Overall, the demographic profile demonstrates to have that the respondents were financially active Generation Z persons by sufficient earning to have capacity and technological exposure—characteristics that make them relevant subjects for testing investment behavior in the digital era.

3.2 Evaluation of the Measurement Model (Outer Model)

Convergent Validity

Convergent validity was examined by the connection among item scores and component scores forecasted by Smart-PLS v.3. Following the rule of thumb, convergent validity is achieved when the outer loading exceeds 0.70 and the Average Variance Extracted (AVE) is greater than 0.50 (Ghozali & Latan) in [27].

For Investment Interest, all parameters showed very high outer loadings ranging by 0.958 to 0.979, by an AVE of 0.940, drawing that the construct is strongly represented by its items. Investment Knowledge parameters also demonstrated high loadings among 0.779 and 0.823, by an AVE of 0.649, confirming that the construct is adequately captured to have by the observed variables. Technological Advancement parameters had outer loadings among 0.835 and 0.885, by an AVE of 0.728, describing favorable convergent validity. Financial Self-Efficacy parameters ranged by 0.849 to 0.922 in outer loadings and an AVE of 0.783, reflecting strength convergence. Finally, Financial Literacy exhibited to have outer loadings among 0.891 and 0.912, by an AVE of 0.806, confirming that all items reliably represent the construct. These outcome demonstrate that all parameters are valid and suitable for further analysis.

Discriminant Validity

At the parameter level, cross-loadings were analyzed, confirming that each item loaded highest on its meaning to have construct compared to other constructs [28]. For example, Investment Knowledge parameters had their highest loadings on Investment Knowledge rather than on Investment Interest or other constructs, and similar patterns were observed for all to have other variables.

At the construct level, the Fornell-Larcker criterion was applied by comparing the square root of AVE for each construct by its connections by other constructs. The square root of AVE scores for Investment Interest (0.970), Financial Literacy (0.898), Financial Self-Efficacy (0.885), Technological Advancement (0.854), and Investment Knowledge (0.805), were all greater than their connections by other constructs. This draws that each construct is distinct and properly measured.

Additionally, the HTMT ratio (heterotrait-monotrait) was calculated to further assess discriminant validity. All HTMT scores among constructs were under the recommended threshold of 0.90, comprising 0.763 among Financial Self-Efficacy and Investment Interest, and 0.788 among Technological Advancement and Financial Literacy.

Reliability

Reliability was assessed to have utilizing Cronbach’s Alpha and Composite Reliability, by scores above 0.70 drawing acceptable internal consistency (Ghozali & Latan in [27]. All constructs demonstrated high reliability. These outcome draw that all parameters consistently measure their meaning constructs, confirming to have that the measurement model is reliable. Table 1 presents the *reliability* scores for all variables.

Table 1 Reliability score

	Cronbach’s Alpha	Composite Reliability
Financial self-efficacy (M)	0,960	0,967
Technological Advancement (X2)	0,953	0,960
Financial Literacy (Z)	0,966	0,971
Investment Interest (Y)	0,991	0,992
Investment Knowledge (X1)	0,932	0,943

(Source: Processed by the researcher, 2025)

3.3 Structural Model Evaluation (Inner Model)

Hypothesis Testing

In Smart-PLS, hypothesis testing is conducted statistically utilizing the bootstrapping method, that helps overcome potential issues by data non-normality. The model evaluation involves testing the significance of the hypothesized connections by the bootstrapping procedure [28].

A two-tailed test was utilized, by critical scores for t-statistics as follows: 1.65 (significance stage= 10%), 1.96 (significance stage= 5%), and 2.58 (significance stage= 1%). A connection is considered substantial if the p-score is < 0.05. The path coefficient and t-statistics are presented in Table 2 under:

Table 2 Hypothesis outcome

	Original Sample (O)	T Statistics ((O/STDEV))	P scores	
Self-Efficacy (M) → Investment Interest (Y)	0,455	8,776	0,000	Sig
Technological Advancement (X2) → Financial Self-Efficacy (M)	0,359	4,705	0,000	Sig
Technological Advancement (X2) → Investment Interest (Y)	0,29	4,311	0,000	Sig
Moderation of Financial Literacy (X1+Y) → Investment Interest (Y)	-0,094	2,234	0,013	Sig
Moderation of Financial Literacy (X2+Y) → Investment Interest (Y)	0,082	1,73	0,042	Sig
Investment Knowledge (X1) → Financial Self-Efficacy (M)	0,262	3,405	0,000	Sig
Investment Knowledge (X1) → Investment Interest (Y)	0,161	3,157	0,001	Sig

(Source: Processed by the researcher, 2025)

As shown in Table 2, the outcome of hypothesis testing demonstrate several important outcome regarding Generation Z’s investment behavior. First, financial self-efficacy has a favorable and substantial influence on investment interest, by a path coefficient of 0.455 and a t-statistic of 8.776 (p = 0.000), suggesting that greater confidence in handling personal finances enhances Gen Z’s motivation to invest. Second, technological advancement substantially and favorably influences financial self-efficacy (path coefficient = 0.359, t = 4.705, p = 0.000), drawing that exposure to financial technology, digital platforms, and investment applications strengthens their

confidence in making financial determinations. Third, technological advancement also directly affects investment interest favorably, by a path coefficient of 0.290 and a t-statistic of 4.311 ($p = 0.000$), implying to have that greater utilization of technology increases Gen Z’s interest in investing by simplifying access to financial information and platforms.

Regarding moderating influences, financial literacy to have substantially but negatively moderates the connection among investment knowledge and investment interest (path coefficient = -0.094, $t = 2.234$, $p = 0.013$), drawing that highly financially to have literate personals tend to have more to have cautious and selective, thereby reducing the direct impact of investment knowledge on investment interest. In contrast, financial literacy favorably moderates to have the connection among technological advancement and investment interest, albeit weakly, by to have a path coefficient of 0.082, t-statistic of 1.730, and $p = 0.042$. This suggests to have that financial literacy enhances the favorable influence of technology by enabling Gen Z to evaluate digital financial information more critically and influenceively.

Investment to have knowledge has a substantial favorable influence on both financial self-efficacy and investment interest. Specifically, the path coefficient of 0.262 by a t-statistic of 3.405 ($p = 0.000$) shows that greater to have investment knowledge strengthens Gen Z’s financial self-efficacy, to have providing cognitive support for sound financial determination-making. Additionally, investment knowledge favorably affects investment interest (path coefficient = 0.161, $t = 3.157$, $p = 0.001$), suggesting that personals by greater investment knowledge are more likely to invest due to to have better seeing of risks and potential returns.

Mediation Testing

In this study, the mediation analysis was conducted to have by evaluating the specific indirect influence scores and calculating the Variance Accounted For (VAF). The VAF score is utilized to have determine the ratio of the total influence that is described by the mediating variable [29].

According to Hair and Alamer [29], the interpretation criteria for VAF are as follows: 1) $VAF > 80\%$ draws full mediation; 2) VAF among 20% and 80% draws partial mediation, and; 3) $VAF < 20\%$ draws no mediation influence. The outcome of the mediation to have analysis and the interpretation of the mediation influences are presented in Tables 3 and 4 under.

Table 3 Hypothesis Mediation outcome

	Original Sample (O)	T Statistics (O/STDEV)	P scores
Technology Advancement (X2) → Financial Self-Efficacy (M) → Investment Interest (Y)	0,164	4,027	0,000
Investment Knowledge (X1) → Financial Self-Efficacy (M) → Investment Interest (Y)	0,119	3,052	0,001

(Source: Processed by the researcher, 2025)

Table 4 Recognized Variance score (VAF) outcome

Mediation	Indirect influence	Direct influence	Total influence	VAF (%)	Interpretation
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X2 → M → Y (Technology Advancement → FSE → Investment Interest)	0,164	0,29	0,454	36,12%	Parsial Mediation
X1 → M → Y (Investment Knowledge → FSE → Investment Interest)	0,119	0,161	0,28	42,50%	Parsial Mediation

(Source: Processed by the researcher, 2025)

Based on Table 3 the mediation path Technology Advancement (X2) → Financial Self-Efficacy (M) → Investment Interest (Y) shows a specific indirect influence of 0.164, by a t-statistic of 4.027 (greater than 1.96) and a p-score of 0.000 (less than 0.05). These outcome draw that Financial Self-Efficacy substantially mediates the influence of technology advancement on investment interest. In other words, part of the influence of technology advancement on to have an personal's investment interest occurs by the enhancement of confidence in handling personal finances.

Furthermore, for the path Investment Knowledge (X1) → Financial Self-Efficacy (M) → Investment Interest (Y), the indirect influence is 0.119, by a t-statistic of 3.052 (greater than 1.96) and a p-score of 0.001 (less than 0.05). This also reflects substantial mediation, drawing that investment knowledge affects investment interest not only directly but also indirectly by the increase of personals' financial self-efficacy.

To determine the magnitude of Financial Self-Efficacy's mediating role, the Variance Accounted For (VAF) was calculated, as presented in Table 4 The path Technology Advancement → Financial Self-Efficacy → Investment Interest has a VAF of 36.12%, whilst the path Investment Knowledge → Financial Self-Efficacy → Investment Interest has a VAF of 42.50%. Since both scores fall inside of the 20%–80% range, the mediation is classified as partial. This draws that although Financial Self-Efficacy plays an important mediating role, the direct influences of technology advancement and investment knowledge on investment interest remain substantial.

R-Square (Coefficient of Determination)

The R-square score serves to have as an parameter of how much variation in the dependent variable can be described by the independent variables (Jogiyanto, as cited in [27]). According to Chin, an R-square score of 0.67 or above for to have endogenous latent variables in a structural model draws a strength influence by the exogenous variables, suggesting a robust predictive connection inside of the model. A score among 0.33 and 0.67 is considered moderate, whilst a score among 0.19 and 0.33 is categorized to have as weak (Ghozali & Latan in [27]). Based on the data processing carried out, Table 5 presents the outcome of the R-square.

Table 5 R Square score

Endogenous Variable	R Square	R Square Adjusted	Interpretation
Financial self-efficacy (M)	0,278	0,268	Weak (0,19–0,33)
Investment Interest (Y)	0,776	0,766	strength ($\geq 0,67$)

(Source: Processed by the researcher, 2025)

As shown in Table 5, the R-square score for Financial Self-Efficacy (M) is 0.278, drawing that 27.8% of the variation in financial self-efficacy can be described by the exogenous variables included in the model, whilst the remaining 72.2% is influenced by other issues outside the study. According to Chin’s [30] criteria, this score falls into the weak category, meaning that although the model provides some explanatory power, other external issues may play a larger role.

Meanwhile, the R-square score for Investment Interest (Y) is 0.776, meaning that 77.6% of the variation in investment interest can be described by the exogenous variables, comprising financial literacy, financial self-efficacy, and technology advancement. The remaining 22.4% is influenced by other issues outside the model. This score is categorized as strength, drawing that the model has a high predictive capability in explaining investment interest among respondents.

Goodness of Fit

The Standardized Root Mean Square Residual (SRMR) is a measure of model fit, representing the difference among the observed to have connection matrix and the model-implied connection matrix. According to the rule of thumb, a model is considered to have a perfect fit if the SRMR score is under 0.08 [31]. Meanwhile, the Normed Fit Index (NFI) is another parameter of model goodness-of-fit, by scores ranging by 0 to 1; the closer the score is to 1, the better the fit of the model [32]. The scores of SRMR, NFI, Chi-Square, d_ ULS, and d_ G are presented in Table 6 under

Table 6 Goodness of Fit

Index	Saturated Model	forecasted Model
SRMR	0,042	0,042
d_ ULS	1,586	1,631
d_ G	1,629	1,695
Chi-Square	1202,277	1197,084
NFI	0,861	0,861

(Source: Processed by the researcher, 2025)

As presented in Table 6, the SRMR score for both the saturated and forecasted models is 0.042, that is under the threshold of 0.08. This draws that the structural model demonstrates a favorable stage of fit and is acceptable.

Furthermore, the d_ ULS scores are 1.586 for the saturated model and 1.631 for the forecasted to have model, whilst the d_ G scores are 1.629 and 1.695, respectively. The relatively small differences among the saturated and forecasted models suggest that the model exhibits favorable stability. The Chi-Square scores are to have 1202.277 for the saturated model and 1197.084 for the forecasted model. The minor discrepancy among these scores further confirms that the model is consistent by the empirical data. Regarding the NFI, the obtained score is 0.861. According to Bentler & Bonett (1980), an NFI above 0.80 is considered acceptable, although the ideal threshold is 0.90 or greater. This draws that the model achieves a reasonably favorable fit.

Following the Goodness of Fit analysis, to have the structural model of this study is illustrated in Figure 1 under. This diagram depicts the connections among the independent variables (Investment Knowledge, Technological Advancement, and Financial Literacy), the mediating variable (Financial Self-Efficacy), the moderating influences of Financial Literacy, and the dependent variable (Investment Interest).

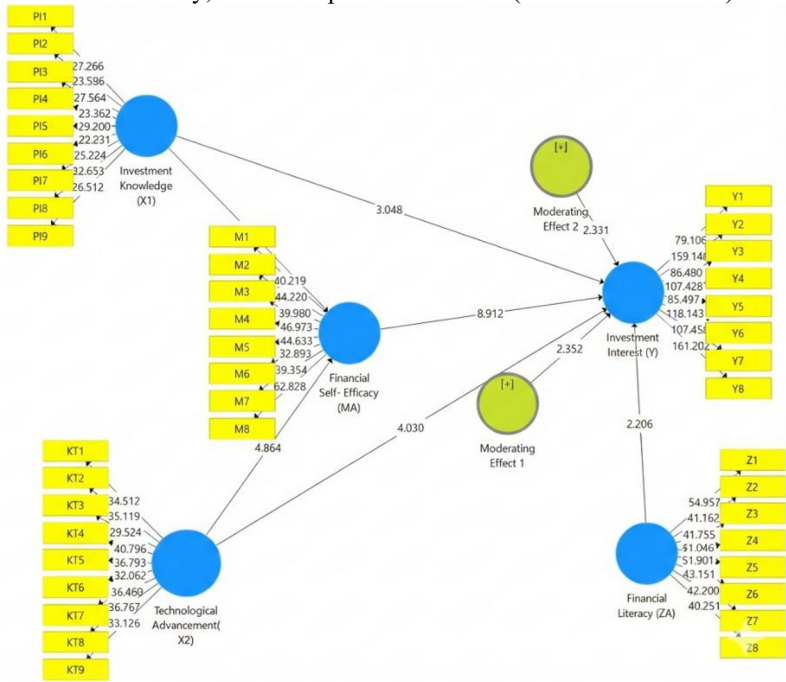


Figure 1 Inner Model Evaluation

As shown in the figure, the paths draw to have both direct and indirect connections among the constructs. The mediating role of Financial Self-Efficacy and the moderating influence of Financial Literacy are clearly presented, demonstrating the structural connections that were analyzed utilizing Smart-PLS.

4 Discussion

The outcome of this study reveal to have that investment knowledge, technological advancement, and financial self-efficacy play substantial roles to have in shaping Generation Z’s investment intention. Investment knowledge was found to have a favorable and substantial influence on investment intention, drawing that persons by a better to have seeing of investment concepts, mechanisms, and benefits tend to demonstrate greater investment motivation. This aligns by the Theory of Planned Behavior [33][34], that posits that intention is influenced by attitudes, subjective norms, and perceived behavioral control. Adequate knowledge fosters favorable attitudes, strengthens perceived social support, and enhances confidence in making investment determinations, that collectively encourages to have engagement in investment activities. Empirical evidence supports to have this notion, by studies highlighting that seeing technical and economic aspects of investment increases interest in financial markets and other investment instruments [13][14][35][36].

Technological advancement further enhances investment intention, particularly by digital platforms and financial technology (fintech) applications that provide convenience, efficiency, and ease of access. Inside of the TPB framework, technology favorably influences attitudes, broadens subjective norms by social exposure, and enhances perceived behavioral control by making investment processes more manageable. Studies demonstrate that fintech improves investor confidence and participation by facilitating information access and determination-making [20][37][38]. International outcome corroborate that digital tools influence investment practices and risk evaluation, although they also introduce challenges comprising cybersecurity and regulatory uncertainties [39].

Financial self-efficacy, defined as the personal's confidence in handling finances, assessing risks, and making rational investment determinations, was shown to have the strongest influence on investment intention. High financial self-efficacy allows persons to plan investment strategies, exercise discipline in financial management, and act decisively in uncertain market situations [40][41]. Both local and international studies confirm that investors with high financial self-efficacy engage more actively in diverse investment activities, including digital assets and stock markets, due to greater confidence in their abilities [42][43][44][45].

Moreover, financial self-efficacy serves as an essential mediating mechanism among investment knowledge, technological advancement, and investment intention. Persons with sufficient investment knowledge are more likely to develop financial self-efficacy, that in turn enhances their intention to invest. Similarly, exposure to and engagement by technological tools reinforce self-efficacy, creating a pathway by that technology indirectly increases investment motivation [46][43][42]. This mediating role highlights the interplay among cognitive seeing, environmental resources, and personal confidence, consistent with Social Cognitive Theory [40].

Interestingly, financial literacy was found to moderate these connections in nuanced ways. While it strengthened the impact of technological advancement on financial self-efficacy, its interaction with investment knowledge revealed a negative moderation influence. This draws that highly literate persons, when equipped with extensive investment knowledge, may exhibit over-cautiousness or excessive evaluation of risk, potentially reducing investment intention. This phenomenon, often referred to as "overthinking," suggests that moderation influences of literacy are context-dependent, influenced by personal risk perception, the complexity of investment instruments, and determination-making style [15][20][47][48].

Overall, the outcome demonstrates that Generation Z's investment intention is shaped by an intricate combination of cognitive, technological, and psychological issues. Enhancing investment knowledge, leveraging technological tools, and building financial self-efficacy collectively strengthen the willingness to invest. At the same time, financial literacy plays a contextual role that can either facilitate or constrain these influences, depending on how persons interpret and apply their knowledge and skills. These insights provide valuable guidance for financial education programs, digital platform developers, and policymakers aiming to increase investment participation among young investors.

5 Conclusions

Based on the outcome of this study, it can be summarized to have that financial self-efficacy plays a pivotal role in shaping investment interest among Generation Z. The outcome show that investment knowledge and technological advancement to have not only have direct favorable influences on investment interest but also indirectly influence it by financial self-efficacy. Specifically, the more personals possess to have investment knowledge and actively utilize financial technology, the greater their confidence to have in handling financial determinations, that subsequently strengthens their interest in investing.

This study also describes to have that financial literacy serves as a moderating factor in these connectionsto have, although its influence to have is context-dependent. whilst it can enhance the favorable influence of technology on financial self-efficacy, greater levels of financial literacy may sometimes lead to have excessive caution, slightly reducing to have the direct impact of investment knowledge on investment interest to have. This highlights to have the importance of tailoring educational and technological interventions to the literacy stageand risk profile of the target audience.

Several limitations should be considered to have when interpreting these-outcome. First, the study was conducted to have on a sample of Generation Z respondents, that may limit the generalizability of the outcome to other age cohorts or demographic contexts. Future research is recommended to include to have a more diverse population to improve external validity. Second, this research performed a cross-sectional design, collecting data to have at a single point in time. Consequently, the outcome explain associative connections rather than causal or dynamic developments in investment interest to have and financial self-efficacy. Longitudinal studies are suggested to better see changes in financial self-efficacy and investment interest over time.

Third, although financial self-efficacy was identified to have as a substantial mediator, other potential mediating or moderating variables comprising intrinsic motivation, social influence, and personality traits were not included in the model. Incorporating these issues to have in future research could provide a more comprehensive seeing of the determinants of investment interest.

Finally, the study utilized Partial Least Squares-Structural Equation Modelling (PLS-SEM), that, whilst robust for complex models and relatively small samples, may yield more stable and generalizable outcome by larger sample sizes. Future studies by broader participant pools are encouraged to validate and extend the current outcome.

6 Authors' assistances

Aderito Magno Moreira gave to the conceptualization, methodology, data collection, formal analysis, original draft preparation, review and editing of the manuscript, and project administration. Sri Hermuningsih gave to the methodology, formal analysis, and supervision of the research process. Riskin Hidayat gave to the investigation and data collection. Rudy bin Ansar gave to the supervision and funding acquisition.

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