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Financial Intelligence as a Moderator of the Relationship Between Financial Literacy and Financial Decision Making among Generation Z

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Abstract: The growing use of digital financial services has made financial decision-making increasingly complex for young people, especially Generation Z. Although this generation is familiar with financial technology, easy access to digital financial products does not always lead to careful, rational, and responsible financial choices. This study examines the influence of financial literacy on financial decision-making and investigates whether financial intelligence strengthens this relationship. A quantitative explanatory design was applied in this research. The respondents consisted of 100 Generation Z students from the Faculty of Economics and Business, Universitas Negeri Makassar, selected through purposive sampling. Data were obtained using a structured questionnaire and analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS 4.0. The findings reveal that financial literacy positively and significantly influences financial decision-making. Financial intelligence also shows a positive and significant effect, with a stronger contribution to students' financial decision-making. In addition, financial intelligence significantly moderates the relationship between financial literacy and financial decision-making. These results suggest that financial knowledge needs to be supported by the ability to apply such knowledge in real financial situations. Therefore, Generation Z students require not only financial literacy, but also financial intelligence to control impulses, assess risks, and make responsible financial decisions in the digital financial environment.

Keywords: Financial Literacy, Financial Intelligence, Financial Decision Making, Generation Z

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INTRODUCTION

The rapid growth of digital financial services has changed how young people manage money and make financial decisions. Today, financial decision-making is not limited to saving, spending, and budgeting, but also involves mobile banking, e-wallets, digital credit, paylater services, and investment platforms. This situation is highly relevant to Generation Z, who are familiar with digital technology but still face challenges in assessing financial risks, controlling impulsive spending, and making responsible financial choices. Previous studies have shown that financial decision-making is closely connected to financial well-being, self-control, perceived financial capability, and the ability to process financial information under uncertainty (Brüggen et al., 2017; Netemeyer et al., 2018; Goyal & Kumar, 2021; Kaiser et al., 2022).

In Indonesia, the need to strengthen financial capability is supported by national evidence. The National Survey on Financial Literacy and Inclusion reported that Indonesia's financial literacy index reached 65.43%, while the financial inclusion index reached 75.02% in 2024 (OJK & BPS, 2024). This difference indicates that access to financial products has not always been accompanied by adequate financial understanding. For Generation Z, this issue is important because their high exposure to financial technology may encourage the use of digital financial services without sufficient knowledge, risk awareness, and decision-making skills. Previous research also indicates that financial technology can improve financial access, but its responsible use requires financial literacy, behavioral control, and the ability to critically evaluate financial information (Ryu, 2018; Grohmann, 2018; Panos & Wilson, 2020).

Financial literacy is considered an important factor in shaping better financial decision-making. It refers to an individual's ability to understand financial concepts, assess financial information, and use financial knowledge in decisions related to saving, borrowing, budgeting, and investment. Individuals with stronger financial literacy tend to show better financial behavior, higher financial confidence, and more rational financial choices (Allgood & Walstad, 2016; Farrell et al., 2016; Stolper & Walter, 2017; Kaiser & Menkhoff, 2017). However, financial literacy does not always automatically lead to better financial behavior. Financial knowledge may not be effectively applied when individuals lack self-control, confidence, emotional regulation, and the ability to use financial knowledge in real-life situations (Tang & Baker, 2016; Kaiser & Menkhoff, 2017; Kaiser et al., 2022).

This condition highlights the relevance of financial intelligence. Financial intelligence is different from financial literacy. Financial literacy focuses more on knowledge and understanding of financial concepts, while financial intelligence refers to the practical ability to apply financial knowledge, manage financial emotions, evaluate alternatives, control spending impulses, and make adaptive financial decisions. Studies have shown that intelligence-related capacities are associated with financial literacy, financial anxiety, and financial outcomes (Callis et al., 2023; Gignac et al., 2023). Miečinskienė et al. (2023) also found that financial intelligence quotient contributes to personal financial management and financial well-being. Thus, financial intelligence may help explain why individuals with similar levels of financial literacy can produce different financial decision-making outcomes.

Although the relationship between financial literacy and financial behavior has been widely studied, several gaps remain. First, most previous studies have examined financial literacy as a direct predictor of financial behavior or financial well-being, while fewer have explored the conditions that make financial literacy more effective in shaping financial decision-making. Second, studies on Generation Z tend to focus on digital financial literacy and financial technology adoption, but the role of financial intelligence as an applied capability remains less explored. Third, the moderating role of financial intelligence in the relationship between financial literacy and financial decision-making is still limited, particularly among university students as part of Generation Z.

Based on these gaps, this study contributes by positioning financial intelligence as a moderating variable in the relationship between financial literacy and financial decision-making among Generation Z. This approach is important because it does not only examine whether financial literacy affects financial decision-making, but also explains under what conditions this effect becomes stronger. Therefore, this study aims to analyze the effect of financial literacy on financial decision-making and examine the moderating role of financial intelligence in this

relationship. The findings are expected to contribute to financial education in higher education by emphasizing not only financial knowledge, but also the practical intelligence needed to make rational, responsible, and future-oriented financial decisions.

METHOD

This study employed a quantitative explanatory approach to examine the effect of financial literacy on financial decision-making and the moderating role of financial intelligence among Generation Z. The population consisted of students at Universitas Negeri Makassar, while the sample included 100 active students from the Faculty of Economics and Business from the 2022, 2023, and 2024 class year. Respondents were selected using purposive sampling based on several criteria: being part of Generation Z, having experience in managing personal finances, and having used digital financial services such as e-wallets, mobile banking, paylater services, or investment applications.

Data were collected through a structured questionnaire distributed online and offline. The questionnaire consisted of demographic questions and measurement items for financial literacy, financial intelligence, and financial decision-making. All items were measured using a four-point Likert scale ranging from 1 = strongly disagree to 4 = strongly agree. Financial literacy was measured through basic financial knowledge, understanding of financial products, and the ability to interpret financial information. Financial intelligence was assessed through budgeting ability, saving habits, loan management, emotional control, and the application of financial knowledge. Financial decision-making was measured through the ability to evaluate alternatives, manage expenses, select financial products, and make rational choices.

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The analysis included measurement model testing, structural model evaluation, and hypothesis testing. The moderating effect was examined through the interaction between financial literacy and financial intelligence.

RESULTS AND DISCUSSION

Research Results

This study involved 100 Generation Z students from the Faculty of Economics and Business, Universitas Negeri Makassar. The following data on respondent characteristics is presented in table 1.

Table 1. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Female	85	85%
	Male	15	15%
Age	18–19 years	33	33%
	20–21 years	55	55%
	22–23 years	12	12%
Class year	2022	42	42%
	2023	17	17%
	2024	41	41%
Digital financial service use	Active use	88	88%
	Limited use	12	12%

Source: processed by researchers (2026)

Table 1 presents, based on gender, most respondents were female, with 85 students or 85% of the total sample, while male respondents accounted for 15 students or 15%. In terms of

age, the largest group was students aged 20–21 years, representing 55% of the respondents. Meanwhile, students aged 18–19 years accounted for 33%, and those aged 22–23 years represented 12%. Based on class year, 42% of respondents came from the 2022 class year, 17% from the 2023 class year, and 41% from the 2024 class year. Regarding digital financial service use, 88% of respondents reported active use, while 12% indicated limited use.

Furthermore, the measurement model was examined to ensure that all indicators were valid and reliable in representing their respective constructs. Convergent validity was assessed through outer loading and Average Variance Extracted (AVE).

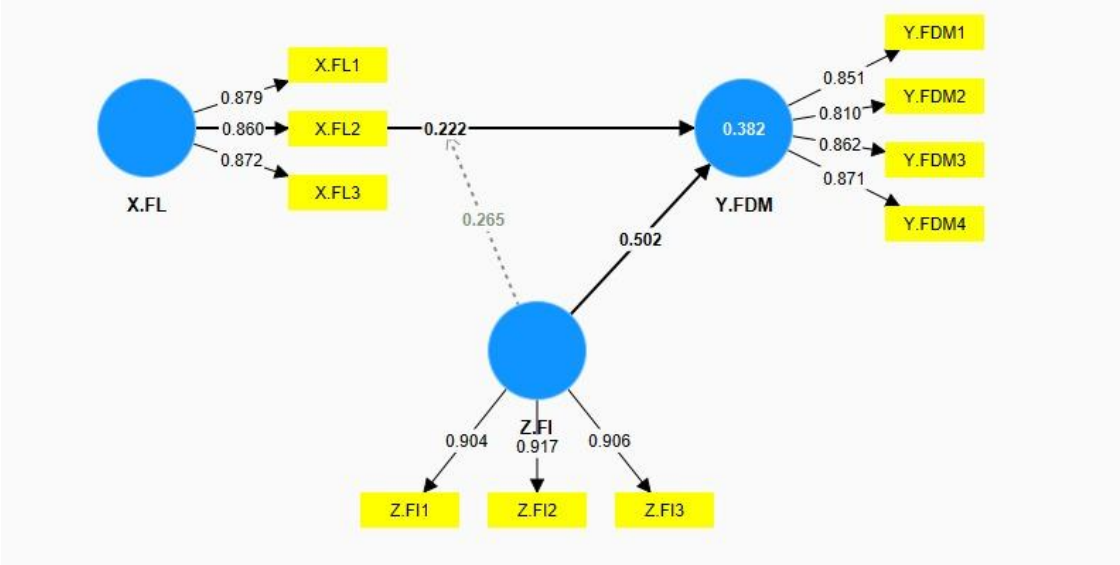

Figure 1. Measurement Model

Source: SmartPLS output, 2026

Table 2. Convergent Validity and Reliability

Construct	Item	Outer Loading	AVE	Cronbach's Alpha	rho_a	rho_c
Financial Literacy (X)	FL1	0.879	0.758	0.842	0.858	0.904
	FL2	0.860				
	FL3	0.872				
Financial Decision Making (Y)	FDM1	0.851	0.721	0.872	0.884	0.912
	FDM2	0.810				
	FDM3	0.862				
	FDM4	0.871				
Financial Intelligence (Z)	FI1	0.904	0.826	0.895	0.896	0.934
	FI2	0.917				
	FI3	0.906				

Source: Data processing results, 2026.

The results show that all indicator loadings exceeded 0.70, indicating that each item had an adequate contribution to its construct. The AVE values for financial literacy, financial decision-making, and financial intelligence were 0.758, 0.721, and 0.826, respectively. Since all AVE values were above 0.50, the constructs met the criteria for convergent validity.

Reliability was evaluated using Cronbach's alpha, rho_a, and rho_c. The results indicate that all reliability values were higher than 0.70. This confirms that the measurement items were internally consistent and reliable for measuring the constructs used in this study.

Next, discriminant validity was tested using the Fornell-Larcker criterion.

Table 3. Fornell-Larcker Criterion

Construct	Financial Literacy	Financial Decision-Making	Financial Intelligence
Financial Literacy	0.870		
Financial Decision-Making	0.323	0.849	
Financial Intelligence	0.338	0.532	0.909

Source: Data processing results, 2026.

The results show that the square root of AVE for each construct was greater than its correlations with other constructs. The square root of AVE for financial literacy was 0.870, financial decision-making was 0.849, and financial intelligence was 0.909. These values indicate that each construct had sufficient empirical distinction from the other constructs in the model.

Next, the structural model was evaluated using R-square and f-square values.

Table 4. Structural Model Evaluation

Evaluation Criteria	Relationship / Construct	Value	Interpretation
R-square	Financial Decision Making	0.382	Moderate
f-square	Financial Literacy → Financial Decision Making	0.068	Small effect
f-square	Financial Intelligence → Financial Decision Making	0.359	Large effect

Source: Data processing results, 2026.

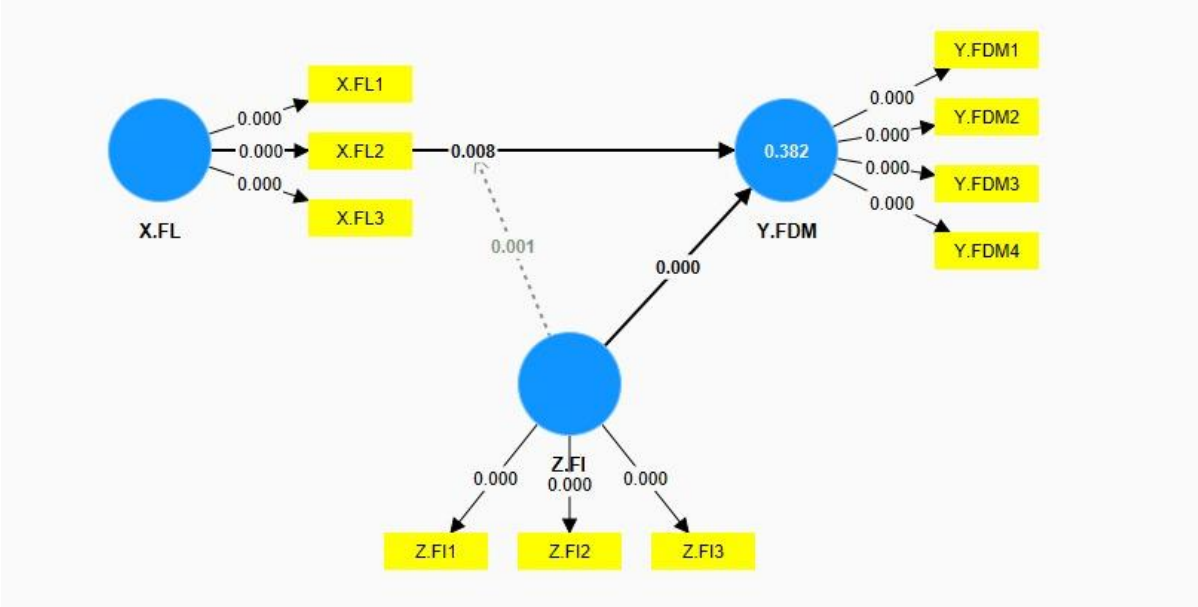

Figure 2. Structural Model

Source: SmartPLS output, 2026

The R-square value for financial decision-making was 0.382, which means that financial literacy and financial intelligence explained 38.2% of the variance in financial decision-making. This value indicates that the model has a moderate level of explanatory power. The f-square value of financial literacy on financial decision-making was 0.068, indicating a small effect. Meanwhile, the f-square value of financial intelligence on financial decision-making was 0.359, indicating a large effect. These results show that financial intelligence has a stronger explanatory role than financial literacy in shaping financial decision-making among Generation Z students.

Furthermore, hypothesis testing was conducted using the bootstrapping procedure in SmartPLS.

Table 5. Hypothesis Testing

Hypothesis	Relationship	Path Coefficient	t-statistic	p-value	Decision
H1	X → Y	0.222	2.645	0.008	Supported
H2	Z → Y	0.502	5.615	0.000	Supported
H3	X → Z → Y	0.265	3.217	0.001	Supported

Source: Data processing results, 2026.

The results indicate that financial literacy had a positive and significant effect on financial decision-making, with a path coefficient of 0.222, t-statistic of 2.645, and p-value of 0.008. Thus, H1 was supported. This finding suggests that students with higher financial literacy tend to demonstrate better financial decision-making.

Financial intelligence also showed a positive and significant effect on financial decision-making, with a path coefficient of 0.500, t-statistic of 5.615, and p-value of 0.000. Therefore, H2 was supported. This result indicates that students with stronger financial intelligence are more capable of applying financial knowledge, controlling financial behavior, and making rational financial choices.

The moderation test shows that the interaction between financial literacy and financial intelligence had a positive and significant effect on financial decision-making, with a coefficient of 0.265, t-statistic of 3.217, and p-value of 0.001. Thus, H3 was supported. This result confirms that financial intelligence strengthens the relationship between financial literacy and financial decision-making. In other words, the effect of financial literacy on financial decision-making becomes stronger when students have higher financial intelligence.

Overall, the results demonstrate that both financial literacy and financial intelligence contribute to financial decision-making among Generation Z students. Financial intelligence not only has a direct effect but also strengthens the influence of financial literacy. These findings support the proposed research model and highlight the importance of integrating financial knowledge with practical financial intelligence to improve students' financial decision-making.

Discussion

The results of this study show that financial literacy contributes positively and significantly to financial decision-making among Generation Z students. This indicates that students who have a better understanding of financial matters are more likely to interpret financial information properly, compare available options, recognize potential risks, and make more reasonable decisions related to budgeting, saving, borrowing, spending, and the use of digital financial products. This result supports Klapper and Lusardi (2020), who stated that financial literacy is essential in building financial resilience and helping individuals deal with financial uncertainty.

This finding is especially important in the context of Generation Z, a group that is closely connected to various digital financial services, including e-wallets, mobile banking, online credit, paylater facilities, and investment applications. In such an environment, access to financial products alone is not enough. Students also need adequate understanding to use these services carefully and responsibly. Setiawan et al. (2022) found that digital financial literacy is associated with saving and spending behavior, which implies that students' understanding of digital financial tools can influence the quality of their financial decisions.

Nevertheless, although financial literacy significantly affects financial decision-making, its effect size in this study is relatively small. This suggests that financial knowledge by itself cannot fully explain why students make certain financial decisions. Some students may understand basic

financial principles, yet still struggle to apply them when facing emotional pressure, peer influence, impulsive buying tendencies, or persuasive digital promotions. This is consistent with Henager and Cude (2016), who emphasized that financial literacy should be linked to both short-term and long-term financial behavior. Xiao and Porto (2017) also argued that financial behavior and financial capability may connect financial education with financial satisfaction, showing that knowledge becomes more useful when it is supported by practical ability.

The second finding reveals that financial intelligence has a positive and significant influence on financial decision-making. This means that financial intelligence plays an important role in guiding students toward more rational, controlled, and future-oriented financial choices. While financial literacy mainly refers to knowledge and understanding, financial intelligence reflects the ability to use that knowledge in real situations, manage emotions, control spending impulses, assess risks, and compare financial alternatives. Kumar et al. (2023) highlighted that skills, digital financial literacy, financial capability, and autonomy are key elements in improving financial decision-making and financial well-being. In a similar direction, Shankar et al. (2022) explained that financial well-being among Generation Z is shaped by their ability to manage resources and make responsible financial decisions.

These results also indicate that financial intelligence serves as a link between knowledge and action. Students may already know that saving, budgeting, and avoiding excessive debt are important, but their actual decisions can still be affected by emotions, habits, social pressure, and financial confidence. Financial intelligence helps students deal with these influences by improving their ability to evaluate choices and control impulsive behavior. Tahir et al. (2021) showed that financial well-being is affected by financial capability and impulsivity, which confirms the importance of behavioral control in achieving better financial outcomes.

The third finding confirms that financial intelligence significantly moderates the relationship between financial literacy and financial decision-making. The positive moderation effect shows that financial literacy becomes more influential when students possess higher financial intelligence. In this sense, financial intelligence does not substitute financial literacy; rather, it strengthens the practical value of financial literacy by helping students convert financial knowledge into responsible financial behavior. Long et al. (2023) found that financial literacy and behavioral traits are related to digital payment adoption and use, indicating that financial behavior in the digital era is influenced by both knowledge and personal behavioral characteristics. Bottazzi and Oggero (2023) also demonstrated that financial literacy is related to financial resilience, but its role becomes stronger when individuals are able to use their knowledge to handle financial challenges.

Overall, this study reinforces the view that financial literacy is necessary, but it is not sufficient when it stands alone. Financial intelligence appears to have a more strategic role because it enables students to apply financial knowledge in a thoughtful, controlled, and adaptive way. These findings are relevant for university students as members of Generation Z who are moving toward financial independence in an environment influenced by digital convenience and consumer-oriented promotions. Koskelainen et al. (2023) emphasized that financial literacy in the digital era should be understood in relation to new financial environments and digital decision-making challenges. From a practical perspective, universities need to design financial education programs that not only improve students' knowledge of saving, budgeting, borrowing, and investment, but also strengthen financial intelligence through case-based learning, simulations, budgeting exercises, risk analysis, and reflective activities. Pham and Le (2023) suggested that financial education and financial literacy are closely connected to financial

behavior among young generations, while Fan et al. (2024) argued that financial literacy supports financial resilience when individuals are able to use their knowledge to manage risks and uncertainty.

CONCLUSIONS

This study confirms that financial literacy positively and significantly influences financial decision-making among Generation Z. Students with stronger financial literacy are more able to understand financial information, assess available alternatives, and make rational choices in managing their personal finances. However, the findings also indicate that financial intelligence has a stronger direct effect, showing that sound financial decisions depend not only on knowledge, but also on the ability to apply it, regulate impulses, and assess financial risks. Financial intelligence also strengthens the relationship between financial literacy and financial decision-making. This means that financial literacy becomes more effective when supported by practical financial intelligence. Therefore, financial education in higher education should not only improve students' financial knowledge, but also develop their ability to use that knowledge wisely, critically, and responsibly in the digital financial environment.

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