

The Role of Financial Literacy and Self-Control in Reducing Impulsive Buying Among Generation Z Digital Wallet Users

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Abstract: The growth of digital transactions through digital wallets has increased shopping convenience, but has also potentially encouraged impulsive buying behavior among Generation Z. While digital wallet use is relevant to the context of impulsive buying, this study treats it only as a descriptive variable. The study also describes the level of digital wallet use among respondents. The study used a quantitative approach with an explanatory research design. The sample consisted of 384 respondents selected using a purposive sampling technique. Descriptive statistics were used to describe financial literacy, digital wallet use, self-control, and impulsive buying, while SEM-PLS was used to test the relationships among financial literacy, self-control, and impulsive buying. The descriptive analysis showed that financial literacy, digital wallet use, self-control, and impulsive buying are all in the high category. The hypothesis testing results showed that financial literacy had no significant effect on impulsive buying, whereas self-control had a significant effect in reducing impulsive buying. In addition, self-control was shown to moderate the relationship between financial literacy and impulsive buying, so that the effectiveness of financial literacy in reducing impulsive behavior depended on an individual's ability to control themselves. These findings indicate that improving financial knowledge needs to be balanced with strengthening self-control in order to encourage more rational consumption behavior in the era of digital transactions.

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INTRODUCTION

The development of digital technology has driven a significant transformation in the financial behavior of society, particularly among Gen Z, who have grown up alongside the ecosystem of digital payments and electronic wallets. Digital payment incentives such as *cashback*, instant discounts, and personalized promotions have been shown to increase convenience and ease in transactions (Kharbanda & Chawla, 2025)(Ma et al., 2024)(Wang et al., 2022). Ease of carrying out digital transactions makes users more prone to impulsive buying (Lamis et al., 2022)(Escobar-farfán et al., 2025)(Dang et al., 2025). Recent data show that *e-wallet* (digital wallet) is the most dominant payment method (84.3%), far above cash on delivery, bank transfer, and pay-later. This confirms a strong societal shift toward more practical and faster digital transactions. Convenience and practicality make digital wallets (*e-wallet*) the primary choice for transactions in society (Sanny et al., 2023)(Underdown & Tamara, 2025)(Riantisari & Nurrokhmini, 2023). This shift has not only changed the way society makes payments, but has also influenced the way people make shopping decisions. The ease and speed of transactions mean the purchasing process can be completed in just a few steps, so buying decisions are often made without careful consideration. This condition shows that the easier a transaction is to carry out, the greater the likelihood of unplanned purchases occurring.

A similar phenomenon is observed among Generation Z in Klaten Regency. Previous research shows that digital transaction adoption is growing rapidly, with 59% of Gen Z having adopted a

cashless lifestyle and 63% having a good level of financial literacy, particularly in basic aspects such as budgeting and saving habits (Nurrokhmini, Riantisari, et al., 2025). That study also finds that a *cashless* lifestyle has a positive and significant effect on consumptive behavior. These findings suggest that increased use of digital transactions is not necessarily followed by the ability to control consumption behavior. Although most respondents already had a good level of financial literacy, consumptive behavior remained prevalent. These findings show that a person's financial knowledge is not necessarily reflected in their daily financial behavior. The ease of transacting through digital wallets means purchase decisions are often influenced by the situation at hand, rather than solely by the level of financial knowledge one possesses.

These findings are in line with various studies stating that financial literacy helps individuals make more rational financial decisions, including controlling the urge to make spontaneous purchases (Fariska et al., 2024)(Apriani et al., 2023)(Long et al., 2023). Individuals with higher levels of financial literacy are usually better able to recognize financial risks, plan budgets, and distinguish between needs and wants before making a purchase (Gilly et al., 2025)(Namirah et al., 2025). Financial literacy is important for preventing poor financial decisions that could later trigger regret (Feeney et al., 2025)(Nurrokhmini, Putri, et al., 2025). Therefore, financial literacy functions as a protective tool that can reduce the adverse effects of digital wallet use on impulsive shopping habits among Gen Z. Nevertheless, research findings regarding the effect of financial literacy on impulsive buying still show differing results. Some studies state that financial literacy can reduce the tendency toward impulsive buying because individuals are better able to manage their finances and consider each purchasing decision. Conversely, other studies show that financial knowledge alone is not enough to hold back the urge to make spontaneous purchases, especially when consumers are faced with the various conveniences and promotions offered through digital platforms. These inconsistent findings suggest that additional factors should be considered when explaining impulsive buying behavior.

These inconsistent findings suggest that impulsive buying is not only influenced by the level of financial literacy. It is also shaped by psychological factors and the characteristics of digital wallet use. Financial literacy may reduce impulsive buying tendencies, particularly when supported by strong self-control (Anisa et al., 2020). The use of digital wallets has been shown to increase impulsive buying (Wei et al., 2023)(Emanuella, 2023) particularly due to promotions, ease of transactions, positive emotions, cheap shipping, and fast delivery. The adoption of digital payments drives shopping frequency even though literacy and self-control help curb consumptive behavior (Purwaningtyas & Sari, 2025). Literacy can trigger consumptive behavior when it encourages the use of PayLater services, while *self-control* weakens its influence (Adhitya Ananda et al., 2024). *Self-control* remains a key moderator even when literacy is not significant (Octaviani & Yuniningsih, 2024). In addition to producing inconsistent findings, most previous studies still examine relationships between variables separately. Research linking financial literacy, digital wallet use, and impulsive buying in a single model that places self-control as a moderating variable remains relatively limited. However, the ability to control oneself is thought to play an important role in determining whether a person's financial knowledge is actually applied in their consumption behavior. The state of the art of this study lies in the limited number of studies that examine the relationship among digital wallet use, financial literacy, and impulsive buying while also introducing *self-control* as a moderating variable. Previous literature has still examined these variables separately and produced inconsistent findings.

Although financial literacy can reduce impulsive buying, several studies suggest that its effect is influenced by psychological mechanisms such as self-control (Hamid, 2025). Conversely, individuals with low *Self-Control* remain susceptible to impulsive buying despite having financial knowledge (Nyrhinen et al., 2024)(Verplanken & Herabadi, 2001). In addition, individuals with high self-control are generally better able to regulate their use of digital wallets (Sukra et al., 2025)(Lee et al., 2023). These findings suggest that self-control plays an important role in determining whether financial literacy is translated into everyday consumption behavior. However, research examining the

relationships among financial literacy, digital wallet use, impulsive buying, and the moderating role of self-control within a single research model remains limited, particularly among Generation Z in Klaten Regency. Therefore, this study aims to examine the level of digital wallet use and financial literacy among Generation Z in Klaten Regency, investigate the effect of financial literacy on impulsive buying, and evaluate the moderating role of self-control in the relationship between financial literacy and impulsive buying.

The novelty of this study lies in the integrated examination of the relationship between financial literacy and impulsive buying by introducing *self-control* as a moderator within a single research model. Novelty also arises from the use of a diagnostic and causality approach based on SEM-PLS to capture the moderating relationship more accurately, as well as a focus on Gen Z in Klaten as the local context. The results of this study are expected to provide benefits for the development of research on financial behavior in the digital era, particularly regarding digital wallet use by Generation Z.

This research addresses an important issue because impulsive buying can have long-term financial consequences, including financial instability, increased debt, reduced saving capacity, and financial stress among young people (Nurrokhmini et al., 2024). This study supports the Fourth Asta Cita, one of the eight national development missions of the Government of Indonesia, which emphasizes the development of high-quality human resources. It also contributes to the achievement of Sustainable Development Goal (SDG) 4 by promoting financial literacy and responsible consumption behavior. Furthermore, this study aligns with Indonesia's Priority Focus Area 5.7, "Quantum Technology Backwardness and the Human Resources Gap," which highlights the need to develop digitally competent human resources capable of adapting to future technological advancements. The objective of this research is to test the effect of financial literacy on impulsive buying among Gen Z, and to assess the role of *self-control* as a moderator of the relationship between financial literacy and impulsive behavior.

RESEARCH METHOD

The research method describes the research approach, data collection technique, population and sample, and data analysis method used in the study.

Research Design and Analytical Approach

This study employed a quantitative explanatory research design. To address the research objectives, two analytical approaches were employed, (1) Diagnostic approach: Descriptive statistics were used to examine the levels of digital wallet use, financial literacy, self-control, and impulsive buying among Generation Z in Klaten Regency; (2) Structural relationship approach: Structural Equation Modeling–Partial Least Squares (SEM-PLS) was used to examine the the structural relationship between financial literacy and impulsive buying, as well as to evaluate the moderating role of self-control in strengthening or weakening this relationship.

Research Variables and Indicators

This research involves 4 main variables: financial literacy (BPS, 2024), digital wallet user (Khan & Abideen, 2023), *self-control* (Nyrhinen et al., 2024) and impulsive buying (Mhd Yusak et al., 2022) along with their assessment indicators, as follows:

Table 1. Research Variables and Assessment Indicators

Variable	Concept Definition	Assessment Indicators
Financial Literacy (X1)	Financial literacy is the knowledge, skills, and confidence needed to manage finances for well-being.	1. Knowledge 2. Skills 3. Confidence

		4. Attitude 5. Behavior
Self-Control (M)	Self-control is defined as the capacity to control urges and impulsivity	1. Ability to resist temptation 2. Control over emotions and momentary urges 3. Consistency of behavior with long-term goals 4. Self-discipline in spending 5. Ability to avoid impulsive behavior
Impulsive Buying (Y)	Impulsive buying is a consumer's tendency to make sudden purchases without rational planning, triggered by emotional urges and external stimuli.	1. Tendency to buy spontaneously 2. Unplanned purchases 3. Difficulty controlling the urge to buy 4. Purchases driven by emotion 5. Purchases made without considering the consequences 6. Momentary satisfaction

Data and Data Collection Method

Digital wallet use was measured only to describe respondents' digital transaction characteristics and was not included as a construct in the SEM-PLS model. In addition, secondary data were obtained from official sources, including the Financial Services Authority (OJK), Bank Indonesia, fintech industry reports, and relevant scientific literature to provide contextual information and support the interpretation of the findings. The population in this study Generation Z aged 15–25 years in Klaten Regency who use digital wallets in their daily transaction activities. The age range of 15–25 years was used as an operational sampling criterion to focus the study on young Generation Z respondents during the 2026 data collection period. BPS classifies Generation Z as individuals born between 1997 and 2012; therefore, the 15–25 age range represents a defined subset of the broader Generation Z population used for this study (Sugiyono, 2018), with the following criteria:

- Gen Z aged 15–25 years
- Residing in Klaten Regency
- Have used a digital wallet for at least the last three months
- Have carried out digital transactions for either primary needs or consumptive purposes

The sample size was determined using the Cochran formula because the population was unknown. Using a confidence level ($Z = 1.96$), proportion $p = 0.5$, and a 5% margin of error ($e = 0.05$), the calculation (Yusri, 2020) :

$$n_0 = \frac{1,96^2 \cdot 0,5 \cdot 0,5}{0,05^2}$$

$$n_0 = \frac{3,8416 \cdot 0,25}{0,0025}$$

$$n_0 = \frac{0,9604}{0,0025} = 384,16$$

Because the calculated minimum sample size was 384.16, the value was rounded up to 385 respondents to ensure that the minimum required sample size was met. Therefore, the study targeted a minimum of 385 respondents.

Data Analysis

Data analysis in this study follows two main approaches, namely the diagnostic approach and the causality approach, which complement one another. Both approaches were applied in stages, starting from mapping the baseline conditions of respondents through to testing the relationships between variables using SEM-PLS.

1. Data Analysis Using the Diagnostic Approach

The analysis at this stage aims to provide an overview of the conditions of financial literacy, digital wallet use, self-control, and impulsive buying among Generation Z in Klaten Regency. The analysis was conducted using descriptive statistics by calculating the average value (*mean*) for each indicator and research variable. The average values obtained were then interpreted based on the assessment categories to determine the level of each research variable. Category determination was carried out using class intervals on a 4-point Likert scale as presented in the following table.

Table 2. Assessment Categories of the Research Variables

Value Interval	Category
1,00–1,75	Very Low
1,76–2,50	Low
2,51–3,25	High
3,26–4,00	Very High

2. Data Analysis Using the Causality Approach

At this stage, the analysis focuses on testing the cause-and-effect relationships between variables using SEM-PLS. The stages are as follows:

- a. Validity and reliability testing
Used to assess whether the indicators used are truly able to measure their respective variables.
- b. Direct effect testing (*Direct Effect*)
Tests the direct relationship between the main variables, namely the effect of financial literacy on impulsive buying.
- c. Moderation testing (*Interaction Effect*)
Tests whether *self-control* is able to strengthen or weaken the effect of financial literacy on impulsive buying among Gen Z in Klaten Regency.

RESULTS AND DISCUSSION

Results of the Diagnostic Approach Analysis

The diagnostic approach analysis was conducted to describe the condition of each research variable based on respondents' answers. This analysis uses descriptive statistics through the calculation of the average value (*mean*) for each indicator and research variable. The average values obtained were then interpreted based on the predetermined assessment categories, thereby providing an overview of the level of financial literacy, digital wallet use, *self-control*, and impulsive buying among Generation Z in Klaten Regency. The results of the descriptive analysis were also used to identify the indicators with the highest and lowest average values for each variable.

Table 3. Descriptive Analysis Results

Variable	Mean	Category
Financial Literacy	3,12	High
Digital Wallet Use	3,08	High
Self-Control	2,86	High
Impulsive Buying	2,74	High

Based on the descriptive analysis results, all research variables fall into the high category. Financial literacy had a mean score of 3.12, indicating a high level of financial literacy among the respondents. Digital wallet use had a mean score of 3.08, suggesting that respondents frequently used digital wallets in their daily transactions. Self-control recorded a mean score of 2.86, indicating a relatively high level of self-control. Meanwhile, impulsive buying had a mean score of 2.74, indicating that respondents still exhibited a tendency toward impulsive buying despite being within the high-

category range. These findings suggest that high levels of financial literacy and self-control do not necessarily correspond to lower levels of impulsive buying. Therefore, SEM-PLS analysis was subsequently conducted to examine the effect of financial literacy on impulsive buying and to evaluate whether self-control moderates this relationship.

Results of the Causality Analysis

Before examining the relationships among the variables using Structural Equation Modeling-Partial Least Squares (SEM-PLS), the measurement model (outer model) was evaluated. This evaluation was conducted to ensure that each indicator validly and reliably measured its intended construct. Accordingly, validity and reliability were assessed first. After all indicators were confirmed to meet the required criteria, the analysis proceeded to the structural model (inner model) to examine the direct effects of financial literacy on impulsive buying and the moderating effect of self-control on this relationship.

1. Outer Model Analysis (Measurement Model)

Evaluation of the measurement model was carried out through convergent validity, discriminant validity, and construct reliability. The research model contains three reflective constructs, namely financial literacy with 10 indicators, self-control with 8 indicators, and impulsive buying with 8 indicators. The model also contains an interaction construct of self-control and financial literacy to test the moderating effect on impulsive buying.

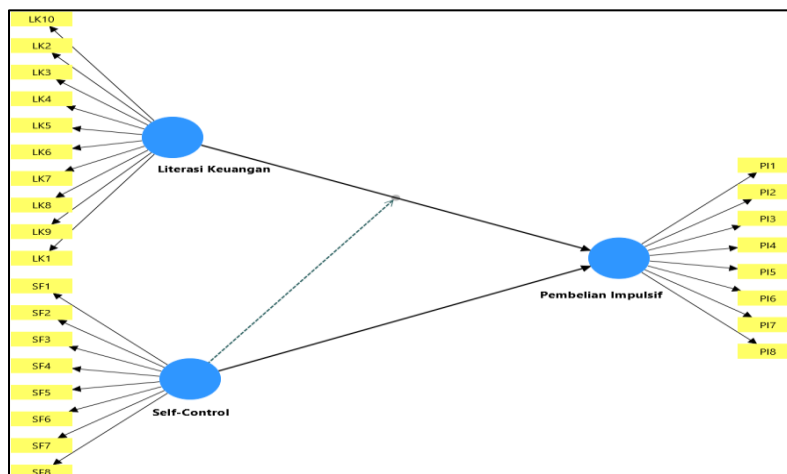


Figure 1. Research Structural Model

Convergent Validity Test

Convergent validity assesses the extent to which indicators measuring the same construct are highly correlated. Evaluation was carried out through outer loading and AVE using SmartPLS 4. An outer loading value of around 0.708 or higher is considered ideal because it shows that the construct can explain more than 50 percent of the indicator's variance. Indicators with loadings between 0.40 and 0.70 do not necessarily need to be removed if the AVE, reliability, and theoretical relevance of the construct remain adequate (Hair et al., 2021). The outer loading results are presented in the following table.

Table 4. Outer Loading Test Results

	Financial Literacy	Impulsive Buying	Self-Control	Description
LK10	0.834			Valid

LK2	0.860		Valid
LK3	0.799		Valid
LK4	0.812		Valid
LK5	0.814		Valid
LK6	0.828		Valid
LK7	0.859		Valid
LK8	0.844		Valid
LK9	0.827		Valid
LK10	0.859		Valid
PI1		0.821	Valid
PI2		0.849	Valid
PI3		0.842	Valid
PI4		0.783	Valid
PI5		0.793	Valid
PI6		0.812	Valid
PI7		0.814	Valid
PI8		0.681	Valid
SF1		0.855	Valid
SF2		0.775	Valid
SF3		0.849	Valid
SF4		0.832	Valid
SF5		0.862	Valid
SF6		0.844	Valid
SF7		0.838	Valid
SF8		0.834	Valid

As shown in Table 4, the outer loadings ranged from 0.681 to 0.860. Twenty-five of the 26 indicators exceeded the recommended threshold of 0.70. Indicator PI8 had an outer loading of 0.681, which was slightly below the recommended threshold but remained within the acceptable range. PI8 was retained because the impulsive buying construct achieved an AVE of 0.642 and demonstrated satisfactory construct reliability. Therefore, removing the indicator based solely on its loading was considered unnecessary. Convergent validity was further assessed using the Average Variance Extracted (AVE). A construct is considered to have adequate convergent validity if its AVE exceeds 0.50, indicating that it explains more than 50% of the variance in its indicators. The AVE values are presented in Table 5.

Table 5. Average Variance Extracted (AVE) Results

Variable	Average Variance Extracted (AVE)	Description
Financial Literacy	0.696	Valid
Impulsive Buying	0.642	Valid
Self-Control	0.700	Valid

The AVE value for financial literacy is 0.696, for impulsive buying is 0.642, and for self-control is 0.700. All values are above 0.50. Thus, each construct is able to explain more than half of its indicators' variance and has satisfied convergent validity

Discriminant Validity Test

Whether each indicator appropriately represents its intended construct and is empirically distinct from other constructs. Discriminant validity can be determined by examining the cross loading results. An indicator model can be said to be valid when its cross loading value is greater than the value for other constructs and > 0.7. The following are the cross loading results between constructs from processing using SmartPLS 4 software.

Table 6. Cross Loading Test Results

	Financial Literacy	Impulsive Buying	Self-Control	Description
LK1	0.834	-0.193	0.583	Valid
LK2	0.860	-0.261	0.609	Valid
LK3	0.799	-0.225	0.531	Valid
LK4	0.812	-0.260	0.591	Valid
LK5	0.814	-0.244	0.594	Valid
LK6	0.828	-0.221	0.639	Valid
LK7	0.859	-0.254	0.622	Valid
LK8	0.844	-0.269	0.624	Valid
LK9	0.827	-0.242	0.585	Valid
LK10	0.859	-0.252	0.619	Valid
PI1	-0.249	0.821	-0.265	Valid
PI2	-0.282	0.849	-0.280	Valid
PI3	-0.199	0.842	-0.202	Valid
PI4	-0.193	0.783	-0.192	Valid
PI5	-0.216	0.793	-0.217	Valid
PI6	-0.274	0.812	-0.250	Valid
PI7	-0.257	0.814	-0.260	Valid
PI8	-0.155	0.681	-0.139	Valid
SF1	0.619	-0.273	0.855	Valid
SF2	0.490	-0.246	0.775	Valid
SF3	0.618	-0.244	0.849	Valid
SF4	0.604	-0.242	0.832	Valid
SF5	0.668	-0.264	0.862	Valid
SF6	0.635	-0.211	0.844	Valid
SF7	0.573	-0.234	0.838	Valid
SF8	0.611	-0.211	0.834	Valid

The cross-loading results showed that each indicator had its highest loading on its intended construct. For the financial literacy construct, indicator loadings ranged from 0.799 to 0.860; for impulsive buying, they ranged from 0.681 to 0.849; and for self-control, they ranged from 0.775 to 0.862. Although indicator PI8 had an outer loading of 0.681, its loading remained higher on its intended construct than on any other construct. These findings indicate that the constructs are empirically distinct and demonstrate adequate discriminant validity. In this study, discriminant validity was evaluated using the cross-loading criterion. The Heterotrait–Monotrait ratio (HTMT) was not included in the analysis; therefore, the assessment of discriminant validity was limited to cross-loading. This approach was used to assess whether each indicator had a higher loading on its intended construct than on the other constructs. Based on the cross-loading results, all indicators demonstrated their highest loading on the respective intended constructs, indicating adequate discriminant validity.

Reliability Test

Cronbach's alpha can be used to assess the internal consistency reliability of the constructs. A construct can be considered reliable when its Cronbach's alpha value is above 0.70 (Hair et al., 2021). The reliability test results obtained are as follows

Table 7. Reliability Test Results

Variable	Cronbach's Alpha Value	Criterion	Description
Financial Literacy (X1)	0,920	>0,7	Reliable
Self-Control (X2)	0,866	>0,7	Reliable
Impulsive Buying (Y)	0,962	>0,7	Reliable

Cronbach's alpha values for all constructs are above 0.70, namely 0.920 for financial literacy, 0.866 for self-control, and 0.962 for impulsive buying. Thus, all constructs demonstrate adequate internal consistency reliability based on Cronbach's alpha values. The validity of the constructs was evaluated separately through the measurement model assessment.

2. Inner Model Analysis (Structural Model)

The structural model test was conducted after the measurement model test, once it was confirmed that the variables used were valid and reliable. The structural model test aims to describe the relationships between latent variables and is evaluated to examine the effect and significance of those relationships. There are 3 tests, namely R-Square, Q-Square, and Hypothesis Testing. The following are the test results using SmartPLS 4 software

Coefficient of Determination Test (R^2)

The R-square (R^2) test is used to measure the ability of the structural model to explain the variation in the endogenous construct based on the effect of the exogenous constructs. The R^2 value ranges from 0 to 1, where a higher value indicates better explanatory and predictive ability of the model (Hair et al., 2022). The R^2 results in this study are presented as follows.

Table 8. Coefficient of Determination Test Results

	R-square	R-square adjusted
Impulsive Buying	0.134	0.127

Based on the inner model test results, the R-square (R^2) value for the Impulsive Buying variable is 0.134, while the adjusted R-square value is 0.127. This shows that the exogenous variables in the model – financial literacy, self-control, and the interaction of financial literacy with self-control – are able to explain 13.4% of the variation in impulsive buying among Generation Z in Klaten Regency. Meanwhile, 86.6% of the remaining variation in impulsive buying is explained by other factors outside this research model.

Predictive Ability Test ($Q^2_{predict}$)

Evaluation of $Q^2_{predict}$ through the PLSpredict procedure is used to assess the model's ability to predict new data outside the sample. A $Q^2_{predict}$ value greater than zero indicates predictive relevance. Furthermore, the root mean square error (RMSE) value of PLS-SEM is compared with a linear model (LM) as a benchmark. The model has better predictive ability if the PLS-SEM prediction error is lower than that of the LM (Shmueli et al., 2019)

Table 9. PLSpredict Evaluation Results

Indicator	$Q^2_{predict}$	PLS-SEM RMSE	LM RMSE	Conclusion
PI1	0,062	0,790	0,811	Predictive
PI2	0,085	0,788	0,802	Predictive
PI3	0,030	0,748	0,767	Predictive
PI4	0,047	0,742	0,771	Predictive
PI5	0,067	0,736	0,758	Predictive
PI6	0,096	0,748	0,778	Predictive
PI7	0,084	0,752	0,792	Predictive
PI8	0,034	0,770	0,793	Predictive

All impulsive buying indicators have positive $Q^2_{predict}$ values, ranging between 0.030 and 0.096. In addition, the PLS-SEM RMSE values for all indicators are lower than the LM RMSE. These results show that the model has strong predictive relevance and predictive performance compared to the linear benchmark across all indicators. This finding does not contradict the low R^2 value,

because explanatory power and predictive ability measure different aspects. R^2 assesses the variation explained within the sample, while PLSpredict assesses predictive ability outside the sample (Shmueli et al., 2019).

Hypothesis Testing

Hypothesis testing was conducted through bootstrapping at a 5% significance level with two-tailed testing. A relationship is declared significant if the p-value < 0.05 or t-statistics > 1.96. The path coefficient indicates the direction of the relationship, while the t-statistics and p-value indicate the level of significance.

Table 10. Hypothesis Testing Results

	Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t-statistics	p-value	Decision
H1	Financial Literacy > Impulsive Buying	-0,118	-0,124	0,072	1,638	0,102	Rejected
H2	Self-Control > Impulsive Buying	-0,148	-0,152	0,074	1,993	0,046	Accepted
H3	Self-Control x Financial Literacy > Impulsive Buying	0,156	0,151	0,047	3,286	0,001	Accepted

Discussion

Financial Literacy Has No Significant Effect on Impulsive Buying

Hypothesis testing showed that financial literacy did not have a significant effect on impulsive buying among Generation Z in Klaten Regency. These findings suggest a gap between financial knowledge and its application in actual consumption decisions. Although respondents demonstrated an understanding of budgeting, saving, and distinguishing between needs and wants, this knowledge was not always reflected in their purchasing decisions when they were exposed to promotions, cashback offers, discounts, and the convenience of digital payment systems.

These findings are consistent with those of Octaviani & Yuniningsih, (2024) who found that financial literacy did not have a significant direct effect once self-control was included in the model. However, these findings differ from those reported by Anisa et al., (2020), Apriani et al., (2023) who found that financial literacy helps individuals regulate their consumption behavior. These inconsistencies may be attributed to differences in respondent characteristics, the digital transaction environment, the intensity of promotional activities, and the measurement of financial literacy and impulsive buying.

The implication of this finding is that financial literacy programs are not sufficient if they only add to knowledge. Such programs need to train the application of budgeting, needs evaluation before transactions, recording of digital expenditures, and the use of spending limits. A behavior-based approach is needed so that financial knowledge translates into more measured consumption decisions.

Self-Control Has a Significant Effect on Impulsive Buying

The test results prove that self-control has a significant effect on impulsive buying. These findings confirm that the ability to resist temptation, control momentary emotions, and maintain consistency with financial goals plays a role in Gen Z's purchasing decisions. Financial knowledge provides the basis for consideration, while self-control determines whether that consideration is actually applied before a transaction is made.

These findings are consistent with those of Nyrhinen et al., (2024) dan Verplanken & Herabadi, (2021) who found that low self-control increases consumers' susceptibility to impulsive purchases. They are also relevant with the findings of Sukra et al., (2025) and Lee et al., (2023), who reported that self-control helps consumers regulate their spending behavior when using digital payment services. The consistency of these findings may be attributed to the characteristics of digital wallets, which reduce transaction friction and shorten the interval between the urge to purchase and the completion of the payment process.

From a practical perspective, self-control can be strengthened by setting spending limits, adopting a cooling-off period before making purchases, limiting exposure to promotional notifications, and allocating separate balances for different spending purposes. These strategies may help Generation Z make more deliberate consumption decisions by reducing purchases driven by emotional impulses and immediate gratification.

Self-Control Moderates the Relationship Between Financial Literacy and Impulsive Buying

The interaction effect between self-control and financial literacy on impulsive buying was statistically significant. These findings indicate that the effect of financial literacy depends on an individual's level of self-control. In other words, financial literacy may produce different outcomes depending on individuals' capacity to regulate their consumption behavior. Thus, financial knowledge does not operate independently but interacts with psychological mechanisms that influence purchasing decisions.

These findings are consistent with those of Adhitya Ananda et al., (2024) and Octaviani & Yuniningsih, (2024) who identified self-control as an important mechanism linking financial capability and consumptive behavior. The significant moderating effect also helps explain why financial literacy did not exhibit a significant direct effect. Financial literacy appears to be most effective when individuals are able to resist immediate impulses and maintain purchasing decisions that are consistent with their financial goals.

Based on the test results, the interaction path coefficient (original sample) is positive at 0.156. Given that the direct effect coefficients of financial literacy and self-control on impulsive buying are negative, this positive interaction value shows that self-control functions to weaken the sensitivity of that relationship. This means that for Generation Z who already have very high self-control, the role of financial literacy in suppressing impulsivity gradually diminishes because their emotional and self-discipline are already strong enough to resist the urge to shop. Conversely, for individuals with lower self-control, good financial literacy understanding becomes the primary shield greatly needed to prevent impulsive behavior. This condition indicates that financial knowledge and self-control operate as substitutes or as complements to one another in curbing consumptive tendencies.

CONCLUSION

This study shows that financial literacy does not have a significant effect on impulsive buying among Generation Z in Klaten Regency, whereas self-control significantly reduces impulsive buying and moderates the relationship between financial literacy and impulsive buying. These findings indicate that financial knowledge is not necessarily reflected in prudent consumption behavior unless it is accompanied by strong self-control. Thus, the research objectives of analyzing the effect of financial literacy on impulsive buying and examining the role of self-control as a moderating variable have been achieved. This research contributes to the development of studies on financial behavior, particularly by showing that self-control is a factor that needs to be considered when explaining the relationship between financial literacy and impulsive buying in the era of digital transactions. From a practical standpoint, the results of this study can serve as input for educational institutions, government, and digital financial service providers in designing financial education programs that focus not only on improving knowledge, but also on building the ability to control oneself in making

consumption decisions. However, this study has several limitations that should be considered when interpreting the findings. First, the study was conducted only among Generation Z respondents in Klaten Regency using purposive sampling, which limits the generalizability of the findings to Generation Z populations in other regions. Second, the R^2 value for impulsive buying was relatively low at 13.4%, indicating that other factors beyond financial literacy and self-control may contribute to impulsive buying behavior. Future research should involve respondents from broader geographical areas and consider probability-based sampling where feasible to improve the generalizability of the findings. In addition, future studies should incorporate additional factors, such as digital promotions, lifestyle, and consumers' psychological characteristics, to provide a more comprehensive understanding of the determinants of impulsive buying.

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