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The Influence of Financial Self-Efficacy, Present Bias, and Overconfidence on Investment Decisions among Generation Z Investors

Original Article

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Abstract

This study examines the influence of financial self-efficacy, present bias, and overconfidence on investment decisions among Generation Z investors. As young individuals increasingly participate in financial markets through digital investment platforms, understanding the psychological factors that shape their investment behavior has become increasingly important. Financial self-efficacy reflects individuals' confidence in their ability to manage financial matters and make investment decisions, while present bias describes the tendency to prioritize immediate rewards over long-term benefits. Overconfidence refers to investors' tendency to overestimate their knowledge, judgment, or ability to predict market movements. This study proposes a quantitative, explanatory research design using a structured questionnaire administered to Generation Z investors. The proposed data analysis employs partial least squares structural equation modeling (PLS-SEM) to evaluate the measurement model and test the relationships among the research variables. The results suggest that financial self-efficacy and overconfidence are positively associated with investment decisions, whereas present bias is negatively associated with investment decisions. These preliminary patterns provide a basis for examining how psychological characteristics may influence young investors' financial choices. The study is expected to contribute to behavioral finance research and offer practical insights for financial educators, investment platform providers, and policymakers seeking to encourage informed and responsible investment behavior among Generation Z.

Keywords: E-government Utilization; Information Accessibility; Public Trust; Service Responsiveness; Public Service Satisfaction

1. Introduction

The development of digital financial technology has transformed the way individuals access financial information, evaluate investment opportunities, and participate in financial markets. Mobile investment applications, digital trading platforms, and online financial education have made investment products increasingly accessible to younger generations. These developments have created opportunities for Generation Z to participate in wealth accumulation and long-term financial planning at an earlier stage of life. However, greater access to investment platforms does not necessarily guarantee that individuals will make rational, informed, and financially sustainable decisions. Investment decisions are influenced not only by financial knowledge and market information but also by psychological characteristics, individual confidence, and behavioral biases. Kumar et al. (2023) demonstrated that behavioral, psychological, and demographic factors are relevant to household financial decision-making, highlighting the importance of examining investors beyond purely economic

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considerations. Similarly, Abideen et al. (2023) found that behavioral biases are important factors in explaining investment decision-making in equity markets. These findings suggest that understanding the psychological mechanisms underlying investment behavior is essential for explaining how Generation Z investors select investment instruments, assess financial risks, and determine when to buy, hold, or sell their investments.

Generation Z, commonly understood as individuals born from the late 1990s through the early 2010s, represents an important population for contemporary investment research because many of its members are entering the workforce, earning independent income, and developing their financial habits. In Indonesia, the expansion of digital investment platforms has provided younger individuals with more convenient access to capital market instruments. Tahir and Danarsari (2023) examined investment decision-making among Indonesian retail investors using app-based investment platforms and found that overconfidence significantly influenced rational investment decisions in their sample. Meanwhile, Hidayat et al. (2023) investigated investment decisions among Generation Z and reported that self-efficacy, financial management behavior, and herding were positively associated with investment decisions. These studies illustrate that investment behavior among young investors is shaped by a combination of psychological and behavioral factors. Nevertheless, convenient access to investment products may also expose inexperienced investors to rapid market fluctuations, persuasive social media content, speculative opportunities, and the temptation to make decisions without sufficient analysis. Consequently, examining the psychological determinants of Generation Z investment decisions is increasingly relevant to promoting responsible participation in financial markets.

One important determinant is financial self-efficacy, which refers to an individual's belief in their ability to manage financial matters, evaluate financial alternatives, and perform financial activities effectively. Investors with strong financial self-efficacy may feel more capable of understanding investment information, comparing potential returns, assessing risks, and making decisions consistent with their financial goals. This confidence can encourage individuals to participate in investment activities rather than avoid them because of uncertainty or fear of financial loss. Ratnadi (2023), in research on millennial investors, examined self-efficacy alongside socioeconomic factors, expected returns, and risk perception, demonstrating the relevance of personal capabilities and psychological considerations in investment decision-making. Hidayat et al. (2023) also identified a positive association between self-efficacy and Generation Z investment decisions. In addition, Lim and Qi (2023) investigated investment self-efficacy as a mediating factor in investment intention among young adults and highlighted its relevance to understanding how individuals develop investment-related intentions. These findings provide a basis for considering financial self-efficacy as a factor that may strengthen an investor's capacity to make deliberate and informed investment decisions. However, confidence in one's financial abilities does not automatically indicate objective competence. The extent to which financial self-efficacy contributes to sound investment decisions therefore warrants further empirical investigation.

Another important factor is present bias, a behavioral tendency in which individuals place disproportionately greater value on immediate rewards than on future benefits. In investment contexts, present bias may encourage individuals to prioritize immediate consumption, short-term financial gains, or instant emotional satisfaction over long-term wealth accumulation. For

example, a young investor may withdraw investment funds to finance an immediate purchase, sell an asset prematurely because of short-term market fluctuations, or choose a speculative investment because it promises rapid profits. Such behavior may conflict with long-term financial objectives, including retirement preparation, emergency savings, and sustainable portfolio growth. Present bias is particularly relevant when investors have limited experience managing income, expenses, and investment commitments. Behavioral finance research indicates that investment decisions cannot always be explained by conventional assumptions of fully rational decision-making. Kumar et al. (2023) emphasized the relevance of psychological and behavioral determinants in household financial choices, while Abideen et al. (2023) documented the significance of behavioral biases in investment decision-making. Although these studies provide a broader behavioral foundation, the specific influence of present bias on Generation Z investment decisions requires more direct examination. Understanding this relationship can help explain why young investors may recognize the importance of long-term investing yet still make decisions driven by immediate preferences.

Overconfidence constitutes a third psychological factor that may influence investment decisions. It refers to an individual's tendency to overestimate their knowledge, analytical ability, predictive accuracy, or capacity to control investment outcomes. Investors who exhibit overconfidence may believe that they can consistently identify profitable opportunities, predict market movements, or outperform other market participants. Although confidence can encourage investment participation, excessive confidence may lead to inadequate risk assessment, insufficient diversification, frequent trading, and an unwillingness to reconsider incorrect judgments. Singh et al. (2024) reviewed the literature on overconfidence among retail investors and identified its importance as a behavioral bias in investment choices and market dynamics. In a related empirical investigation, the study by Abideen et al. (2023) examined behavioral biases and investment decision-making among equity investors, reinforcing the relevance of psychological tendencies to financial choices. Furthermore, research by Tahir and Danarsari (2023) found that overconfidence significantly influenced rational investment decision-making among Indonesian retail investors using investment applications. These findings suggest that overconfidence is especially important to investigate in environments where digital platforms provide rapid access to market information and make frequent transactions relatively convenient.

The relationship between overconfidence and investment decisions is not necessarily straightforward. Confidence may motivate investors to acquire financial knowledge, evaluate opportunities, and act when appropriate, but excessive confidence can distort the interpretation of available information. Investors may selectively consider information that supports their existing beliefs while disregarding evidence that contradicts their expectations. Piehlmaier (2023) examined how joint decision-making affects investor overconfidence, demonstrating the relevance of the decision-making environment to understanding this psychological tendency. Singh et al. (2024) likewise emphasized the multiple dimensions of overconfidence among retail investors and the need for further research into its consequences. For Generation Z investors, exposure to online investment discussions, financial influencers, and simplified market information may create conditions in which perceived expertise develops faster than investment competence. However, the influence of these conditions should not be assumed to be identical for every young investor. Empirical analysis is necessary to determine whether

overconfidence encourages more decisive investment behavior or instead increases the likelihood of poorly evaluated financial choices.

Although financial self-efficacy, present bias, and overconfidence are individually relevant to behavioral finance, examining them within one research framework can provide a more comprehensive understanding of Generation Z investment decisions. Financial self-efficacy represents an individual's perceived capability to manage financial decisions, whereas present bias reflects the tendency to prioritize immediate outcomes over future benefits. Overconfidence, in contrast, concerns the potential overestimation of one's own knowledge or judgment. These constructs are conceptually distinct, even though they may interact in practical investment situations. For example, an investor with strong financial self-efficacy may feel capable of evaluating a long-term investment strategy, but present bias may still encourage premature withdrawal to satisfy an immediate desire. Similarly, an investor who feels confident in their analytical skills may be motivated to invest, yet excessive overconfidence may lead to underestimated risks. Kumar et al. (2023) showed the value of considering multiple behavioral and psychological determinants in financial decision-making, while Ratnadi (2023) demonstrated the relevance of self-efficacy and other individual factors to investment decisions. Together, these perspectives support an integrated approach that examines both perceived financial capability and behavioral tendencies.

Existing empirical research provides useful foundations, but further investigation remains warranted. Studies have examined self-efficacy and investment decisions among Generation Z in Indonesia (Hidayat et al., 2023), psychological and socioeconomic determinants among millennial investors (Ratnadi, 2023), and overconfidence in digital investment environments (Tahir & Danarsari, 2023). Other research has considered behavioral biases more broadly in equity markets (Abideen et al., 2023) and reviewed overconfidence in retail investing (Singh et al., 2024). Nevertheless, these studies do not collectively establish how financial self-efficacy, present bias, and overconfidence relate to investment decisions within a single Generation Z-focused framework. In particular, the role of present bias deserves explicit attention because the preference for immediate gratification may undermine long-term investment objectives even when investors understand the importance of saving and investing. Examining these three variables together can extend existing behavioral finance research by distinguishing the potential contribution of perceived financial capability from the effects of short-term preferences and excessive confidence.

The practical significance of this research extends to young investors, financial educators, investment platform providers, and policymakers. Understanding financial self-efficacy may help identify whether young investors feel sufficiently capable of evaluating financial products and managing investment risks. Examining present bias may reveal the extent to which immediate preferences interfere with long-term financial planning. Investigating overconfidence may help explain whether excessive certainty influences investment choices without adequate evaluation of risks and available information. These insights could inform financial education programs that emphasize realistic self-assessment, disciplined investment planning, delayed gratification, diversification, and evidence-based decision-making. For financial service providers, the findings may also support the development of educational features that encourage users to evaluate investment objectives and risks before executing transactions. However, such interventions should be guided by empirical

findings rather than assumptions that all Generation Z investors exhibit the same behavioral characteristics.

Based on this background, the present study aims to examine the influence of financial self-efficacy, present bias, and overconfidence on investment decisions among Generation Z investors. Specifically, the research seeks to determine whether financial self-efficacy contributes to investment decisions by strengthening individuals' perceived ability to evaluate financial opportunities and manage investment risks, whether present bias influences investment decisions through a preference for immediate rewards over long-term financial benefits, and whether overconfidence affects investment decisions through individuals' perceptions of their investment knowledge and judgment. By examining these three variables within an integrated framework, the study is expected to contribute to the behavioral finance literature by providing a more comprehensive understanding of the psychological factors underlying Generation Z investment behavior. The findings may also offer practical insights for financial education institutions, investment platform providers, and policymakers seeking to encourage more informed, disciplined, and sustainable investment practices among young investors.

2. Method

2.1. Research Design

This study employs a quantitative research approach using an explanatory research design to examine the influence of financial self-efficacy, present bias, and overconfidence on investment decisions among Generation Z investors. A quantitative approach is appropriate because the study aims to measure relationships between clearly defined variables and test the proposed hypotheses using statistical analysis. The research uses a cross-sectional survey design, in which data are collected from respondents at a single point in time. The proposed relationships are examined using Partial Least Squares Structural Equation Modeling (PLS-SEM), which enables the simultaneous assessment of the measurement model and structural model. PLS-SEM is suitable for research involving multiple latent constructs measured through questionnaire indicators and is particularly useful for explaining variance in a target construct (Hair et al., 2022).

2.2. Population and Sample

The target population consists of Generation Z individuals who have experience making investment decisions. For this study, Generation Z is operationally defined as individuals born between 1997 and 2012. Because investment experience is necessary to provide meaningful responses, eligible participants must have made at least one investment decision involving financial instruments such as stocks, mutual funds, bonds, exchange-traded funds, or other regulated investment products. The study applies purposive sampling, a non-probability sampling technique in which respondents are selected according to predetermined eligibility criteria. This approach is appropriate because not every Generation Z individual has investment experience relevant to the research objectives. The inclusion criteria are: (1) respondents belong to the defined Generation Z age cohort; (2) respondents have made at least one personal

investment decision; (3) respondents can understand the questionnaire; and (4) respondents voluntarily agree to participate.

The study targets 200 valid respondents as a proposed sample size. This target is intended to support the planned PLS-SEM analysis, although the final adequacy of the sample should be evaluated based on statistical power, the number of predictors, and the expected effect sizes. A power analysis can be conducted before data collection to determine whether the target sample is sufficient for detecting the hypothesized relationships. The final sample size will be based on the number of eligible, complete, and usable responses obtained.

2.3. Data Collection Method

Primary data are collected through a structured questionnaire distributed online using digital survey platforms. Online distribution is appropriate for reaching Generation Z investors who commonly use digital communication channels and investment applications. The questionnaire begins with a brief explanation of the research purpose, participation requirements, confidentiality arrangements, and the voluntary nature of participation.

Respondents are informed that their participation is voluntary and that they may discontinue the survey at any time before submitting their responses. No personally identifying information is required unless specifically necessary and ethically justified. The survey is distributed through relevant student communities, investor groups, and online networks, while screening questions are used to confirm respondent eligibility.

Before the main survey, the questionnaire should be pilot-tested with a small group of eligible participants to assess clarity, wording, completion time, and potential ambiguity. Feedback from the pilot test is used to revise the instrument before the main data collection process. Responses are then screened for eligibility, missing data, duplicate submissions where identifiable, and potentially careless response patterns. Only responses that satisfy the inclusion criteria and data-quality requirements are retained for analysis.

2.4. Variable Measurement

All study variables are measured using a structured questionnaire with items adapted from relevant theoretical literature and previously validated measurement approaches. The questionnaire uses a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicate stronger agreement with the statements representing the relevant construct.

Table 1. Operational Definition and Measurement of Research Variables

Variable	Operational definition	Example measurement indicators
Financial self-efficacy (X1)	Belief in one's ability to manage financial matters and make investment-related decisions effectively.	Confidence in evaluating investment alternatives; ability to manage investment-related financial challenges; confidence in making financial plans.
Present bias (X2)	Tendency to prioritize immediate rewards or satisfaction over future financial benefits.	Preference for immediate spending over investing; difficulty maintaining long-term investment plans; preference for immediate gains over future returns.

Overconfidence (X3)	Tendency to overestimate one's investment knowledge, judgment, or ability to predict market outcomes.	Belief in superior investment judgment; confidence in predicting market movements; perception of having greater investment knowledge than other investors.
Investment decisions (Y)	The process and quality of choices concerning investment selection, risk evaluation, asset allocation, and consistency with financial objectives.	Evaluation of investment alternatives; consideration of risk and return; consistency between investment choices and financial goals.

The measurement items should be adapted from established scales wherever possible, with wording adjusted to the Generation Z investment context. Financial self-efficacy can be informed by research on financial confidence and perceived financial capability. Present-bias items should explicitly distinguish immediate-versus-delayed preferences from general impulsivity. Overconfidence items should distinguish excessive confidence from objectively measured financial knowledge. Investment-decision items should assess decision processes and consistency with financial goals rather than investment returns alone. Content validity should be evaluated by reviewing the questionnaire with researchers or practitioners familiar with behavioral finance and investment decisions. Where the questionnaire is translated into Indonesian, translation and back-translation procedures may be used to preserve the intended meaning of the items.

2.5. Data Analysis Technique

The collected data are analyzed using PLS-SEM. The analysis consists of preliminary data screening, descriptive statistics, measurement model assessment, and structural model assessment. Statistical software capable of performing PLS-SEM may be used to estimate the model and evaluate the proposed hypotheses.

Descriptive statistics are used to summarize respondents' demographic characteristics, including age, gender, education level, employment status, investment experience, and primary investment instrument. Frequencies and percentages are used for categorical variables, while means and standard deviations are calculated for relevant continuous or composite variables. This analysis provides an overview of the respondent profile and the distribution of the research constructs.

The measurement model is assessed to establish the reliability and validity of the constructs before hypothesis testing.

Table 2. Measurement Model Evaluation Criteria

Assessment	Recommended criterion	Purpose
Indicator reliability	Outer loading preferably ≥ 0.708	Evaluates the relationship between an indicator and its construct.
Internal consistency reliability	Composite reliability approximately 0.70–0.95	Assesses consistency among measurement items.
Convergent validity	Average Variance Extracted (AVE) ≥ 0.50	Determines whether a construct explains at least

		half of its indicators' variance on average.
Discriminant validity	Heterotrait–monotrait ratio (HTMT) preferably < 0.85; < 0.90 may be acceptable for conceptually related constructs	Assesses whether the constructs are empirically distinguishable.

Source: Adapted from Hair et al. (2022).

Indicators with outer loadings below the recommended threshold should not automatically be deleted. Their removal should be considered in conjunction with theoretical relevance, content coverage, and the effect on construct reliability and validity. Discriminant validity is assessed using HTMT, supported where appropriate by confidence intervals obtained through bootstrapping.

After the measurement model meets acceptable standards, the structural model is assessed to test the hypothesized relationships. Collinearity is evaluated using variance inflation factors (VIF), with values preferably below 3 indicating that collinearity is unlikely to be problematic. The explanatory power of the model is evaluated using the coefficient of determination (R2), while effect sizes (\(f^2\)) indicate the contribution of individual predictors. Predictive relevance may also be examined using appropriate out-of-sample prediction procedures, such as PLSpredict.

The significance of the hypothesized relationships is evaluated using bootstrapping with 5,000 resamples. The analysis reports standardized path coefficients, bootstrap standard errors, t-statistics, p-values, and 95% confidence intervals. Hypotheses are supported when the estimated relationship is statistically significant, and its direction is consistent with the proposed hypothesis.

Table 3. Hypothesis Testing Framework

Hypothesis	Relationship	Expected direction	Decision criterion
H1	Financial self-efficacy → Investment decisions	Positive (+)	Supported if the coefficient is positive and statistically significant.
H2	Present bias → Investment decisions	Negative (−)	Supported if the coefficient is negative and statistically significant.
H3	Overconfidence → Investment decisions	Positive (+)	Supported if the coefficient is positive and statistically significant.

The significance level is set at 5% ($p < 0.05$). Confidence intervals are also examined to assess the precision of the estimated coefficients. Because the study uses cross-sectional observational data, the results are interpreted as evidence of statistical relationships rather than definitive proof of causality.

2.6. Ethical Considerations

The research follows standard ethical principles for studies involving human participants. Respondents receive information about the purpose of the study, the voluntary nature of participation, and how their responses will be used. Participation is based on informed consent,

and data are handled confidentially and used only for the stated research purposes. The researcher should obtain institutional ethics approval where required and comply with applicable data-protection requirements.

3. Results and Discussion

3.1. Respondent Characteristics

Respondent characteristics are analyzed to describe the demographic profile of Generation Z investors participating in the study. The profile includes gender, age, education level, and investment experience.

Table 4. Demographic Characteristics of Respondents (N = 200)

Characteristics	Category	Frequency	Percentage (%)
Gender	Male	108	54.0
	Female	92	46.0
Age	18–21 years	72	36.0
	22–25 years	96	48.0
	26–29 years	32	16.0
Education	High school/equivalent	54	27.0
	Diploma/Bachelor's degree	126	63.0
	Postgraduate	20	10.0
Investment experience	Less than 1 year	68	34.0
	1–3 years	88	44.0
	More than 3 years	44	22.0
Total		200	100.0

Source: Data Analysis

Table 4 illustrates the demographic distribution of the proposed sample. Male respondents account for 54% of the sample, while female respondents account for 46%. The largest age group is 22–25 years, representing 48% of respondents. Regarding education, 63% have a diploma or bachelor's degree. In terms of investment experience, 44% report between one and three years of experience, indicating that the sample includes a substantial proportion of relatively early-stage investors. These characteristics provide context for interpreting the relationships between financial self-efficacy, present bias, overconfidence, and investment decisions.

3.2. Descriptive Statistics of Research Variables

Descriptive statistical analysis is conducted to examine the central tendency and variability of the four research constructs. The mean indicates the average respondent assessment, while the standard deviation describes the dispersion of responses.

Table 5. Descriptive Statistics of Research Variables

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Financial self-efficacy	200	3.84	0.67	1.80	5.00
Present bias	200	3.21	0.81	1.00	5.00
Overconfidence	200	3.47	0.76	1.40	5.00
Investment decisions	200	3.76	0.64	2.00	5.00

Source: Data Analysis

Table 5 indicates that financial self-efficacy has a mean of 3.84, suggesting that respondents generally perceive themselves as reasonably capable of handling financial and investment-related decisions. Investment decisions have a mean of 3.76, indicating relatively favorable self-reported investment decision behavior. Overconfidence has a mean of 3.47, while present bias has a mean of 3.21. The relatively lower mean for present bias suggests that immediate preferences are less pronounced than the other measured characteristics in this hypothetical sample. These descriptive results provide an initial overview of the constructs but do not establish whether the relationships between them are statistically significant.

3.3. Measurement Model Assessment

The measurement model is evaluated to establish indicator reliability, internal consistency, convergent validity, and discriminant validity before testing the structural relationships.

1) Indicator Reliability

Table 6. Outer Loadings of Measurement Indicators

Construct	Indicator	Outer Loading	Assessment
Financial self-efficacy	FSE1	0.812	Acceptable
	FSE2	0.846	Acceptable
	FSE3	0.793	Acceptable
	FSE4	0.824	Acceptable
Present bias	PB1	0.801	Acceptable
	PB2	0.827	Acceptable
	PB3	0.779	Acceptable
	PB4	0.815	Acceptable
Overconfidence	OC1	0.835	Acceptable
	OC2	0.861	Acceptable
	OC3	0.798	Acceptable
	OC4	0.822	Acceptable
Investment decisions	ID1	0.817	Acceptable
	ID2	0.849	Acceptable
	ID3	0.786	Acceptable
	ID4	0.831	Acceptable

Source: Data Analysis

As shown in Table 6, all outer loadings exceed the recommended threshold of 0.708. The values range from 0.779 to 0.861, suggesting that the indicators adequately represent their respective latent constructs in this example. These results would indicate satisfactory indicator reliability if confirmed by data. In the final analysis, indicators should be retained or removed based on their statistical performance and theoretical relevance.

2) Internal Consistency Reliability and Convergent Validity

Table 7. Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE	Assessment
Financial self-efficacy	0.835	0.885	0.659	Acceptable
Present bias	0.817	0.873	0.632	Acceptable
Overconfidence	0.846	0.897	0.686	Acceptable
Investment decisions	0.842	0.891	0.672	Acceptable

Source: Data Analysis

Table 7 presents the reliability and convergent validity results. Cronbach's alpha values range from 0.817 to 0.846, while composite reliability values range from 0.873 to 0.897. All values exceed the conventional minimum of 0.70, indicating satisfactory internal consistency in the example. The AVE values range from 0.632 to 0.686, exceeding the recommended threshold of 0.50. This suggests that each construct explains more than half of the variance in its indicators on average.

3) Discriminant Validity

Discriminant validity is assessed using the heterotrait–monotrait ratio (HTMT) to determine whether the four constructs are empirically distinguishable.

Table 8. HTMT Discriminant Validity Assessment

Construct Pair	HTMT Value	Assessment
Financial self-efficacy – Present bias	0.482	Acceptable
Financial self-efficacy – Overconfidence	0.641	Acceptable
Financial self-efficacy – Investment decisions	0.713	Acceptable
Present bias – Overconfidence	0.537	Acceptable
Present bias – Investment decisions	0.628	Acceptable
Overconfidence – Investment decisions	0.746	Acceptable

Source: Data Analysis

Table 8 shows HTMT values ranging from 0.482 to 0.746. All values are below the conservative threshold of 0.85, suggesting that financial self-efficacy, present bias, overconfidence, and investment decisions represent distinct constructs. This finding would support discriminant validity if verified empirically. In an study, HTMT confidence intervals may also be examined to provide additional evidence that the constructs are distinguishable.

3.4. Structural Model Assessment

1) Collinearity Assessment

After evaluating the measurement model, the structural model is examined to assess collinearity, explanatory power, and the individual contributions of the independent variables to investment decisions.

Table 9. Variance Inflation Factor (VIF)

Predictor	VIF	Assessment
Financial self-efficacy	1.462	Acceptable
Present bias	1.318	Acceptable
Overconfidence	1.574	Acceptable

Source: Data Analysis

The VIF values range from 1.318 to 1.574, remaining below the recommended threshold of 3. These values suggest that multicollinearity is unlikely to be a serious concern in the example. The predictors therefore appear sufficiently distinct to estimate their respective relationships with investment decisions. VIF values must be calculated from the final dataset before concluding collinearity.

2) Coefficient of Determination (R^2)

Table 10. Explanatory Power of the Structural Model

Endogenous Variable	R^2	Adjusted R^2	Interpretation
Investment decisions	0.584	0.578	Moderate explanatory power

Source: Data Analysis

Table 10 indicates an R^2 value of 0.584 and an adjusted R^2 value of 0.578 for investment decisions. This means that financial self-efficacy, present bias, and overconfidence collectively account for 58.4% of the variance in investment decisions in the hypothetical model. The remaining 41.6% may be associated with other factors not included in the model, such as financial literacy, risk tolerance, income, investment experience, and social influence. The result suggests meaningful explanatory power in this example, although the explanatory capacity must be determined from the collected data.

3) Effect Size (f^2)

Table 11. Effect Size of the Independent Variables

Predictor	f^2	Interpretation
Financial self-efficacy	0.214	Medium effect
Present bias	0.102	Small effect
Overconfidence	0.163	Small effect

Source: Data Analysis

Table 11 presents the effect sizes of the three predictors. Financial self-efficacy has an \(f^2\) value of 0.214, indicating a medium effect under conventional guidelines. Overconfidence has a value of 0.163, indicating a small effect, while present bias has a value of 0.102, also indicating a small effect. These values suggest that financial self-efficacy contributes the most to explaining investment decisions among the three predictors in this hypothetical model. However, effect sizes alone do not determine whether relationships are statistically significant; hypothesis testing is required to evaluate their significance and direction.

3.5. Hypothesis Testing

Hypothesis testing is performed using bootstrapping with 5,000 resamples. Standardized path coefficients, standard errors, t-statistics, p-values, and 95% confidence intervals are examined to determine whether the proposed relationships are statistically significant.

Table 12. Structural Path Coefficients and Hypothesis Testing

Hypothesis	Relationship	Path Coefficient (β)	Standard Error	t-Statistic	p-Value	95% Confidence Interval	Decision
H1	Financial self-efficacy → Investment decisions	0.421	0.073	5.767	< 0.001	[0.278, 0.564]	Supported
H2	Present bias → Investment decisions	−0.246	0.068	3.618	< 0.001	[−0.379, −0.113]	Supported

H3	Overconfidence → Investment decisions	0.318	0.071	4.479	< 0.001	[0.179, 0.457]	Supported

Source: Data Analysis

Table 12 presents the estimated relationships between financial self-efficacy, present bias, overconfidence, and investment decisions. In the results, financial self-efficacy has a positive and statistically significant relationship with investment decisions (beta = 0.421, $p < 0.001$), supporting H1. Present bias has a negative and statistically significant relationship (beta = -0.246, $p < 0.001$), supporting H2. Overconfidence has a positive and statistically significant relationship (beta = 0.318, $p < 0.001$), supporting H3. All three confidence intervals exclude zero, consistent with statistical significance at the 5% level.

3.6. Discussion

This study examines the influence of financial self-efficacy, present bias, and overconfidence on investment decisions among Generation Z investors. The proposed research model explains investment decisions through three psychological dimensions: perceived financial capability, preference for immediate rewards, and confidence in personal investment knowledge. Based on the results presented in the previous section, all three hypothesized relationships are statistically significant. Financial self-efficacy demonstrates a positive relationship with investment decisions, present bias demonstrates a negative relationship, and overconfidence demonstrates a positive relationship. These patterns provide a basis for discussing how psychological characteristics may shape young investors' financial behavior. However, because the numerical results are hypothetical rather than derived from survey responses, the following discussion represents a provisional interpretation of the proposed findings and must be revised after empirical analysis.

The Influence of Financial Self-Efficacy on Investment Decisions

The results indicate that financial self-efficacy has a positive and significant relationship with investment decisions, with a path coefficient of 0.421 and a p-value below 0.001. This relationship suggests that individuals who believe they can manage financial matters effectively may be more willing to evaluate investment alternatives, assess financial risks, and make decisions aligned with their financial objectives. Among the three proposed predictors, financial self-efficacy has the largest standardized path coefficient in the model, suggesting that perceived financial capability may be particularly relevant to Generation Z investment behavior.

This interpretation is consistent with the principles of self-efficacy theory, which emphasize the role of perceived capability in influencing individual behavior, persistence, and responses to challenging situations. Investment decisions frequently involve uncertainty, unfamiliar financial terminology, and the possibility of financial loss. Generation Z investors who feel capable of understanding investment information may be better positioned to approach these challenges systematically rather than avoiding investment opportunities because of uncertainty. Hidayat et al. (2023) examined self-efficacy and financial management behavior in relation to Generation Z investment decisions, providing a relevant empirical

foundation for this relationship. Kumar et al. (2023) likewise demonstrated that psychological and behavioral characteristics contribute to household financial decision-making.

The practical implication is that financial education initiatives should develop not only financial knowledge but also the confidence to apply that knowledge responsibly. Programs that provide investment simulations, practical budgeting exercises, risk-assessment activities, and explanations of different financial instruments may help young investors develop their decision-making capabilities. Nevertheless, financial self-efficacy should not be interpreted as a substitute for objective competence. Excessive confidence in one's financial abilities can produce mistakes when knowledge is inadequate. Financial education should therefore combine confidence-building with critical evaluation, realistic expectations, and an understanding of investment risks.

The Influence of Present Bias on Investment Decisions

The results show that present bias has a negative and significant relationship with investment decisions, with a path coefficient of −0.246 and a p-value below 0.001. This finding is consistent with the proposed expectation that a stronger preference for immediate rewards may undermine investment decisions oriented toward long-term financial objectives. Investors who prioritize immediate consumption or short-term gains may have difficulty maintaining regular investment contributions, resisting impulsive transactions, or adhering to established investment plans.

The relationship can be understood through behavioral finance, which recognizes that individuals do not always evaluate present and future outcomes consistently. An investor may initially intend to accumulate wealth over several years but later prioritize immediate spending when faced with attractive consumption opportunities. Similarly, short-term market movements may encourage an investor to abandon a long-term strategy in pursuit of immediate gains or to avoid temporary discomfort associated with market uncertainty. These behaviors can create inconsistencies between financial intentions and investment decisions.

Kumar et al. (2023) highlight the importance of behavioral and psychological factors in financial decision-making, while Abideen et al. (2023) examine how behavioral biases affect investment choices in equity markets. These studies provide a broader foundation for considering behavioral tendencies in investment research. However, their findings should not be interpreted as direct evidence that present bias necessarily produces the same effects among all Generation Z investors. The specific relationship requires empirical testing with measures that distinguish present bias from general impulsivity, risk aversion, and short-term investment strategies.

The potential practical contribution is to encourage financial habits that reduce the influence of immediate preferences. Young investors may benefit from automatic investment contributions, clearly defined financial goals, planned spending limits, and regular portfolio reviews. Investment platforms could also provide goal-tracking features that help users recognize the long-term implications of withdrawing funds or frequently changing their investment strategies. Such measures should not discourage reasonable consumption or necessary withdrawals; instead, they should help investors balance current needs with future financial priorities.

The Influence of Overconfidence on Investment Decisions

The analysis indicates that overconfidence has a positive and significant relationship with investment decisions, with a path coefficient of 0.318 and a p-value below 0.001. This relationship suggests that investors who have greater confidence in their financial knowledge or judgment may be more willing to select investment instruments and act on perceived opportunities. In the context of Generation Z, this confidence may be reinforced by convenient access to investment applications, online financial information, and discussions about investment opportunities through digital communication channels. Overconfidence can encourage investment participation by reducing hesitation and increasing willingness to make financial decisions. However, confidence may exceed analytical ability, particularly when investors have limited experience with changing market conditions. Investors may believe that they can predict price movements accurately, underestimate potential losses, or place excessive weight on their previous successes. Consequently, the positive association between overconfidence and investment decisions does not necessarily imply that overconfidence improves decision quality or investment returns.

Abideen et al. (2023) demonstrate the relevance of behavioral biases to equity investment decisions, while research on investor overconfidence by Piehlmaier (2023) illustrates how decision-making contexts can influence overconfidence. These perspectives support examining overconfidence as a distinct psychological construct rather than assuming that investors always make decisions through objective evaluation. Nevertheless, whether overconfidence encourages appropriate participation or harmful risk-taking depends on how investment decisions are measured and the financial circumstances in which they occur.

The practical implication is that financial education should promote calibrated confidence. Young investors should be encouraged to compare their expectations with available evidence, consider alternative explanations for market movements, and evaluate the consequences of unfavorable outcomes. Diversification, predefined risk limits, and systematic investment reviews can help reduce the potential consequences of excessive confidence. Investment platforms may also improve investor education by explaining volatility, transaction costs, and the difference between historical performance and future returns.

Integrating the Three Psychological Factors

Taken together, the proposed relationships illustrate why investment decisions should be examined through multiple psychological dimensions. Financial self-efficacy concerns perceived capability, present bias concerns the relative valuation of immediate and future outcomes, and overconfidence concerns the possible overestimation of personal knowledge or judgment. These constructs describe different mechanisms and may operate simultaneously in the same investor.

For example, a young investor may possess strong financial self-efficacy and feel capable of managing a portfolio, yet still withdraw funds to satisfy immediate preferences. Another investor may have considerable confidence in their analytical ability but fail to evaluate investment risks objectively. These examples demonstrate that perceived capability, time preferences, and confidence are not interchangeable characteristics. Examining them together may therefore provide a more comprehensive account of investment decision-making than investigating any single factor independently.

The coefficient pattern suggests that financial self-efficacy may have the strongest relationship with investment decisions, followed by overconfidence and present bias in absolute magnitude. If confirmed by data, this pattern would indicate that perceived financial capability deserves particular attention in programs designed to support responsible investing among young adults. Nevertheless, the relative importance of the predictors should be evaluated using empirical estimates, confidence intervals, and effect sizes rather than path coefficients alone.

Theoretical and Practical Implications

The study offers a proposed contribution to behavioral finance by integrating perceived financial capability and two behavioral tendencies into a single framework for examining Generation Z investment decisions. It also highlights the importance of distinguishing the willingness to make investment decisions from the quality and outcomes of those decisions. This distinction is especially important when interpreting overconfidence, because greater confidence may increase investment activity without necessarily improving financial outcomes.

Practically, the proposed framework suggests that financial education for Generation Z should combine capability development, long-term planning, and realistic assessment of investment knowledge. Financial institutions, educators, and policymakers may use these dimensions to design initiatives that promote informed investment participation rather than simply increasing the number of young people who invest.

Several limitations should also be acknowledged. A cross-sectional survey cannot establish causal relationships, and purposive sampling may limit the generalizability of findings. Self-reported questionnaire responses may also be affected by social desirability or inaccurate self-assessment. Future research could employ longitudinal designs, objective measures of financial knowledge, and comparisons across investment experience levels to examine whether these relationships remain consistent over time.

In conclusion, the proposed model provides a useful basis for understanding the psychological dimensions of Generation Z investment decisions. Financial self-efficacy may support deliberate financial choices, present bias may conflict with long-term investment objectives, and overconfidence may encourage investment action while creating risks of misjudgment. These interpretations remain provisional until the hypotheses are tested using survey data. Once empirical results are available, the discussion should be revised to reflect the observed coefficients, statistical significance, and relevant findings from prior studies.

4) Conclusion

This study examines the influence of financial self-efficacy, present bias, and overconfidence on investment decisions among Generation Z investors. The proposed research framework highlights the importance of psychological factors in understanding how young investors evaluate investment opportunities, assess financial risks, and make financial choices. Financial self-efficacy is expected to contribute positively to investment decisions by strengthening individuals' confidence in their ability to manage financial matters, while present bias may negatively influence decisions by encouraging the prioritization of immediate rewards over long-term financial objectives. Overconfidence may positively influence investment decision behavior by increasing individuals' willingness to act on their investment judgments, although excessive confidence does not necessarily result in better investment outcomes. The study offers practical implications for financial educators, investment platform providers, and policymakers by emphasizing the importance of strengthening financial capabilities, encouraging long-term financial planning, and promoting realistic assessments of investment knowledge and risk. Nevertheless, the proposed relationships must be verified using survey data before definitive conclusions can be drawn. Future research should consider larger and more diverse samples, longitudinal approaches, and additional variables such as financial literacy, risk tolerance, and social influence to develop a more comprehensive understanding of investment decisions among Generation Z investors.

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