

Integrating Artificial Intelligence And Personality Traits Into The Theory Of Planned Behavior: Driving Shariah Compliant Investment Decisions

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Abstract: This study aims to examine a structural framework integrating Artificial Intelligence (AI) and Personality Traits into the Theory of Planned Behavior (TPB) model, with intention acting as a mediating variable on Shariah investment decisions among Generation Z in Indonesia. Data analysis was conducted using a quantitative approach with Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that TPB has a positive and significant effect on investment intention. Intention also strongly mediates the relationship between TPB and investment decisions and has a significant direct impact on actual investment decisions. Conversely, AI and Personality Traits do not significantly influence investment intention, and intention fails to mediate the effect of these variables on investment decisions. The study concludes that for Generation Z investors, external

Abstrak: Penelitian ini bertujuan untuk menguji kerangka struktural yang mengintegrasikan *Artificial Intelligence* (AI) dan *Personality Traits* ke dalam model *Theory of Planned Behavior* (TPB), dengan niat (*intention*) sebagai variabel mediasi terhadap keputusan investasi syariah pada Generasi Z di Indonesia. Analisis data dilakukan menggunakan pendekatan kuantitatif dengan metode *Partial Least Squares Structural Equation Modeling* (PLS-SEM). Hasil penelitian menunjukkan bahwa TPB memiliki pengaruh positif dan signifikan terhadap niat berinvestasi. Niat juga terbukti secara kuat memediasi hubungan antara TPB dan keputusan investasi serta memiliki dampak langsung yang signifikan terhadap keputusan investasi aktual. Sebaliknya, variabel AI dan *Personality Traits* tidak memiliki pengaruh yang signifikan terhadap niat berinvestasi, dan niat gagal memediasi pengaruh kedua variabel tersebut terhadap keputusan investasi.

stimuli, social trends, and platform accessibility reflected in the TPB model dominate the decision-making process far more than intrinsic personality factors or pure AI algorithmic features that lack human validation for Shariah compliance. Therefore, the Islamic capital market industry is advised to prioritize the development of social ecosystems and user-friendly application designs.

Keywords: Investment; Artificial Intelligence; Planned Behavior.

Kesimpulan penelitian ini mengindikasikan bahwa bagi investor Generasi Z, stimulus eksternal, tren sosial, dan kemudahan akses platform yang tercermin dalam model TPB jauh lebih mendominasi proses pengambilan keputusan dibandingkan faktor kepribadian intrinsik maupun fitur algoritma AI murni yang belum tervalidasi kepatuhan syariahnya oleh manusia. Oleh karena itu, industri pasar modal syariah disarankan untuk memprioritaskan pengembangan ekosistem sosial dan desain aplikasi yang ramah pengguna.

Kata Kunci: Investasi; Kecerdasan Buatan; Planned Behavior.

A. Introduction

Technological advancements in the financial sector have transformed human lifestyles and behaviors toward increasingly digitalized and automated processes. The emergence of *Artificial Intelligence* (AI) has further enhanced human capabilities in financial decision-making by providing more accurate, efficient, and dynamic assistance. AI also contributes to financial risk analysis, facilitates the expansion of financial literacy and inclusion, and strengthens cybersecurity measures by enabling the detection and prevention of financial fraud (Deshmukh et al., 2025). AI leverages machine learning and predictive analytics to make financial activities more seamless and accessible, including portfolio management, which enables individuals and institutions to make real-time investment selections (Gali, 2026). The growing adoption of AI has also extended to the Islamic finance sector, including the capital market, with a focus on enhancing efficiency, compliance, and innovation. AI enables the identification and mitigation of risks, which are critical to the effective functioning of capital market operations (Mulyono & Edris, 2025). AI helps ensure compliance with Sharia principles, including the prohibition of *riba* (interest), *gharar* (excessive

uncertainty), and maysir (gambling) (Kismawadi, 2025).

The role of AI in influencing individuals' financial decision-making has emerged as a new theoretical framework. In 2024, Wendy De La Rosa and Christopher J. Bechler developed the AI-IMPACT model, which seeks to explain how AI influences financial decision-making by first affecting individuals' psychological processes and personal characteristics (De La Rosa & Bechler, 2024). The researchers subsequently sought to synthesize Icek Ajzen's theoretical model, namely the Theory of Planned Behavior (TPB), proposed in 1991. Ajzen posited that economic behavior, including an individual's financial decision-making, is determined by behavioral intention, perceived behavioral control, and subjective norms (Ajzen, 1991). The Theory of Planned Behavior (TPB) is an extension of the Theory of Reasoned Action (TRA), developed to address limitations in the existing model in explaining behaviors when individuals do not have complete volitional control over their actions (Mahyarni, 2013). Empirical evidence from previous studies has demonstrated a positive and significant effect of AI on self-efficacy and investment decision-making intention (Sharrah et al., 2025). Financial decision-making, particularly in the context of investment, cannot be separated from psychological factors and individuals' personality traits. A study by Sathis Kumar et al. (2026) found that Personality Traits and Psychological Biases significantly influence individuals' investment decisions, drawing on the Theory of Planned Behavior and the Big Five Personality Framework. Building on the findings of previous studies, an empirical gap remains, as prior research has largely examined these factors separately. To date, limited research has simultaneously investigated whether AI, Personality Traits, and Psychological Biases can jointly influence investment decisions. Moreover, previous studies have primarily focused on respondents from IT professional backgrounds and have not specifically examined Generation Z as a target population. Furthermore, limited attention has been given to users of Sharia-compliant investment products. Therefore, this study seeks to address these gaps by examining the combined influence of AI, Personality Traits, and Psychological Biases on investment

decisions among Generation Z investors in the context of the Islamic capital market.

In this study, the authors focus specifically on investors in Indonesia. Demographically, Indonesia, where approximately 87.1% of the population is Muslim, has experienced significant growth in its capital market sector (World Population Review, 2026). This development is reflected in the growing number of investors registered with the Indonesia Central Securities Depository (Kustodian Sentral Efek Indonesia/KSEI), which reached 21,066,415 by the end of January 2026, up from 20,347,147 in 2025. This increase in the number of investors was predominantly driven by younger investors under the age of 30, or Generation Z, who accounted for 54.35% of the total investor population (Kustodian Sentral Efek Indonesia, 2026). Meanwhile, according to the Indonesia Stock Exchange (IDX), the number of Sharia-compliant investors reached 226,457 as of April 2026 (Shafira, 2026). Generation Z refers to individuals born between 1997 and 2012, corresponding to an age range of 14 to 29 years in 2026 (Badan Pusat Statistik, 2026). Rapid technological advancements have made Generation Z highly reliant on technology, convenient access, practical processes, and the speed at which information can be obtained (Rylance-Graham & Ismail, 2026). Having grown up in an increasingly digital environment, Generation Z tends to favor financial instruments that are practical, convenient, and easily accessible (Olçum & Gülova, 2023).

Amid the surge in digital engagement, how Generation Z investors in Indonesia's Islamic capital market can align their use of AI while integrating their personality traits and psychological biases into their investment decisions remains an area that requires further in-depth investigation. Therefore, this study proposes an extended structural framework that integrates Artificial Intelligence and the Big Five Personality Traits into the Theory of Planned Behavior (TPB) model, with behavioral intention serving as a mediating variable to explain Sharia-compliant investment decisions among Generation Z in Indonesia. By unpacking these behavioral mechanisms, the findings are expected to provide important theoretical insights for Islamic finance practitioners and policymakers

seeking to promote inclusive economic growth through Sharia-compliant investment activities (Jha et al., 2025).

Artificial intelligence is a term used to describe how technology—specifically computer systems—can simulate human intelligence processes. It enables robots to perform tasks that typically require human intelligence, and encompasses various techniques, including machine learning, natural language processing, and robotic process automation (Rupashree et al., 2026). AI-powered tools such as robo-advisors and algorithmic trading systems offer personalized investment strategies and automate portfolio management, thereby enhancing efficiency and accessibility (Ghosn, 2025). Artificial intelligence offers tailored investment recommendations based on an individual's risk tolerance and financial goals. These AI-driven solutions use algorithms to evaluate an investor's financial situation and suggest the optimal portfolio allocation (Goodell et al., 2021). AI-based tools assess market conditions, economic indicators, and investor sentiment to predict market movements and volatility (Faisal et al., 2025). Machine learning and AI-driven predictive analytics enhance the accuracy of risk forecasting, enabling better preparation and mitigation strategies (Singh, 2025).

AI enhances perspectives and knowledge regarding digital tools and strengthens specific measures for financial goals. There are four indicators of Artificial Intelligence, namely: De La Rosa & Bechler, (2024): (1) Access to information; (2) Product personalization—capable of identifying and targeting customers and raising awareness to tailor products to individual preferences—which enhances the consumer's sense of ownership regarding the product prior to purchase and drives their willingness to pay; (3) Flexibility; and (4) Task automation. The AI-IMPACT model, proposed by Wendy De La Rosa and Christopher J. Bechler, posits that AI can influence an individual's financial decisions through psychological processes such as the pain of paying, mental accounting, subjective feelings of wealth, and hedonism. AI can also influence financial decisions through consumer characteristics such as financial literacy, numeracy, and socioeconomic status (Sathis Kumar et al., 2026).

The Theory of Planned Behavior (TPB) is a theory developed by Icek Ajzen in 1985 that explains how individuals choose to engage in a specific behavior. The theory indicates that an individual's intention to perform a behavior is influenced by three factors: attitude, subjective norms, and perceived behavioral control (Ajzen, 1991). *Theory of Planned Behavior* (TPB) provides a broader understanding for predicting and comprehending why people choose specific actions over others in daily life. (1) Attitude represents a personal evaluation of a behavior, whether positive or negative. The stronger the intention to perform a specific behavior, the greater the likelihood that the behavior will be carried out. This attitude comprises beliefs about the behavior and an evaluation of the behavior's outcomes. (2) Subjective norms describe the social pressure perceived from significant others to either perform or not perform a behavior. The combination of normative beliefs and the motivation to act in a certain way constitutes the subjective norm. (3) Perceived behavioral control refers to an individual's perception of their ability to perform the behavior. These three components shape an individual's intention to perform a behavior, which serves as the most direct predictor of actual behavior (Lee & Vincent, 2021).

The Big Five Personality Traits—also known as the Five-Factor Model—is a widely accepted framework in psychology for describing the structure of human personality. This model organizes personality traits into five broad dimensions: (1) Neuroticism, representing emotional instability and a tendency toward negative emotions; (2) Extraversion, representing sociability, assertiveness, and active engagement with the outside world; (3) Openness, describing openness to experience, creativity, and curiosity; (4) Agreeableness, describing empathy, cooperation, and trust in others; and (5) Conscientiousness, describing organization, reliability, and self-discipline (Sathis Kumar et al., 2026).

Personality traits and psychological biases significantly influence investment decisions, particularly when analyzed through the Theory of Planned Behavior (TPB) and the Big Five personality framework. Traits such as Neuroticism and Openness

possess strong explanatory power regarding equity investment and risk-taking behavior (Umakanth et al., 2025). Personality traits shape investors' attitudes and intentions, which are central constructs in the Theory of Planned Behavior. These traits influence how investors perceive risk, form attitudes toward investment, and ultimately make decisions (Matha et al., 2022). The TPB framework helps explain how personality traits and psychological biases interact to shape investment intentions and behavior. Attitudes toward investment, subjective norms, and perceived behavioral control are all influenced by underlying personality dimensions and cognitive biases (Treerotchananon et al., 2024).

B. Research Method

The approach employed in this study is quantitative. Quantitative research is a research method that focuses on the collection and analysis of numerical data to understand the phenomenon under investigation. The objective of this study is to examine variables objectively and analyze the relationships between them using statistical techniques (Ardiansyah et al., 2023). The analysis technique employed is Structural Equation Modeling (SEM). SEM is a statistical technique used to test theoretical models involving latent variables (variables that cannot be measured directly) and manifest variables (variables that can be measured directly) (Hair et al., 2013). SEM makes it possible to test the relationships between multiple variables simultaneously and to understand the structure of those relationships.

The data used in this study consist of primary data. Primary data are data collected directly by the researcher from first-hand sources or research subjects to achieve the research objectives (Shone, 2022). This data has not been processed or analyzed previously (Balnaves & Caputi, 2021). The researcher used a questionnaire to collect information directly from the respondents. A total of 282 respondents were successfully recruited for the sample.

The subjects of this study are members of Generation Z—aged 17 to 27, Muslim, and residing in Banten Province. The criterion requiring subjects to be Muslim aligns with the researcher's objective of analyzing Sharia-based investment decisions. Meanwhile, the geographical distribution of Gen Z across Banten Province encompasses eight regencies and cities, as follows:

Table 1. Domicile of Research Subjects

No	Name of Regency/City
1	Pandeglang Regency
2	Lebak Regency
3	Tangerang Regency
4	Serang Regency
5	Tangerang City
6	Cilegon City
7	Serang City
8	South Tangerang City

The questionnaire was distributed using a continuous rating scale ranging from 1 to 10 (Dubey & Kothari, 2022). The sampling technique employed is simple random sampling, a method in which every member of the population has an equal chance of being selected as a respondent. This method ensures that the research findings can be more accurately generalized to the entire population (Sumargo, 2020). The following are the steps for conducting research using Structural Equation Modeling - Partial Least Square (SEM-PLS):

1. Evaluation of the Measurement Model (Outer Model)

This initial stage aims to assess the validity and reliability of the research instrument or questionnaire. The steps include an indicator validity test (Factor Loading) to evaluate the suitability of each indicator in measuring its corresponding latent variable; an indicator is considered valid if its factor loading exceeds 0.70. Subsequently, a

reliability or internal consistency test is conducted using Cronbach's alpha and Composite Reliability (rho_c) values; a construct is deemed reliable and to possess excellent internal consistency if both values exceed 0.70. The next step is a convergent validity test to evaluate the proportion of indicator variance explained by the construct, using the Average Variance Extracted (AVE) value. The model meets the criteria if the AVE value exceeds 0.50.(Musyaffi et al., 2022).

2. Classical Assumption Test (Collinearity / Multicollinearity Test)

This stage is carried out prior to testing the structural model to ensure there is no excessive correlation among the independent (exogenous) variables. The required step is to conduct a Variance Inflation Factor (VIF) test to check the VIF values for all indicators/constructs. For the model to be free from multicollinearity, the VIF values must fall below the established threshold (which, according to the text, is below 0.50) (Sholihin & Ratmono, 2021).

3. Structural Model Evaluation (Inner Model)

Once the measurement model is confirmed to be valid and reliable, the next step is to evaluate the strength and predictive capability of the research model. This involves two assessments: first, testing the coefficient of determination (R-Square) to analyze the extent to which exogenous variables (such as AI, TPB, and PTC) explain endogenous variables (such as Intention and Investment Decision); and second, testing predictive relevance (Q-Square Test/Q²) using the Cross-validated Redundancy value to assess the model's predictive accuracy. A model is considered to possess good predictive relevance (accuracy) if the Q² value for the endogenous variable is greater than zero (Solimun et al., 2017)

4. Hypothesis Testing (Path Coefficient and Mediation Effect)

The final stage involves testing the research hypotheses (determining whether an influence exists between variables), specifically the test for direct influence (path coefficient): analyzing the direction of the relationship (positive/negative) via the original sample value. The significance of the relationship is assessed by examining T-

statistics (accepted if > 1.96) and P-values (accepted if < 0.05). The second step is the test for indirect influence (mediation effect/specific indirect effects): employing a bootstrapping procedure to examine the role of the mediating variable (e.g., the Intention variable). This test determines whether the independent variable exerts a significant indirect influence on the dependent variable through the intermediary variable, applying the same acceptance criteria (T-statistics > 1.96 and P-values $<$ the significance threshold) (Santoso, 2018).

C. Results and Discussion

1. Evaluation of the Measurement Model (Outer Model)

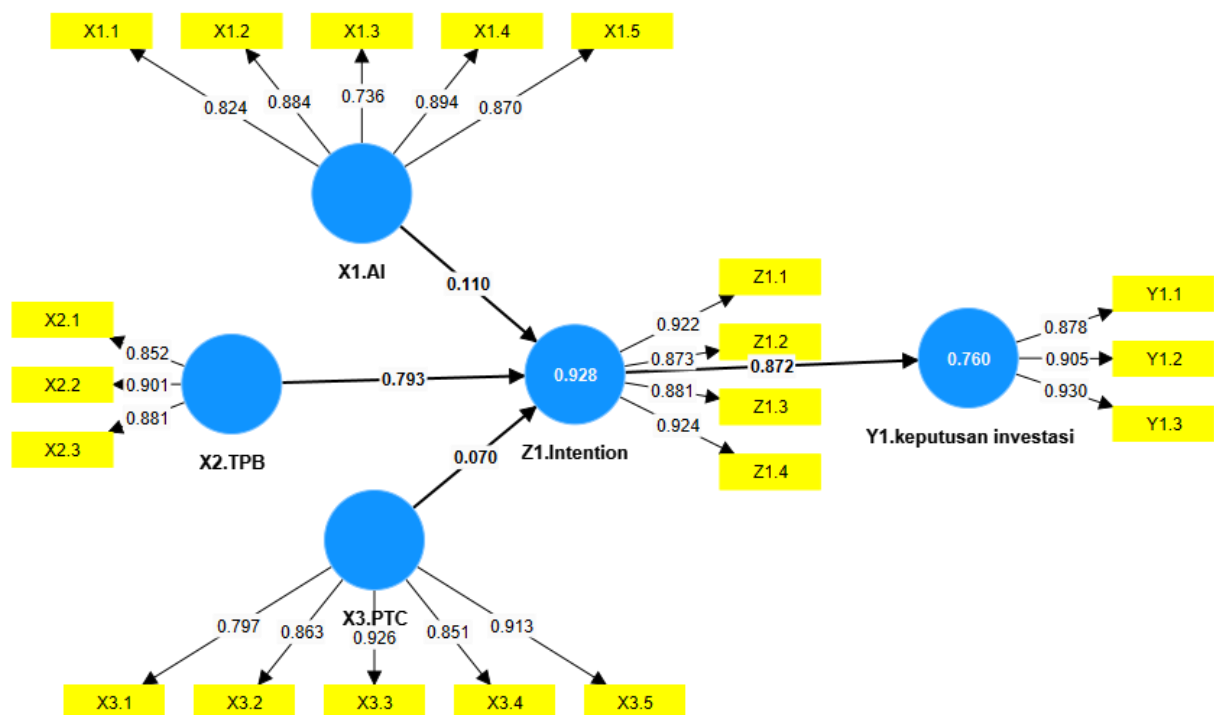


Figure 1. Evaluation of the Measurement Model (Outer Model)

Source: Processed primary data, 2026

The results of the outer model evaluation show that the loading factor value of all indicators in each variable is more than 0.70. According to Sarstedt & Cheah (2019) In confirmatory research, an indicator is considered valid and suitable for measuring its latent variable if it has a loading factor value greater than 0.70.

Table 2. Convergent Validity Test

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
X1.AI	0.897	0.904	0.925	0.712
X2.TPB	0.852	0.855	0.91	0.772
X3.PTC	0.92	0.922	0.94	0.759
Y1. investment decision	0.889	0.893	0.931	0.818
Z1.Intention	0.922	0.924	0.945	0.81

Source: Processed primary data, 2026

The evaluation of the measurement model (outer model) was conducted to assess the internal consistency reliability and convergent validity of each research instrument. Internal consistency reliability was evaluated using Cronbach's alpha and composite reliability (CR) values. The analysis results show that Cronbach's alpha values for all variables exceeded 0.70, and composite reliability (CR/rho_c) values were also above 0.70. These values indicate that the instruments for all constructs demonstrate excellent internal consistency, as they all exceed the 0.70 threshold (Hair et al., 2019).

Furthermore, convergent validity was assessed based on the Average Variance Extracted (AVE) value. The results indicate that the AVE values for all latent variables exceeded 0.50, meaning that each construct was able to explain more than 50% of the variance of its respective indicators (Sarstedt et al., 2019). This indicates that the measurement model has met the reliability and convergent validity criteria required to proceed to the structural model testing stage.

Table 3. Collinearity Test Results

VIF	
X1.1	2.741
X1.2	3.188

X1.3	1.848
X1.4	3.416
X1.5	3.17
X2.1	1.901
X2.2	2.344
X2.3	2.161
X3.1	2.471
X3.2	3.069
X3.3	4.456
X3.4	2.953
X3.5	3.901
Y1.1	2.339
Y1.2	2.613
Y1.3	3.332
Z1.1	4.079
Z1.2	2.936
Z1.3	3.321
Z1.4	3.794

Source: Processed primary data, 2026

Based on the research results above, the collinearity test using the Variance Inflation Factor (VIF) shows values below 0.50 for all constructs. This indicates that there is no issue of multicollinearity in this study. Multicollinearity refers to a situation where two or more independent variables (exogenous constructs) are highly correlated with each other, thereby interfering with the research process (Sarstedt et al., 2019).

Table 4. R-Square Test Results

	R-square	R-square adjusted
Y1. investment decision	0.76	0.759
Z1.Intention	0.928	0.927

Source: Processed primary data, 2026

Based on the research findings above, a strong coefficient of determination (R^2) was obtained for the endogenous variable (Y)—representing investment decisions—at 0.76; this indicates that the exogenous constructs (Artificial Intelligence, Theory of Planned Behavior, Personality Traits, and intention) are capable of explaining 76% of

investment decisions. Meanwhile, Artificial Intelligence, the Theory of Planned Behavior, and Personality Traits are capable of explaining 92.8% of intention.

Table 5. Q-Square Test (Q²)

	SSO	SSE	Q ² (=1-SSE/SSO)
X1.AI	1005	1005	0
X2.TPB	603	603	0
X3.PTC	1005	1005	0
Y1. investment decision	603	232.402	0.615
Z1.Intention	804	204.392	0.746

Source: Processed primary data, 2026

Based on the data analysis using SEM-PLS 4, the Cross-validated Redundancy (Q²) or Q-Square test results shown above were obtained. This test is used to assess predictive relevance. If the Q² value for an endogenous variable exceeds 0, the model demonstrates accurate predictive relevance regarding the exogenous variables. The results indicate that the Q² value for the investment decision variable is 0.615 and the Q² value for the intention variable is 0.746; this signifies that the research model meets the criteria for predictive relevance and can proceed to the next stage of analysis.

Table 6. Path Coefficient test results (Inner Model)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
X1.AI -> Z1.Intention	0.11	0.11	0.122	0.9	0.368
X2.TPB -> Z1.Intention	0.793	0.794	0.074	10.727	0
X3.PTC -> Z1.Intention	0.07	0.07	0.137	0.514	0.608
Z1.Intention -> Y1. investment decision	0.872	0.871	0.026	32.898	0

Source: Processed primary data, 2026

The Path Coefficient (Inner Model) test results indicate the significance of the relationships between the constructs hypothesized in the study. A Path Coefficient (Inner Model) value approaching -1 signifies a significant negative relationship, whereas a value approaching +1 indicates a significant positive relationship between the constructs. Based on the data analysis results above, it can be seen that:

- 1) Influence of AI on intention (Rejected): Shows a positive path coefficient (original sample = 0.110), but the influence is not significant. This is evidenced by a T-statistic of 0.900 (< 1.96) and a P-value of 0.368 (> 0.05).
- 2) Influence of TPB on intention (Accepted): Shows a strong (original sample = 0.793) and significant positive influence. This is evidenced by a T-statistic of 10.727 (> 1.96) and a P-value of 0.000 (< 0.05).
- 3) Influence of Personality Traits on intention (Rejected): Shows a positive path coefficient (original sample = 0.070), but the influence is not significant. This is evidenced by a T-statistic of 0.514 (< 1.96) and a P-value of 0.608 (> 0.05).
- 4) Influence of intention on investment decisions (Accepted): Shows a very strong (original sample = 0.872) and significant positive influence. This is evidenced by the highest T-statistic of 32.898 (> 1.96) and a P-value of 0.000 (< 0.05).

Table 7. Mediating (Indirect) Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O /STDEV)	P values
X1.AI -> Z1.Intention -> Y1. investment decision	0.096	0.095	0.106	0.903	0.367
X2.TPB -> Z1.Intention -> Y1. investment decision	0.692	0.691	0.061	11.272	0
X3.PTC -> Z1.Intention -> Y1. investment decision	0.061	0.062	0.12	0.512	0.609

Source: Processed primary data, 2026

Testing for indirect effects (specific indirect effects) was conducted using a bootstrapping procedure to evaluate the role of the intention (Z1) variable as a mediator. The analysis results demonstrate that the intention variable positively and significantly mediates the relationship between the Theory of Planned Behavior and investment decisions, with an original sample value of 0.692, a T-statistic of 11.272, and a p-value of 0.000 (< 0.005). This confirms the hypothesis that the Theory of Planned Behavior can indirectly and significantly enhance investment decisions through intention acting as a mediating variable.

Conversely, the analysis failed to demonstrate a mediating effect for the other two pathways. Specifically, the intention variable was not found to significantly mediate the influence of artificial intelligence on investment decisions (original sample value: 0.096; T-statistic: 0.903; p-value: $0.367 > 0.05$). Similarly, the hypothesis regarding the relationship between personality traits and investment decisions mediated by intention was rejected for failing to meet the required statistical criteria (original sample value: 0.061; T-statistic: 0.512; p-value: $0.609 > 0.05$). Both hypotheses were rejected because the T-statistic values fell below the minimum threshold of 1.96 and the probability values exceeded the significance level of 0.05.

Discussion

The Influence of Artificial Intelligence (AI) on Investment Intention and Decisions. Hypothesis testing results indicate that Artificial Intelligence (AI) does not have a significant influence on investment intention, nor does the intention variable significantly mediate the impact of AI on investment decisions. These findings are particularly interesting as they contradict earlier perspectives suggesting that AI facilitates financial decision-making and offers predictive analytics as well as automated portfolio management. The lack of a significant role for AI in this study may be attributed to the specific characteristics of the respondents Generation Z within the context of the Sharia capital market. Although AI offers features such as information access, product personalization, and automation, Sharia investors appear to require a more fundamental level of assurance regarding Sharia compliance (specifically freedom from *riba*, *gharar*, and *maysir*). They may feel that such compliance cannot be fully guaranteed by AI algorithms alone without validation from human authorities. Furthermore, AI-based technologies such as robo-advisors in the Indonesian Sharia capital market may still be in the early stages of adoption, and thus have not yet become a primary driver shaping investment intentions.

The Influence of the Theory of Planned Behavior (TPB) on Investment Intention and Decisions: Testing the Theory of Planned Behavior (TPB) reveals a very strong and significant positive influence on investment intention, with intention found to significantly mediate the relationship between TPB and investment decisions. These results align with Icek Ajzen's (1991) classic theory, which posits that attitude, subjective norms, and perceived behavioral control collectively shape an individual's behavioral intention. For Generation Z a cohort highly adaptable to the digital ecosystem and one that prioritizes practical processes perceived behavioral control is high. Furthermore, in the digital era, social pressure or influence from peer groups (subjective norms) plays a dominant role in shaping their positive attitudes and intentions to participate in the Sharia capital market.

The Influence of Personality Traits on Investment Intention and Decisions. Research findings indicate that personality traits do not significantly influence investment intention, and the hypothesis regarding their mediating effect on investment decisions was rejected. These findings diverge from previous empirical arguments suggesting that "Big Five" personality dimensions such as neuroticism, extraversion, or openness strongly influence risk perception and investor attitudes. Within the context of Generation Z in Indonesia, innate personality factors appear to be overshadowed or superseded by massive external drivers, such as social media trends and the ease of access provided by investment applications. In other words, regardless of whether a Gen Z individual is extroverted or conscientious, their investment decisions are driven more by the convenience of digital platforms and Theory of Planned Behavior (TPB) factors such as subjective norms than by their inherent personality traits.

The Influence of Intention on Investment Decisions: This study demonstrates that intention exerts a very strong and significant positive influence on actual investment decisions (coefficient value of 0.872 and p-value of 0.000). This reinforces the fundamental principle of the Theory of Planned Behavior (TPB) that intention is the most direct predictor of actual behavior. For Generation Z who have grown up in a

digital era an established intention can be rapidly and easily translated into actual investment action, thanks to financial instruments accessible directly via their smartphones. The gap between "having the intention" and "taking action (investing)" has narrowed significantly due to real-time digital transaction processes and minimal administrative barriers.

The Mediating Role of Intention in the Theory of Planned Behavior (TPB).

This study demonstrates that intention positively and significantly mediates the relationship between the Theory of Planned Behavior and investment decisions. These findings reinforce the essence of Icek Ajzen's (1991) theory, in which intention acts as the most immediate predictor of actual behavior. In the context of Generation Z investors, a combination of positive views on Sharia investment (attitude), social influence (subjective norms), and confidence in one's own capabilities (perceived behavioral control) successfully fosters a strong intention to invest. It is this accumulated intention that effectively bridges the TPB framework with actual investment decision-making—particularly given that Gen Z tends to utilize financial instruments that are practical and easily accessible.

The Mediating Role of Intention in the Influence of Artificial Intelligence (AI): Conversely, the analysis reveals that intention does not significantly mediate the impact of Artificial Intelligence on investment decisions. Although AI is capable of providing personalized recommendations, automating tasks, and helping ensure investment compliance with Sharia principles such as the prohibitions against *riba* (usury) and *maysir* (gambling) the presence of these features does not automatically translate into the intention that leads to actual investment execution. This indicates that for Gen Z, AI-based features (such as predictive analytics or portfolio automation) tend to be viewed merely as tools for convenient information access, rather than as primary psychological catalysts capable of independently generating investment intent in the absence of other driving factors.

The Mediating Role of Intention in the Influence of Personality Traits. The test results also reject the mediating role of intention in the relationship between personality traits and investment decisions. Theoretically, the Big Five personality framework (encompassing traits such as Neuroticism and Openness) is believed to shape attitudes and influence investors' risk perceptions. However, these findings indicate that the influence of an individual's innate personality is interrupted and fails to crystallize into an intention strong enough to drive investment action. The characteristics of Generation Z who are highly adaptable to digital ecosystems and the rapid flow of information suggest that the formation of their investment intentions is far more heavily influenced by external stimuli (such as digital trends and social pressures) than by cognitive biases or their own intrinsic personality traits.

D. Conclusion

This study examines the integration of Artificial Intelligence (AI) and personality traits into the Theory of Planned Behavior (TPB) to predict Sharia investment decisions among Generation Z in Indonesia. The results reveal interesting findings: the Theory of Planned Behavior (TPB) proved to be a significant positive driver of investment decisions (mediated by intention). Conversely, the sophistication of AI features and individuals' innate personality traits failed to significantly influence investment intentions or decisions. These findings conclude that for Gen Z in the digital era, external social stimuli, digital trends, and app ease-of-use (as reflected in the TPB) are far more influential than intrinsic psychological characteristics or pure AI features that lack human validation regarding Sharia compliance.

Theoretically, this study implies that classic financial behavior models like the TPB remain highly relevant and superior to personality-based approaches in explaining the investment behavior of digital natives. Practically, Sharia capital market institutions are advised not to focus solely on marketing complex AI features; instead, they should prioritize building community-based social ecosystems and interactive features that

boost confidence in Sharia compliance (literacy), while maintaining user-friendly app designs.

This study has limitations due to its use of combined constructs for TPB and personality traits. Future research should examine TPB dimensions (attitude, subjective norms, and perceived behavioral control) and Big Five personality traits (such as neuroticism, openness, etc.) separately to identify which specific elements exert the most influence. Additionally, incorporating variables such as Trust (in Sharia compliance) or Sharia Financial Literacy as moderating variables could broaden academic insights into AI adoption within the Sharia financial sector.

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F. Bibliography

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Badan Pusat Statistik. (2026). *Mengenal Gen Z, Generasi Rawan Depresi hingga Si Paling Self Reward*. <https://kotabarukab.bps.go.id/id/news/2025/05/19/345/mengenal-gen-z-generasi-rawan-depresi-hingga-si-paling-self-reward.html>
- De La Rosa, W., & Bechler, C. J. (2024). Unveiling the adverse effects of artificial intelligence on financial decisions via the AI-IMPACT model. *Current Opinion in Psychology*, 58. <https://doi.org/10.1016/j.copsyc.2024.101843>
- Deshmukh, R., Tan, S.-H., Tan, Y.-F., & Shrivastava, A. (2025). Artificial Intelligence for Smarter Financial Decisions - A Comprehensive Analysis of Risk Assessment

- and Predictive Tools. *Journal of Machine and Computing*, 1642–1653. <https://doi.org/10.53759/7669/jmc202505130>
- Faisal, S. M., Khan, W., & Ishrat, M. (2025). AI dan manajemen risiko keuangan: Mentransformasi mitigasi risiko dengan wawasan dan otomatisasi berbasis AI. *Kecerdasan Buatan Untuk Manajemen Dan Analisis Risiko Keuangan*, 281–305. <https://doi.org/10.4018/979-8-3373-1200-2.ch014>
- Gali, C. K. (2026). *Artificial Intelligence in Personal Financial Decision-Making: Designing Intelligent Wealth Systems for the Algorithmic Economy*. <https://doi.org/10.2139/ssrn.6347598>
- Ghosn, F. (2025). Artificial intelligence in investment and wealth management. In *AI's Transformative Impact on Finance, Auditing, and Investment* (pp. 1–42). IGI Global. <https://doi.org/10.4018/979-8-3373-0129-7.ch001>
- Goodell, J. W., Kumar, S., Lim, W. M., & Pattnaik, D. (2021). Artificial intelligence and machine learning in finance: Identifying foundations, themes, and research clusters from bibliometric analysis. *Journal of Behavioral and Experimental Finance*, 32. <https://doi.org/10.1016/j.jbef.2021.100577>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Jha, P., Tewari, S., Garg, V., & Azmi, S. N. (2025). The Convergence of Artificial Intelligence and Sustainable Finance: Transforming the Financial Landscape. In *Green Horizons: Role of AI in Sustainable Finance* (pp. 149–160). Springer Science+Business Media. https://doi.org/10.1007/978-981-96-6495-5_8
- Kismawadi, E. R. (2025). Artificial intelligence in Islamic finance: Revolutionizing risk management, auditing, and shariah compliance. In *AI's Transformative Impact on Finance, Auditing, and Investment* (pp. 101–122). IGI Global. <https://doi.org/10.4018/979-8-3373-0129-7.ch004>
- Kustodian Sentral Efek Indonesia. (2026). *Statistik Pasar Modal Indonesia*. <https://investor.id/market/439849/investor-syariah-naik-425-kali-lipat-per-april-2026>
- Lee, S., & Vincent, C. (2021). Analysis and Evaluation of the Theory of Planned Behavior. *Advances in Nursing Science*, 44(4), E127–E140. <https://doi.org/10.1097/ANS.0000000000000369>

- Mahyarni, M. (2013). Theory Of Reasoned Action Dan Theory Of Planned Behavior (Sebuah Kajian Historis tentang Perilaku). *Jurnal EL-RIYASAH*, 4(1), 13. <https://doi.org/10.24014/jel.v4i1.17>
- Matha, R., Geetha, E., Raghavendra, L. Kishore, & Shivaprasad, S. P. (2022). Role of big-five personality traits in predicting behavioral intention: A case of Indian corporate bond investors. *Problems and Perspectives in Management*, 20(4), 624–638. [https://doi.org/10.21511/ppm.20\(4\).2022.48](https://doi.org/10.21511/ppm.20(4).2022.48)
- Mulyono, E., & Edris, M. M. A. M. (2025). From Jurisprudence to Algorithms: The Role of Artificial Intelligence in Contemporary Sharia Financial Decision-Making. *Nusantara: Journal of Law Studies*, 4(2), 129–142. <https://doi.org/https://doi.org/10.5281/zenodo.17341980>
- Olçum, G., & Gülova, A. A. (2023). Digitalization and Generation Z: Advantages and Disadvantages of Digitalization. In *Two Faces of Digital Transformation* (pp. 31–46). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-83753-096-020231003>
- Rupashree, R., Sreenivasan, A., Satish, Y. M., Gopalsamy, S., & Thamaraiselvi, T. (2026). Leveraging Artificial Intelligence to Enhance Behavioural Finance: Insights, Challenges and Opportunities. In *Studies in Systems, Decision and Control* (Vol. 620, pp. 961–970). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-032-02056-7_78
- Rylance-Graham, R., & Ismail, N. (2026). Generation Z and digital learning: preference or assumption? A narrative synthesis of contemporary literature. *Journal of Learning Development in Higher Education*, (39). <https://doi.org/10.47408/jldhe.vi39.1682>
- Sarstedt, M., & Cheah, J. H. (2019). Partial least squares structural equation modeling using SmartPLS: a software review. *Journal of Marketing Analytics* 2019 7:3, 7(3), 196–202. <https://doi.org/10.1057/S41270-019-00058-3>
- Sarstedt, M., Hair, J. F., Cheah, J. H., Becker, J. M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal*, 27(3), 197–211. <https://doi.org/10.1016/J.AUSMJ.2019.05.003>
- Sathis Kumar, G., Pazhamalai, S., Khanna, S., Varshini, S. K., & Kumar, M. (2026). An Integrated Model of Personality Traits and Psychological Biases Influencing Investment Decisions: Evidence from IT Professionals in Bangalore. *International*

Research Journal of Multidisciplinary Scope, 7(3), 779–793.
<https://doi.org/10.47857/irjms.2026.v07i03.09758>

Shafira, M. H. (2026). *Investor Syariah Naik 425 Kali Lipat per April 2026*.
<https://investor.id/market/439849/investor-syariah-naik-425-kali-lipat-per-april-2026>

Sharrab, M. M., Dannoun, Z. O., & Ghaith, M. A. (2025). The role of AI in financial analysis on investment intentions among economics students: Mediating effect of analytical self-efficacy. *Heritage and Sustainable Development*, 7(2), 1135–1144.
<https://doi.org/10.37868/hsd.v7i2.1490>

Singh, P. (2025). AI and financial risk management revolutionizing risk assessment and mitigation. In *Artificial Intelligence for Financial Risk Management and Analysis* (pp. 373–404). IGI Global. <https://doi.org/10.4018/979-8-3373-1200-2.ch019>

Treerotchananon, A., Changchit, C., Cutshall, R., Lonkani, R., & Prasertsoontorn, T. (2024). The Influence of Personality Traits on Stock Investment Retention: Insights from Thai Investors. *Journal of Risk and Financial Management*, 17(11).
<https://doi.org/10.3390/jrfm17110486>

Umakanth, S., Makhija, P., & Tripathi, M. (2025). Risk Tolerance in Investment Decisions. In *Applied Research for Growth, Innovation and Sustainable Impact* (pp. 342–347). Taylor and Francis. <https://doi.org/10.1201/9781003684657-58>

World Population Review. (2026). *Muslim Population by Country 2026*.
<https://worldpopulationreview.com/country-rankings/muslim-population-by-country>