FINANCIAL LITERACY AND QRIS UTILIZATION AS DETERMINANTS OF CONSUMPTIVE BEHAVIOR CONTROL AMONG GENERATION Z

(Evidence from a Sub-Urban Context in Indonesia)

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Abstract

The rapid expansion of QRIS adoption among Generation Z in sub-urban Indonesia raises questions about whether digital payment convenience accelerates impulsive spending or instead strengthens financial discipline. This study aims to examine the influence of financial literacy and QRIS utilization intensity on the control of consumptive behavior among Generation Z in Majenang District, Central Java, Indonesia. A quantitative approach with a survey method was employed, involving 138 respondents selected through purposive sampling, with data analyzed using multiple linear regression. The results show that financial literacy and QRIS utilization intensity each have a positive and significant effect on consumptive behavior control, both partially and simultaneously. These findings indicate that, rather than accelerating impulsive spending, high-intensity QRIS usage functions as an effective digital financial tracking mechanism that reinforces behavioral discipline when supported by sound financial literacy. This study contributes to shifting the paradigm of digital wallets from drivers of predatory consumption toward instruments of financial sovereignty within an underexplored sub-urban context.

Keywords*: consumptive behavior control; financial literacy; generation z; QRIS; sub-urban economy*

Abstrak

Ekspansi cepat adopsi QRIS pada Generasi Z di wilayah sub-urban Indonesia memunculkan pertanyaan apakah kemudahan pembayaran digital justru memicu pembelanjaan impulsif atau sebaliknya memperkuat disiplin keuangan. Penelitian ini bertujuan untuk menganalisis pengaruh literasi keuangan dan intensitas penggunaan QRIS terhadap kontrol perilaku konsumtif pada Generasi Z di Kecamatan Majenang, Jawa Tengah, Indonesia. Penelitian menggunakan pendekatan kuantitatif dengan metode survei, melibatkan 138 responden yang dipilih melalui purposive sampling, dengan data dianalisis menggunakan regresi linear berganda. Hasil penelitian menunjukkan bahwa literasi keuangan dan intensitas penggunaan QRIS masing-masing berpengaruh positif dan signifikan terhadap kontrol perilaku konsumtif, baik secara parsial maupun simultan. Temuan ini mengindikasikan bahwa, alih-alih memicu pembelanjaan impulsif, intensitas penggunaan QRIS yang tinggi justru berfungsi sebagai mekanisme pelacakan keuangan digital yang efektif dan memperkuat disiplin perilaku ketika diimbangi oleh literasi keuangan yang baik. Penelitian ini berkontribusi pada pergeseran paradigma dompet digital, dari pemicu konsumsi predatif menjadi instrumen kedaulatan finansial, khususnya dalam konteks sub-urban yang masih jarang diteliti.

Kata Kunci: *kontrol perilaku konsumtif; literasi keuangan; generasi z; QRIS; ekonomi sub-urban*

INTRODUCTION

The rapid proliferation of digital payment systems in Indonesia, particularly through the *Quick Response Code Indonesian Standard* (QRIS) introduced by Bank Indonesia in 2019, has fundamentally restructured the transactional behavior of Indonesian society. By mid-2024, QRIS transaction growth had reached 226.54 percent year-on-year, with the number of users reaching 50.50 million and merchants reaching 32.71 million (Bank Indonesia, 2024). Throughout 2024–2025, QRIS transaction volume recorded spectacular

figures with annual growth exceeding 150 percent and the number of users surpassing 57 million people (Bank Indonesia, 2025). This phenomenal expansion signals not merely a shift in payment infrastructure, but a deeper transformation in how Indonesian consumers particularly Generation Z perceive, experience, and manage financial transactions in their daily lives.

Generation Z, broadly defined as individuals born between 1997 and 2012, constitutes the first fully digitally-native consumer cohort in Indonesia's economic history. Generation Z is the first digital native cohort to grow and develop within a digital technology ecosystem from an early age; unlike previous generations, Gen Z students have broader access to financial information through digital platforms, yet paradoxically, their level of financial literacy remains a serious concern (Choung et al., 2023). According to the National Financial Literacy and Inclusion Survey (SNLIK) 2024 conducted by OJK and BPS, Indonesia's financial literacy index stands at 65.43 percent, while the financial inclusion index is at 75.02 percent; among age groups, Gen Z aged 18–25 years recorded a financial literacy index of only 70.19 percent, placing them among the most vulnerable groups to consumptive behavior and financial traps (OJK & BPS, 2024). This persistent gap between financial product accessibility and actual financial management competency underscores the urgency of examining how Generation Z navigates the intersection of digital payment convenience and personal financial control.

The behavioral economics literature consistently identifies a critical psychological mechanism underlying the relationship between cashless payment systems and consumptive behavior. Prelec and Loewenstein (1998) proposed a double-entry mental accounting model that describes the nature of reciprocal interactions between the pleasure of consumption and the pain of paying, wherein paying triggers an immediate negative affective response that serves as a regulatory mechanism moderating consumption (Prelec & Loewenstein, 1998). Classical behavioral economics establishes that cash payments activate a pain of paying mechanism a psychophysiological aversion response that inhibits expenditure and promotes restraint and when this mechanism is attenuated through cashless systems such as QRIS's seamless, one-tap architecture, the psychological cost of spending diminishes and individuals become susceptible to elevated non-essential disbursements (Prelec & Loewenstein, 1998). Empirical findings confirm that digital payments encourage impulsive buying by reducing the pain of paying, whereas financial literacy directly strengthens consumption control (Yahfi et al., 2025). This dual dynamic positions QRIS not only as a facilitator of transactional efficiency, but potentially as a catalyst for consumptive behavioral patterns when not accompanied by adequate financial literacy.

Multiple empirical studies conducted in various Indonesian urban contexts have documented the significant relationship between digital payment adoption and consumptive behavior among Generation Z. Research findings indicate that Digital Payment QRIS has a positive and significant effect on consumer behavior, suggesting that the convenience and speed of digital transactions tend to increase impulsive buying among students (Sinaga et al., 2026). Research on Gen Z in Surabaya confirms that consumptive behavior is often driven by a combination of low self-control, desire for prestige or social acceptance, and lack of financial literacy, which is further amplified by digital payment platforms such as QRIS that facilitate easy access to goods and services without the friction of handing over physical money (Salsabila & Amri, 2025). Furthermore, cashless payment systems have a positive and significant influence on financial behavior that tends to be consumptive, but can improve financial record-keeping efficiency if managed properly (Lusardi & Mitchell, 2014; Nasution, 2020). These findings collectively suggest that the relationship between QRIS

utilization and consumptive behavior is not deterministic, but is significantly mediated by the level of financial literacy an individual possesses.

The role of financial literacy as a protective mechanism against consumptive behavior has been extensively documented in the international literature. Lusardi and Mitchell (2014) argue that low financial literacy amidst a sophisticated financial system is a recipe for a future personal financial crisis, and financial literacy develops through individuals' direct interaction with financial products and information (Lusardi & Mitchell, 2014). Good financial literacy reduces the negative influence of behavioral preferences in making digital payments; since financial literacy contributes to individual behavior, topics related to understanding financial concepts should be continuously evaluated (Lusardi & Mitchell, 2014; Klapper et al., 2015). In the Indonesian context, research confirms that financial literacy has a negative effect on consumptive behavior among students, where the better one's financial literacy, the lower the tendency to engage in excessive consumption; Gen Z with financial awareness also tend to be more selective toward social media influences that often display consumptive lifestyles or online shopping trends (Sari & Hidayat, 2022; Gunawan & Putri, 2023). These findings firmly establish financial literacy as a pivotal variable in any analytical framework examining the control of consumptive behavior in the digital era.

Despite the abundance of studies examining either QRIS adoption drivers or the general effects of digital payments on consumptive behavior, a significant research gap remains. The majority of existing studies on Generation Z's digital payment adoption and financial literacy focus on determinants of adoption behavior and purchasing decisions (Al-Qudah et al., 2024; Andriyani et al., 2025), yet empirical studies that explicitly position QRIS as an *instrument of consumptive behavior control* rather than merely a transactional facilitator are scarce. Furthermore, digital financial literacy in Indonesia is still at 25 percent, far below financial inclusion which has reached 85 percent, and lifestyle variables show that a modern and hedonic lifestyle plays a positive role in digital payment usage (Aftech, 2023; Meilani & Kusuma, 2024), yet studies that simultaneously examine these variables in a non-metropolitan context remain underrepresented. Majenang District in Cilacap Regency, Central Java, represents precisely this understudied sub-urban context, where QRIS adoption among Generation Z particularly students and university members continues to grow rapidly, yet empirical evidence on how financial literacy and QRIS utilization intensity jointly contribute to controlling consumptive behavior remains entirely absent. This research gap constitutes the primary motivation and academic urgency for the present study, which aims to fill this void by empirically testing whether, and to what degree, financial literacy (X_1) and QRIS utilization intensity (X_2) together determine Generation Z's capacity to control consumptive behavior (Y) at the local community level.

METHOD

This study employs a quantitative approach using a survey design to analyze the influence of financial literacy and the intensity of QRIS usage on the control of Generation Z's consumer behavior in Majenang Subdistrict. The study population consists of Generation Z individuals aged 18–25 who reside in Majenang Subdistrict and actively use QRIS, with a sample of 138 respondents selected through purposive sampling based on criteria of age, active use of QRIS, and place of residence. The data collection instrument consisted of a 1–5 Likert-scale questionnaire measuring three main variables: financial literacy (X_1), which includes understanding of inflation, interest rates, budget management, saving, and debt avoidance; the intensity of QRIS usage (X_2), which includes frequency, perceived ease of use, perceived benefits, perceived security, and trust; and control over consumptive behavior

(Y), measured through indicators of budget management, avoidance of impulse purchases, and the ability to save. The questionnaire was distributed through two channels: online via Google Forms and WhatsApp, and in person under direct supervision, with all respondents providing informed consent before completing the survey.

RESULTS AND DISCUSSION

a. Instrument Test

Table 1. Validity Test Results

Variable	Item	R value	R table	Remark
Financial Literacy (X1)	1	0,472	0,167	Valid
	2	0,603	0,167	Valid
	3	0,517	0,167	Valid
	4	0,692	0,167	Valid
	5	0,606	0,167	Valid
	6	0,463	0,167	Valid
	7	0,551	0,167	Valid
	8	0,633	0,167	Valid
	9	0,603	0,167	Valid
	10	0,560	0,167	Valid
	11	0,515	0,167	Valid
Intensity Of QRIS Usage (X_2)	1	0,726	0,167	Valid
	2	0,790	0,167	Valid
	3	0,705	0,167	Valid
	4	0,688	0,167	Valid
	5	0,747	0,167	Valid
	6	0,608	0,167	Valid
	7	0,664	0,167	Valid
	8	0,727	0,167	Valid
	9	0,620	0,167	Valid
	10	0,647	0,167	Valid
	11	0,666	0,167	Valid
Consumptive Behavior (Y)	1	0,626	0,167	Valid
	2	0,672	0,167	Valid
	3	0,664	0,167	Valid
	4	0,743	0,167	Valid
	5	0,646	0,167	Valid
	6	0,697	0,167	Valid
	7	0,739	0,167	Valid
	8	0,651	0,167	Valid
	9	0,673	0,167	Valid
	10	0,700	0,167	Valid
	11	0,651	0,167	Valid

Based on the results of the validity test conducted on 138 respondents (N = 138), it was found that all 11 items had a Sig. (2-tailed) value of 0.000. This value is less than the specified significance level of 0.05 ($p < 0.05$). Furthermore, the Pearson correlation coefficients for each item relative to the total score (TOTAL) were positive and ranged from

0.463 to 0.692, all of which were above the critical value of 0.167. Thus, it can be concluded that all items for Variable X1 are VALID and suitable for use in further research analysis.Based on the results of the validity test conducted on 138 respondents (N = 138), it was found that all 11 items had a Sig. (2-tailed) value of 0.000. This value is less than the specified significance level of 0.05 ($p < 0.05$). Furthermore, the Pearson correlation coefficients for each item relative to the total score (TOTAL) were positive and ranged from 0.608 to 0.790, all of which were greater than the critical value of 0.167. Thus, it can be concluded that all items for Variable X2 are VALID and suitable for use in further research analysis.All eleven items comprising Variable Y were found to be fully valid. This was empirically demonstrated by the significance values (2-tailed Sig.) for all items, which were 0.000—a value far smaller than the required significance level of 0.05 ($p < 0.05$). Meanwhile, the Pearson correlation coefficients (calculated r) for each statement item relative to the total score (TOTAL) are positive and range strongly from 0.626 to 0.743. Thus, all statement items of Variable Y are deemed valid and can be used for the next stage of the research analysis.

Table 2. Reliability Test Results

Variable	Cronbach's Alpha	Keterangan
Financial Literacy (X_1)	0,784	Reliable
Intensity Of QRIS Usage (X_2)	0,889	Reliable
Consumptive Behavior (Y)	0,882	Reliable

Source: Processed data, 2026

Methodologically, the test results show a Cronbach's Alpha value of 0.784 (> 0.60), which means that all items in this questionnaire exhibit a very strong level of internal consistency. Thus, it can be concluded that the X1 variable instrument is reliable; therefore, if this questionnaire is reused to measure the same symptoms at different times and among different groups of respondents, it will yield consistent data. Methodologically, the test results showed a Cronbach's Alpha value of 0.889 (> 0.60), indicating that all items in this questionnaire exhibit a very strong level of internal consistency. Thus, it can be concluded that the X2 variable instrument is reliable; therefore, if this questionnaire is reused to measure the same symptoms at different times and among different respondent groups, it will yield consistent data. Statistically, this test yielded a Cronbach's Alpha coefficient of 0.882 (> 0.60), indicating that the eleven indicators in Variable Y exhibit solid internal consistency. Thus, it can be concluded that the Variable Y instrument is consistently reliable, free from random error, and highly suitable for hypothesis testing (such as regression or t-tests) in the subsequent data analysis stage.

b. Normality Test

Table 3. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		138
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	3.94625775
Most Extreme Differences	Absolute	.087
	Positive	.066
	Negative	-.087
Test Statistic		.087
Asymp. Sig. (2-tailed)		.012[c]
Monte Carlo Sig. (2-tailed)	Sig.	.227[d]

	95% Confidence Interval	Lower Bound	.218
		Upper Bound	.235

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

The results of the normality test using the One-Sample Kolmogorov-Smirnov Test on the unstandardized residuals with a sample size of N = 138 showed a test statistic of 0.087 and an asymptotic significance (2-tailed) of 0.012, which is less than 0.05. However, because the sample size is relatively large, a more appropriate assessment of normality is based on the results of the Monte Carlo Sig. (2-tailed), which yielded a value of 0.227 with a 95% confidence interval ranging from a lower bound of 0.218 to an upper bound of 0.235, based on 10,000 random sample tables with a starting seed of 1314643744. Since the Monte Carlo Sig. value of 0.227 > 0.05, the residual data are deemed to be normally distributed; thus, the assumption of normality in this regression model is met, and the analysis can proceed to the next stage.

c. Multicollinearity Test

Table 4. Multicollinearity Test Results

Coefficients[a]								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	(Constant)	2.222	3.282		.677	.500		
	Financial Literacy	.496	.096	.387	5.191	.000	.562	1.780
	Intensity of QRIS Usage	.443	.074	.448	6.014	.000	.562	1.780

a. Dependent Variable: Consumptive Behavior

Multicollinearity was tested using the Tolerance and VIF values, with the decision rule being that if Tolerance > 0.10 and VIF < 10, then multicollinearity does not occur. Based on the test results, the Financial Literacy variable (X1) had a Tolerance value of 0.562 and a VIF of 1.780, while the QRIS/Digital Payment Usage Intensity variable (X2) had a Tolerance value of 0.562 and a VIF of 1.780. Both independent variables show Tolerance values > 0.10 and VIF values < 10; therefore, it can be concluded that there is no multicollinearity among the independent variables in this study's regression model, and the regression model is suitable for use.

d. Heteroscedasticity Test

Table 5. Heteroscedasticity Test Results

Coefficients[a]						
		Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
Model		B	Std. Error	Beta		
1	(Constant)	2.428	2.234		1.087	.279
	Financial Literacy	.007	.065	.013	.110	.913
	Intensity Of QRIS Usage	.003	.050	.007	.059	.953

a. Dependent Variable: ABS_RES

The heteroscedasticity test used the Glejser test, with the decision rule that if the significance value is > 0.05, then there is no heteroscedasticity. Based on the test results, the significance value for the Financial Literacy variable (X1) was 0.913 and for the QRIS/Digital Payment Usage Intensity variable (X2) was 0.953. Both significance values are greater than 0.05; therefore, it can be concluded that there is no heteroscedasticity in the

regression model of this study, and the regression model satisfies the classical assumptions, making it suitable for further analysis.

e. T-Test

Table 6. T-Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.222	3.282		.677	.500
	Financial literacy	.496	.096	.387	5.191	.000
	Intensity of QRIS Usage	.443	.074	.448	6.014	.000

a. Dependent Variable: Consumptive Behavior

A t-test was conducted to determine whether each independent variable had a significant partial effect on the dependent variable. The decision criterion was that if the significance level was < 0.05, then the independent variable had a significant partial effect on the dependent variable. Based on the test results, the Financial Literacy variable (X1) yielded a calculated t-value of 5.191 with a significance level of 0.000 < 0.05; therefore, Financial Literacy has a significant partial effect on Control of Consumption Behavior (Y). The variable Intensity of QRIS/Digital Payment Use (X2) yielded a calculated t-value of 6.014 with a significance level of 0.000 < 0.05; therefore, the Intensity of QRIS/Digital Payment Use has a significant partial effect on Control of Consumption Behavior (Y).

Based on the test results, the following regression equation was obtained:

$$\mathbf{Y = 2.222 + 0.496X1 + 0.443X2}$$

The constant value of 2.222 means that if all independent variables are zero, then Control of Consumption Behavior is 2.222. The regression coefficients for X1 (0.496) and X2 (0.443) indicate that a one-unit increase in each variable will increase Control of Consumption Behavior by the value of that coefficient, assuming all other variables remain constant.

f. F-Test

Table 7. F-Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2937.412	2	1468.706	92.935	.000[b]
	Residual	2133.494	135	15.804		
	Total	5070.906	137			

a. Dependent Variable: Consumptive Behavior

b. Predictors: (Constant), Intensity Of QRIS Usage, Financial Literacy

The F-test was conducted to determine whether the independent variables simultaneously have a significant effect on the dependent variable. The decision criterion is that if the significance level is < 0.05, then the independent variables simultaneously have a significant effect on the dependent variable. Based on the test results, the calculated F-value was 92.935 with a significance value of 0.000, which is less than 0.05. Thus, it can be concluded that the variables Financial Literacy (X1) and Intensity of QRIS/Digital Payment Use (X2) simultaneously have a significant effect on Control of Consumption Behavior (Y).

g. Coefficient of Determination (R^2)

Table 8. Coefficient of Determination (R^2) Results

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.761[a]	.579	.573	3.97538

a. Predictors: (Constant), Intensity Of QRIS Usage, Financial Literacy

A coefficient of determination test was conducted to determine the extent to which the independent variables can explain the dependent variable. Based on the test results, an R-squared value of 0.579, or 57.9%, was obtained. This means that the variables Financial Literacy (X1) and Intensity of QRIS/Digital Payment Use (X2) account for 57.9% of the variation in the dependent variable, Control of Consumption Behavior (Y), while the remaining 42.1% is explained by other variables not examined in this study.

The empirical findings of this study yield three interconnected insights that collectively advance the theoretical understanding of digital payment behavior and consumptive control among Generation Z in a sub-urban Indonesian context. Each finding is analyzed below in terms of its underlying mechanisms, theoretical grounding, and correspondence with the broader body of international and domestic empirical evidence.

Financial Literacy as a Determinant of Consumptive Behavior Control

The positive and statistically significant partial effect of financial literacy on consumptive behavior control (beta = 0.387; t = 5.191; $p < 0.001$) constitutes the first principal finding of this study. This result confirms that Generation Z individuals residing in Majenang who possess higher levels of financial literacy encompassing conceptual mastery of inflation, interest rates, budgeting, saving, and debt avoidance demonstrate meaningfully greater capacity to regulate non-essential expenditure. Theoretically, this finding is firmly anchored in the Financial Socialization Theory (Moschis & Churchill, 1978) and the extended Human Capital Theory (Becker, 1964), both of which posit that financial knowledge is an acquired cognitive resource that shapes rational decision-making under conditions of economic choice. When individuals internalize financial concepts, they are better equipped to evaluate the long-term consequences of consumption decisions, thereby exercising greater behavioral restraint in the face of transactional temptation.

This finding resonates closely with the theoretical contributions of Lusardi and Mitchell (2014), who argue that financial literacy constitutes a form of protective capital against financially harmful behaviors, including excessive spending. The significance of this protective function is compounded in the context of Generation Z, a cohort characterized by both heightened digital exposure and, paradoxically, relatively low financial competency. The OJK and BPS (2024) SNLIK report documents that the financial literacy index for Generation Z aged 18-25 years stands at only 70.19 percent a figure that, while above the national average, masks substantial heterogeneity between urban and sub-urban populations, particularly in areas like Majenang where formal financial education infrastructure remains underdeveloped.

The present finding is substantiated by a convergent body of recent empirical literature. Yahfi et al. (2025) confirm in their study of Indonesian university students that financial literacy directly strengthens consumption control behavior and functions as a moderating buffer against the consumptive impulses triggered by digital payment convenience. Similarly, Choung et al. (2023), examining a cross-national sample of Asian young adults, demonstrate that financial literacy acquisition through active engagement with

financial products significantly reduces impulsive spending tendencies. Sari and Hidayat (2022) specifically report, in a study of Gen Z consumers in West Java, that individuals with high financial literacy exhibit a statistically stronger tendency to resist social media-driven consumption triggers, a finding that mirrors the present study's sub-urban context where peer influence remains potent.

Comparatively, Al-Qudah et al. (2024), in a study of Jordanian youth using digital payment platforms, found that financial literacy moderated the relationship between digital payment usage and impulsive purchasing behavior, with the moderating effect being particularly pronounced among younger users with higher digital engagement a demographic profile congruent with the Gen Z respondents in Majenang. Andriyani et al. (2025), examining Indonesian millennials and Gen Z in the Jabodetabek metropolitan area, reported a significant negative relationship between financial literacy and consumptive behavior, with a standardized coefficient of -0.412, suggesting a slightly stronger effect than observed in the present study (beta = 0.387). This marginal difference may be attributable to the metropolitan sample's greater exposure to formal financial education through university curricula and workplace financial wellness programs, resources less systematically available in sub-urban contexts such as Majenang. Gunawan and Putri (2023) further corroborate this sub-urban moderation effect, noting that financial literacy interventions in non-metropolitan Indonesian communities demonstrate comparatively attenuated effects precisely because the foundational financial knowledge infrastructure including financial counseling services and formal banking engagement is structurally less developed. These observations collectively suggest that the positive effect documented in the present study may, in fact, underestimate the true potential impact of financial literacy under conditions of stronger institutional support.

The regression coefficient of X1 (0.496) further indicates that for every one-unit increase in financial literacy scores, consumptive behavior control increases by approximately 0.496 units, holding QRIS usage intensity constant. This magnitude is consistent with the findings of Klapper et al. (2015), who, in their global analysis of financial literacy and financial behavior, identify a similarly moderate effect size and attribute it to the multidimensional and culturally embedded nature of consumptive behavior, which is shaped not only by cognitive knowledge but also by social norms, peer effects, and environmental affordances variables that lie beyond the scope of financial literacy alone.

QRIS Utilization Intensity as a Determinant of Consumptive Behavior Control

The second significant finding is the positive and statistically significant partial effect of QRIS utilization intensity on consumptive behavior control (beta = 0.448; t = 6.014; $p < 0.001$). Notably, the standardized coefficient for QRIS utilization (0.448) marginally exceeds that of financial literacy (0.387), indicating that, within this sample, the intensity of QRIS usage emerges as a slightly stronger predictor of consumptive behavior control than financial literacy per se. This result is theoretically counterintuitive against the backdrop of classical behavioral economics, which, through Prelec and Loewenstein's (1998) double-entry mental accounting model, predicts that increased reliance on cashless payment systems attenuates the pain of paying mechanism and thereby erodes behavioral restraint. The present finding does not, however, contradict this theoretical framework; rather, it reflects a more nuanced dynamic that is best explained through the lens of Technology Acceptance Model (TAM) extensions and habitual behavior theory.

Within the TAM framework as extended by Venkatesh et al. (2003) and subsequent scholars, perceived ease of use and perceived usefulness shape not only adoption decisions but also the qualitative nature of technology use. In the present study's measurement instrument, QRIS utilization intensity encompasses dimensions of frequency, perceived ease

of use, perceived benefits, perceived security, and trust a multidimensional operationalization that captures not merely transactional volume but the cognitive and affective relationship respondents have with QRIS as a financial management tool. It is precisely this latter dimension QRIS as a tool perceived to offer benefits including transaction recording, expense tracking, and budget visibility that may account for the positive directional effect observed. When Gen Z users engage with QRIS with high frequency and high trust, they are more likely to access the transaction history features inherent in digital payment ecosystems, which in turn creates a structured feedback loop that supports budget monitoring and spending awareness.

This interpretation is supported by Nasution (2020), who demonstrates that cashless payment systems in Indonesia, while associated with increased spending velocity, also improve financial record-keeping efficiency among users who actively engage with digital financial dashboards. Meilani and Kusuma (2024) further find that high-intensity QRIS users in Yogyakarta exhibit significantly stronger financial self-monitoring behaviors compared to low-frequency users, attributing this effect to the digital receipting and expenditure categorization features embedded in QRIS-linked applications. In a related vein, Sinaga et al. (2026) document that while QRIS adoption broadly increases consumer behavior flexibility, the direction of behavioral outcomes whether toward excessive spending or controlled budgeting is contingent on user engagement depth, with habitual, high-trust users more likely to leverage QRIS as a budget instrument than as a consumption enabler.

This finding represents a theoretically significant departure from studies conducted in non-Indonesian or more urban contexts. Fang et al. (2022), examining mobile payment users in China, report that payment app usage frequency is positively associated with impulsive buying behavior, a result that appears to contradict the present study. However, the discrepancy is explicable through contextual factors: the Chinese sample comprised primarily urban consumers in highly commercialized e-commerce ecosystems characterized by embedded algorithmic recommendation systems and instant checkout pathways, conditions that systematically amplify the pain-of-paying attenuation effect. In contrast, the Majenang sub-urban context is characterized by a comparatively simpler QRIS deployment landscape predominantly used in traditional markets, small retailers, and campus canteens where transactional architecture does not include algorithmically curated upselling mechanisms. This environmental difference may explain why higher QRIS utilization intensity in Majenang correlates with spending discipline rather than spending escalation.

Similarly, Priya et al. (2023), in a study of Indian Gen Z consumers, find a positive relationship between digital payment frequency and impulse purchasing, attributing it to the reduced cognitive salience of expenditure in high-velocity cashless environments. The present study's divergent result suggests that the relationship between payment technology intensity and consumptive behavior is not universally directional but is instead contextually modulated by the richness of the payment ecosystem, the availability of spending feedback mechanisms, and the degree of financial literacy accompanying payment technology adoption. This conclusion reinforces the theoretical proposition that QRIS, in the sub-urban Indonesian context, may be functioning not as a consumption accelerator but as a consumption regulator rovided that users engage with it at sufficient depth and trust levels to harness its financial management affordances.

Simultaneous Effect and Explanatory Power of the Model

The simultaneous effect of financial literacy and QRIS utilization intensity on consumptive behavior control ($F = 92.935$; $p < 0.001$) confirms that the two predictor variables jointly operate as a coherent behavioral determinant system rather than as independent influences. The coefficient of determination ($R^2 = 0.579$) indicates that the

model accounts for 57.9 percent of the variance in consumptive behavior control, reflecting a strong explanatory capacity. The Adjusted R^2 of 0.573 further confirms model parsimony, suggesting minimal penalty for predictor inclusion and robust generalizability within the study's population boundary.

This level of explanatory power is notably comparable to studies with similar variable configurations. Yahfi et al. (2025), employing a parallel two-predictor model in an urban Indonesian university sample, report an R^2 of 0.541, modestly lower than the present study's 0.579, which may reflect the Majenang sub-urban context's higher within-sample variance in both financial literacy and QRIS usage patterns a characteristic of sub-urban populations where individual exposure to financial education and digital infrastructure is less homogeneous than in university-centric metropolitan samples. Andriyani et al. (2025), using a larger metropolitan sample with additional control variables, report an Adjusted R^2 of 0.623, marginally higher than the present finding, consistent with the expectation that models incorporating additional covariates such as social influence, self-control personality traits, and income level capture additional explained variance.

The remaining 42.1 percent of unexplained variance represents both a limitation and an opportunity for future research. Candidate variables identified in the extant literature include self-control as a personality trait (Tangney et al., 2004), hedonic motivation (Meilani & Kusuma, 2024), social media influence (Gunawan & Putri, 2023), peer normative pressure (Choung et al., 2023), and family financial socialization quality (Moschis & Churchill, 1978). Each of these variables has demonstrated independent predictive relevance for consumptive behavior in prior studies and may, in conjunction with the present model's predictors, substantially increase explanatory power in future research designs.

The regression constant of 2.222 is also theoretically noteworthy: even when both financial literacy and QRIS usage intensity approach zero, consumptive behavior control does not collapse entirely, suggesting the presence of baseline dispositional and contextual factors including cultural norms of frugality, household financial socialization, and local economic constraints that provide a floor level of consumption restraint independent of formal literacy or technology adoption. This finding is consistent with Moschis and Churchill's (1978) financial socialization framework, which emphasizes that early-life familial financial modeling establishes baseline behavioral dispositions that persist even in the absence of formal financial education.

Theoretical, Practical, and Policy Contributions

From a theoretical standpoint, this study makes several contributions to the extant literature. First, it extends the application of behavioral economics specifically Prelec and Loewenstein's (1998) pain of paying model to a sub-urban Indonesian Gen Z context, demonstrating that the model's predictions are not universally generalizable but are moderated by the depth of user engagement with digital payment systems and the accompanying level of financial literacy. Second, the study contributes to TAM literature by empirically demonstrating that high-intensity QRIS usage, when operationalized to include trust and perceived benefit dimensions, can function as a positive enabler of consumptive behavior control, a finding that challenges the dominant negative valence attributed to cashless payment intensity in classical behavioral economic frameworks. Third, by achieving an R^2 of 0.579 with only two predictors in a non-metropolitan context, the study validates the dual-predictor framework financial literacy and digital payment intensity as a parsimonious yet robust explanatory model for Gen Z consumptive behavior control, suitable for application and replication across comparable ASEAN sub-urban contexts.

From a practical standpoint, the findings carry direct implications for financial educators, university administrators, and fintech developers. Educational institutions in

Majenang and comparable sub-urban districts should integrate contextualized financial literacy curricula into their programs, with explicit attention to digital payment management competencies, including transaction monitoring, digital budgeting tools, and expenditure categorization through QRIS-linked applications. The finding that QRIS utilization intensity positively predicts consumptive behavior control suggests that fintech developers and Bank Indonesia should invest in enhancing the financial management features of QRIS-adjacent applications including automated spending reports, budget cap notifications, and AI-driven expenditure categorization to maximize the behavioral regulatory potential of the platform beyond its transactional function.

From a policy perspective, the study underscores the urgency of bridging Indonesia's persisting digital financial literacy gap. As documented by Aftech (2023), digital financial literacy in Indonesia remains at approximately 25 percent against a financial inclusion rate exceeding 85 percent a structural imbalance that creates conditions for consumptive vulnerability among digitally active but financially underequipped Gen Z populations. The empirical evidence from this study, situated in the largely understudied sub-urban Majenang context, provides policy-relevant evidence that targeted financial literacy interventions particularly those delivered through community-based and digitally mediated channels can meaningfully strengthen consumptive behavior control in populations historically underserved by mainstream financial education infrastructure. Policy frameworks at the regional level should explicitly incorporate QRIS literacy modules into existing financial inclusion programs, designed not merely to promote adoption but to cultivate the deeper behavioral competencies required to harness QRIS as a self-regulatory financial instrument.

Novelty and Synthesizing Argument

The novelty of this study lies at the intersection of three dimensions that have not been simultaneously addressed in prior research. First, it is among the first empirical studies to frame QRIS utilization not as a determinant of consumption volume the conventional positioning in digital payment research but as a potential determinant of consumptive behavior control, thereby inverting the analytical perspective and contributing a positive regulatory narrative to a literature dominated by risk-framing. Second, it establishes an empirical baseline for the joint predictive relationship between financial literacy and QRIS usage intensity in a non-metropolitan, sub-urban Central Java context, a geographical and demographic niche that is significantly underrepresented in both the Indonesian and international digital payment-behavior literature. Third, the study provides evidence that the direction of the QRIS-consumption relationship is context-contingent, corroborating recent theoretical calls for contextually situated examinations of digital payment behavioral outcomes and departing from earlier deterministic models that treat cashless payment systems as inherently consumption-amplifying.

Synthesizing the empirical and theoretical dimensions of the present analysis, a coherent argument emerges: Generation Z in sub-urban Indonesia occupies a unique behavioral position characterized by growing digital payment engagement within environments of structural financial literacy deficit. In this context, both financial literacy and QRIS utilization intensity function not as opposing forces one restraining and one accelerating consumption but as complementary and mutually reinforcing determinants of consumptive behavior control. Financial literacy provides the cognitive scaffolding necessary to evaluate consumption choices critically, while high-intensity, trust-based engagement with QRIS furnishes the transactional architecture and expenditure visibility that operationalize those cognitive dispositions into behavioral discipline. The simultaneous and additive nature of their effects, captured in the present model's F-statistic of 92.935 and R^2 of 0.579, constitutes compelling empirical evidence that interventions targeting either

predictor in isolation will achieve suboptimal outcomes compared to integrated approaches that cultivate both digital financial competency and meaningful QRIS engagement concurrently. This synthesis has direct relevance for the design of financial wellness programs, digital literacy curricula, and inclusive fintech policy frameworks aimed at empowering Indonesia's Gen Z population to navigate the digital payment landscape not as passive consumers but as financially sovereign agents.

CONCLUSION

This study provides empirical evidence regarding the dynamics of consumptive behavior control among sub-urban Generation Z in the digital era. It can be concluded that financial literacy and the intensity of QRIS utilization serve as critical, mutually reinforcing pillars in enabling young consumers to regulate their expenditures. Partially, high financial literacy equips individuals with the cognitive framework necessary to evaluate opportunity costs and resist hedonistic impulses. Concurrently, a high intensity of QRIS usage contrary to conventional behavioral economics assumptions that view cashless systems as catalysts for reckless spending acts as an effective automated budgeting and tracking tool. Simultaneously, these two factors account for a substantial proportion of the variance in consumptive behavior control, proving that digital financial discipline is achieved through the intersection of internal cognitive capacity and external technological transparency.

Despite its contributions, this study is subject to several limitations that open avenues for future investigation. First, the geographical scope is confined to a single sub-urban district (Kecamatan Majenang), which may limit the generalizability of the findings to other sub-urban settings with different economic infrastructures. Second, this study relies on self-reported survey data, which is susceptible to social desirability bias. Future research should expand the geographical horizon through cross-regional comparative analyses (e.g., comparing urban, sub-urban, and rural digital behaviors). Furthermore, integrating qualitative approaches, such as in-depth interviews, could offer deeper insights into the psychological mechanisms behind the digital *pain of paying*. Lastly, incorporating additional variables such as peer pressure, digital paylater facilities, and psychological self-control could enhance the explanatory power of the current behavioral model.

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