Digital-Intelligent Economy and Scientific Management, 2026, 1(2), 38-59
https://doi.org/10.71204/73qjj079

Digital Financial Literacy and Gen Z's Consumption Behavior: Evidence from a Multi-Dimensional Analysis

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Received: 28 December 2025 / Accepted: 25 February 2026 / Published online: 28 February 2026

Abstract

In the age of digital finance, a phenomenon that has taken over most people's lives, digital financial literacy (DFL) has become a crucial determinant of the spending habits of digitally native Generation Z so the present study discusses its multi-dimensional influence on the consumption behavior of Chinese college students. Using survey data from 211 participants, a multiple regression analysis is conducted to examine the effects of different DFL components on Generation Z students' spending patterns. The study incorporates consumption attitude as a mediating factor and explores heterogeneity by considering gender and monthly financial support as moderating variables. The findings reveal that digital payment literacy increases total consumption, whereas overall DFL proficiency reduces the frequency of transactions. Students with greater familiarity with digital credit engage in more frequent purchases, while those with stronger digital investment literacy exhibit better spending restraint compared to those with digital security literacy. Moreover, individuals with stronger financial traits make fewer purchasing decisions, regardless of their total expenditure. The moderating analysis reveals that the dampening effect of DFL on spending frequency is particularly significant among male students and those with lower financial dependence. These findings underscore the complex role of digital financial literacy in shaping youth consumption habits and highlight the importance of targeted financial education programs in the digital era. The study offers valuable implications for educators and policymakers aiming to foster responsible financial behavior among digitally native populations.

Keywords: Digital Financial Literacy (DFL); Generation Z; Mobile Payments; Consumption Behavior; Digital Credit; Consumption Frequency; Financial Attitudes

1. Introduction

Generation Z (Gen Z), born between 1997 and 2012 (Wilson, 2021), represents the first cohort to grow up entirely in the digital era. Their financial interactions are deeply embedded in digital financial tools, including e-payment platforms, digital credit, and online investment systems. In China, mobile payment systems such as Alipay and WeChat Pay are widely adopted, making Chinese Gen Z students an essential demographic for examining how digital financial literacy shapes financial decision-making. As of 2021, China's Gen Z constitutes 20% of the population of China (Yang et al., 2020) and over 88% of mobile internet users in China are now using mobile payments (Ma et al., 2024), with a significant proportion being younger people like Gen Z (Agardi & Alt, 2022). The financial habits of this cohort are distinctly informed by the fact that they are digital natives integrated into one of the most sophisticated mobile payment platforms in the world, and that near-universal digital transaction infrastructure and generational variation in technology adoption play a significant role in shaping trends in the adoption and consumption behavior towards payments among young users (Agardi & Alt, 2022; Vatsa et al., 2023).

Digital financial literacy extends beyond traditional financial knowledge, encompassing skills in digital credit management, payment systems, investment strategies, and cybersecurity (Lyons & Kass-Hanna, 2021). Gen Z members who entered adulthood in the era of technological transformation and societal change develop their financial behaviors through the combination of external monetary support and independent financial responsibility perspectives (Rubin et al., 2024; Spohn, 2024). New challenges emerge from digitalized financial services that affect Gen Z, a generation Temel Eginli and Isik (2020) described as "digital natives" due to their lifelong immersion in technology. Qomariyah et al. (2022) showed how financial literacy helps young consumers manage impulses for buying but few academic researches examines digital financial Literacy’s double advantage for controlling unwarranted purchase behavior while speeding up commerce because digital payment systems become more accessible (Bhoopathy & Kanagaraj, 2023; Shah et al., 2024). Additionally, variations in gender differences and financial support can act as moderators in these relationships, bringing many dimensions of complexity to the analysis. The relationship between digital financial literacy and Gen Z consumption patterns requires investigators to develop an all-inclusive review of contextual elements that influence these consumption behaviors.

This research examines how the different multi-faceted skills impact Gen Z college students' spending habits. This study seeks to address in scholarly literature because it analyzes both the nature and occurrence of student's expenses between fundamental costs and educational needs and recreational expenses and luxury purchases. This paper establishes its purpose to add value to existing digital financial literacy studies through exploring multiple dimensions which affect Gen Z student consumption types and frequencies. The empirical findings of this study integrated with theoretical frameworks, help to understand how consumption attitudes function as a mediating element between certain demographic characteristics and the study's outcome. The research successfully addresses a vital missing aspect in academic intellectual discussion while achieving important practical lessons to guide policy and educational entities in developing financial literacy programs for digital era youth. The research investigates paths that lead to developing

financial responsibility in upcoming consumers while they learn to handle complicated financial challenges.

The rest of the paper is organized as follows: the "Literature Review and Hypothesis Development" section synthesizes related research on digital financial literacy and consumption behavior and develops the hypotheses of this study. The section "Methodology" describes how the data were collected, the research design, the measurement of variables, and the model specification. The section "Empirical Analysis" presents the descriptive statistics, followed by the main regression results and robustness checks, mediation analysis, and heterogeneity analysis. The section "Discussion" interprets the empirical findings and further develops their theoretical and practical implications. Finally, the "Conclusion" summarizes the key results and emphasizes implications for policy and education, as well as directions for future research.

2. Literature Review and Hypothesis Development

2.1. Literature Review

Digital financial tools now drive fundamental changes in financial interactions between people, especially the younger generation (Garai-Fodor et al., 2022). The change has witnessed increased research that delved into the nexus between consumption patterns and financial literacy, with increasing focus on digital financial literacy as a key catalyst of financial decision-making choices (Fitri et al., 2022; Koskelainen et al., 2023). This literature review synthesizes current empirical research on financial literacy and its impact on consumption behavior, and further outlines the theoretical underpinnings and empirical findings informing this research.

Financial literacy stands as the fundamental element that allows individuals to make sound financial decisions (Lusardi, 2015). Wann (2016) emphasized that financial education determines how college students learn about finance and develop their attitudes towards financial matters, which leads them to budget better and spend less impulsively. Generation Z consumers demonstrate better self-control in retail purchasing behaviors because financial literacy helps to reduce their impulsive buying actions, according to Ayuningtyas and Irawan (2021). Such findings underscore the role of financial education in preventing unnecessary spending and promoting sound financial habits. The majority of research focuses on financial literacy effects at the large scale but disregards the small-scale factors that influence consumer purchasing behavior. Propensity for oversight about financial education becomes essential at this time for Gen Z as they face a growing digitalized financial environment which directs their everyday spending decisions through digital platforms.

Digital financial literacy encompasses not only traditional financial knowledge but also the ability to navigate and utilize digital financial tools effectively (Morgan et al., 2019). According to Yang et al. (2023) digital finance enables wider acceptance of mobile payments and online borrowing and investment products because digital financial literacy acts as a key factor for daily tool integration. Liu and Zhang (2021) established that digital financial literacy reduces digital credit overuse risks and teaches college students' responsible financial behavior. Research into digital financial literacy shows greater fragmentation because scholars have

provided insufficient focus on its multiple dimensions between digital credit, digital investment, digital security, and digital payment and account management, and their effects on consumer behavior.

Online financial tools have changed the way people engage with money, allowing easy transactions and credit access. Zou and Fu (2024) investigated the determinants of young adults' behavioral intentions to use internet-based consumer credit services and found perceived value and ease of use to be important predictors of adoption. Lind et al. (2020) demonstrated men show a stronger preference than women for conducting planned financial activities with better financial knowledge, although males engage in these behaviors at a higher rate. These results highlight the significance of exploring the interplays between some digital financial literacy domains, such as awareness of digital credit, digital investment, digital security, digital payment and account in influencing consumption frequency and type. Although abundant literature exists concerning the general consequences of financial literacy, there exist some gaps that need to be filled. Research about consumption attitudes mediating DFL and the consumption behavior relationship currently remains scarce. The relationship between financial attitudes, which connects financial knowledge to financial behavior, remains untested in digital financial contexts despite theoretical arguments (Nano, 2015).

In short, the literature reports a complex interplay between financial literacy, digital tools, and consumption habits with profound implications for Gen Z undergraduate students. Although previous research has proven the contribution of financial literacy in enabling smart financial habits, it has largely overlooked the multidimensionality of digital financial literacy and its influence on consumption behavior. By bridging these gaps, this study aims to contribute more deeply to the knowledge about the effects of digital financial literacy on Gen Z's consumption behavior, taking into account the mediating effect of consumption attitudes and the moderating effects of gender and parental economic support. With this question, the research seeks to provide actionable advice for policymakers and educators in their efforts to enhance financial education programs tailored to the needs of digitally native youth.

2.2. Research Hypothesis Development

The research examines how digital financial literacy affects consumption patterns of Generation Z students at Chinese colleges. Research-based theoretical frameworks from the literature review form the basis for the following hypotheses which will be used in the analysis. The study analyzes research gaps through these hypotheses which investigate both the complete digital financial literacy evaluation and its separate dimension as well as their impact on total consumption type and consumption frequency. This research integrates consumption attitudes as a mediator and gender and the students monthly financial support as moderators to fully explain how Gen Z consumers behave in terms of consumption patterns. Based on that the proposed hypothesis is:

H1: Higher overall digital financial literacy reduces spending frequency, while digital payment literacy might increase total consumption.

The first hypothesis posits that higher levels of overall digital financial literacy lead to a reduction in the frequency of spending among Gen Z college students. Research's like Grohmann (2018) and Vatsa et al. (2023) reveals that financial literacy improves budgeting competence plus prevents people from making rash purchases. However, the dimension of digital payment and account management works as a positive influence, which raises total consumption type while also raising frequency. The availability of digital payment platforms, according to Kurniawan et al. (2019) allows users to make transactions more easily, which leads to increased frequency rates leading to increased spending across both necessary and discretionary categories and Efriyanto and Anggun (2025) suggests, the convenience and lower psychological "pain of paying" that come with digital transactions can lead to more frequent purchases and higher overall consumption levels..

H2: Greater familiarity with digital credit leads to more frequent purchases.

The second research hypothesis indicates that when Gen Z college students have experience using digital credit tools including online loans and credit cards their spending frequency rises. The association between digital credit utilization and Gen Z college students' buying habits stems from their perception of these services' enhanced value and user-friendly capabilities according to Julia et al. (2023).

H3: Greater investment knowledge curbs frequent spending by Gen Z college students more than security awareness.

The third hypothesis shows that understanding digital investment creates a stronger force to decrease consumption frequency than digital security knowledge. According to Borden et al. (2008) investment literacy develops extended financial perspectives that lead people toward saving more than they spend. In contract, digital security awareness provides necessary protection for financial assets yet it does not determine how people spend their money. The different effects between digital investment and digital security demonstrate how knowledge about investment can deeply transform financial actions among Gen Z individuals.

H4: Stronger financial attitudes among Gen Z college students limit frequent spending more than total spending.

The research investigates whether consumption attitudes serve as a mediator between digital financial literacy and consumption behavior within this hypothesis. Higher financial attitude strength reduces both spending frequency to a greater extent than total spending. According to Nano (2015) positive financial attitudes act as a mediator between financial knowledge and behavior since they help people make disciplined spending decisions. Study like Furnham and Fenton-O'Creevy (2024) shows that habit-forming spending behavior stems primarily from attitudes instead of total purchase amount, which demonstrates their capability to limit impulsive frequent buying.

H5: Digital financial literacy reduces frequent spending more among male Gen Z college students and female Gen Z students with less monthly financial support.

The final hypothesis investigates whether the effect of digital financial literacy on consumption frequency depends on the demographic and financial context, in particular, whether gender differences and monthly financial support level moderate the degree to which financial knowledge is converted into spending restraint among Gen Z college students. Differences in the socialization of men and women in matters of finances and risk-taking suggest that men and women can use their financial literacy differently in making consumption decisions, especially when faced with different amounts of financial autonomy (James & Agunsoye, 2022; Rudeloff et al., 2019). Moreover, people with less financial means also have a stricter budgeting, which further enhances the disciplining impact of financial literacy by making them more cautious with their spending and self-regulated than their richer counterparts (Andriani & Nugraha, 2018; Sarial-Abi et al., 2021).

3. Methodology

3.1. Data Collection

An online questionnaire designed with "Questionnaire Star" was utilized to investigate Gen Z student consumption based on their digital financial literacy knowledge. The research distribution employed mobile phone scanning and WeChat applet using online methods to collect 64 valid responses. The questionnaire contains personal data sections and investigates student consumption activities along with their digital financial proficiency. A detailed analysis of these data reveals the present consumption patterns along with digital financial knowledge level of college students. The collected valid responses amounted to 211 successfully recovered datasets for thorough examination. The chosen variables function as an essential framework designed for complete contextual comprehension of consumption patterns.

3.2. Research Approach and Questionnaire Design

The researchers took a quantitative research design that involved the use of a structured online questionnaire to gather primary data among Gen Z Chinese college students. The questionnaire was made to measure systematically and measurably demographic traits of respondents, their consumption habits, consumption attitudes, and their digital financial literacy. Particularly, the questionnaire was divided into several modules. In the first module, demographic and background data were gathered such as gender, age, academic grade, and monthly financial support which were subsequently used as control and moderating variables in the empirical analysis. The second module was based on consumption behavior which included the type of consumption basic living, study-related, entertainment and discretionary spending as well as the consumption frequency which includes the online and offline purchase occasions. The third module evaluated digital financial literacy on four different dimensions, including: digital credit, digital investment, digital security, and digital payment and account management based on Likert-scale items as a measure of respondents' proficiency and familiarity with digital financial instruments. Also, another group of items assessed consumption attitudes which were utilized to test the mediating variables of financial attitudes in the relationship between digital financial literacy and consumption behavior.

The questionnaire design was consistent with the conceptual framework of the study and provided the opportunity to use this data in further econometric analysis with the help of multiple regression, mediation and heterogeneity models. Tools such as SPSS 27, Stata 15 and Excel for their data analysis process to ensure a rigorous and reliable method of finding results.

3.3. Variable Measurement

3.3.1. Independent Variable

Digital Financial Literacy (DFL) is a multidimensional indicator that represents the competence of digital credit, digital investment, digital security, and digital payment and account management. Both composite and dimension-specific indices are based on the responses of the surveys and serve as the primary explanatory variables in the empirical research. The digital financial literacy indicator system development depends on an extensive definition of each dimension that stands for essential digital financial practices. This study uses a five-point Likert scale (A-E) for measuring dimension-related questions, with A worth one point, B worth two points, and so forth up to E worth five points. Each dimension score contains a calculation that determines the average proficiency level of respondents by dividing the total scores from all questions by the number of questions in the dimension. Principal Component Analysis (PCA) serves to merge four dimensions into one combined index through its implementation process. PCA enables the discovery of inherent data patterns which eliminates correlations between variables, thus making the composite DFL score successfully detect maximum dimensional variance. The application of this analytical method adopted in prior studies strengthens analysis stability while keeping it consistent with financial literacy research standards thus delivering a complete representation of digital financial ability for Gen Z students (Morgan et al., 2019; Yang et al., 2023).

3.3.2. Dependent Variable

The two components used to operationalize consumer behavior measure Consumption Type (CT) and Consumption Frequency (CF). Consumption type is divided into four categories: Basic living expenses, study expenses, entertainment expenses, and luxury and shopping expenses. The study uses the total consumption type, which is the sum of these categories, reflecting overall spending patterns. The composite measure offers a holistic measure of how respondents consume overall (Garai-Fodor et al., 2022; Leclerc, 2012).

The consumption frequency measure consists of online and offline spending frequency which add up to become the aggregate total consumption frequency. This strategy shows the growing adoption of digital and physical channels of consumption by Gen Z consumers and it is possible to better evaluate the intensity of purchases (Agardi & Alt, 2022; Vatsa et al., 2023). Previous studies also indicate that consumer preferences, financial resources, and environmental situations including accessibility, price, and social environment, determine consumption decisions in each channel, and these are directly related to financial literacy and financial knowledge levels (Lusardi, 2015; Shah et al., 2024). Based on this, it is possible to conduct a more sensitive analysis of the effect of digital financial literacy on both the levels of spending and purchasing behavior in Gen Z students through the concomitant use of the type of consumption and frequency of consumption in the aforementioned analysis.

3.3.3. Mediator Variable

Digital financial literacy and consumption behavior have a connection that passes through the intermediary variable of Consumption Attitude (CA) (Hollis et al., 2024; Normawati & Santoso, 2023). The researchers selected this variable as a connector because spending attitudes determine exactly how financial understanding leads to real-life consumption practices. The standard scoring technique enables computation of consumption attitude while reverse scoring (6 - original score) negative questionnaire items like X3 and X4 leads to balanced results that remain within 1–5 score range.

$$S=\frac{(X_1+X_2)+(6-X_3)+(6-X_4)}{4} \quad (1)$$

This method standardizes measurement allowing better group comparisons of attitudes which impacts both total financial spending and rate of purchases.

3.3.4. Control Variable

Multiple demographic variables serve as control measures to clarify independent factors affecting how university students spend their money. This study employed gender, age, grade, and monthly financial support as their control variables. These variables serve as important indicators for explaining the differences in how Gen Z students allocate their funds.

The study sample presented in table 1 shows equal representation of genders since females make up 55.9% (n=118) while males comprise 44.1% (n=93) of the participants. Most participants are between the ages 21 to 22 because this matches the common student demographic at the university level. The majority of students tested belong to the senior year, with 52.1% while sophomores account for 15.2% and juniors make up 13.7% and freshmen make up 19.0%. Students from multiple academic levels take part in the study which brings together diverse financial situations and responsibilities.

Through financial support distributed monthly, students demonstrate diverse financial capabilities. The majority of students these days receive between 2001–3000 yuan which makes up 40.8% of the total respondents, while 37.4% report receiving between 1000–2000 yuan. Few students received financial support of under 1000 yuan, while less than 3.8% acquired more than 4000 yuan. The variations in monetary assistance likely impact the way students spend money because those students with higher funding typically have more room to make discretionary purchases.

Table 1. Demographic profile of respondents

Characteristics	Variables	Frequency (N= 211)	Percentage %
Gender	Female	118	55.9
	Male	93	44.1
Age	18	17	8.1
	19	23	10.9

	20	37	17.5
	21	42	19.9
	22	87	41.2
	23	5	2.4
Grade	Freshman Year	40	19
	Junior Year	29	13.7
	Senior Year	110	52.1
	Sophomore Year	32	15.2
Monthly Financial Support	1000-2000 Yuan	79	37.4
	2001-3000 Yuan	86	40.8
	3001-4000 Yuan	36	17.1
	Less than 1000 Yuan	2	0.9
	More than 4000 Yuan	8	3.8

Table 2 presents all the variables used for the analysis with their description and abbreviations. The study includes demographic adjustments to eliminate external influences from gender distribution along with student age and academic development levels and financial support amounts.

Table 2. Variable Description

Variable Names	**Variable Symbol**	**Variable Description**
Consumption Type	CT	Total sum of basic living expenses, study expenses, entertainment expenses and luxury & shopping expenses
Consumption Frequency	CF	Total sum of online and offline consumption frequency
Consumption Attitude	CA	Summated score of consumption attitude
Composite Digital Financial Literacy	DFL	A composite measure of Digital Financial Literacy (DFL) derived using Principal Component Analysis (PCA) to integrate its four underlying dimensions
Digital Credit	DC	Summated average score of digital credit
Digital Investment	DI	Summated average score of digital investment
Digital Security	DS	Summated average score of digital security

Digital Payment and Account	DPA	Summated average score of digital payment and account
Gender	Gender	"Male" = 1, "Female" = 0
Age	Age	Age of the survey respondents
Grade	Grade	"Freshman Year" = 1, "Sophomore Year" = 2, "Junior Year" = 3, "Senior Year" = 4
Monthly Financial Support	Mon	"Less than 1,000 yuan" = 1, "1,000-2000 yuan" = 2, "2001-3000 yuan" = 3, "3001-4000 yuan" = 4, "More than 4,000 yuan" =5

3.5. Model Specification

This study focuses on survey data collected from Gen Z students to construct a multiple regression model that examines, from a multidimensional perspective, how digital financial literacy influences the consumption patterns of Gen Z youths.

$$Consump[CT, CF] = \beta_0 + \beta_1 DFL + \beta_2 Age + \beta_3 Gender + \beta_4 Grade + \beta_5 Mon + \epsilon \quad (2)$$

$$Consum[CT, CF] = \beta_0 + \beta_1 \begin{pmatrix} DC \\ DI \\ DS \\ DPA \end{pmatrix} + \beta_2 Age + \beta_3 Gender + \beta_4 Grade + \beta_5 Mon + \epsilon \quad (3)$$

Consump[CT, CF] represents the dependent variables, namely Consumption Type and Consumption Frequency, indicating that separate regressions are conducted for each outcome while maintaining a unified analytical framework. β_0 is the intercept term, which denotes the baseline value of the dependent variable when all independent variables are zero. β_1 to β_5 are the coefficients associated with the independent variables, quantifying the marginal effects of digital financial literacy or its dimensions (digital credit, digital investment, digital security, digital payment and account), Gender, Age, Grade, and Monthly Financial Support on the dependent variables. The error term ϵ, captures unexplained variation in the dependent variables due to omitted factors or random noise.

4. Empirical Analysis

4.1. Descriptive and Correlation Analysis

The descriptive statistics in Table 3 provide an overview of the key variables of the study. The average total consumption type is 2894.82 yuan with a standard deviation of 1019.98, indicating spending pattern heterogeneity among the respondents. Consumption frequency is, on average,

5.52 transactions, reflecting modest spending habit regularity. Digital financial literacy scores are close to zero due to standardization, from -8.52 to 8.8, indicating significant financial knowledge differences. Among its dimensions, digital payment and account has the largest mean value, reflecting competency in this dimension, while digital credit has the lowest. Age and monthly economic aid, with a mean 2.85, which corresponds to 2001–3000 yuan are the control variables that further describe the demographic portrait of the sample.

Table 3. Descriptive Statistical Analysis

Variables	N	Mean	Std. Dev.	max	min
CT	211	2894.82	1019.98	10000	411
CF	211	5.52	1.30	8	2
CA	211	2.65	0.63	5	1
DFL	211	0	3.43	8.8	-8.52
DC	211	2.78	0.91	5	1
DI	211	3.02	0.95	5	1
DS	211	3.72	0.76	5	1
DPA	211	4.06	0.66	5	1
Gender	211	0.44	0.50	1	0
Age	211	20.82	1.35	23	18
Grade	211	2.99	1.20	4	1
Mon	211	2.85	0.85	5	1

Table 4 reveals several correlation relationships among the variables. Composite DFL exhibits high positive correlations with its individual dimensions, signifying their convergence in measuring financial literacy. Of notable observation is the negative correlation of DFL with consumption frequency, confirming its role in limiting high spending frequency. In contrast, CF positively correlates with monthly financial support, suggesting that more financial resources elevate spending frequency. Gender also shows considerable correlations, where men spend less but consume more frequently, pointing towards gendered consumption. The findings form the basis of understanding the interaction among financial literacy, consumption behavior, and demographic factors.

Table 4. Correlation Analysis

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) CT	1.000											
(2) CF	0.167**	1.000										
(3) CA	-0.019	-0.179***	1.000									
(4) DFL	0.012	-0.258***	0.617***	1.000								
(5) DC	-0.015	-0.058	0.655***	0.911***	1.000							
(6) DI	0.053	-0.344***	0.516***	0.923***	0.719***	1.000						
(7) DS	0.067	0.166**	-0.203***	0.150**	0.085	0.152**	1.000					
(8) DPA	0.105	0.152**	-0.334***	-0.255***	-0.297***	-0.026	0.465***	1.000				
(9) Gender	-0.181***	0.283***	-0.077	-0.215***	-0.113	-0.198***	-0.139**	0.009	1.000			
(10) Age	0.060	-0.522***	-0.047	0.209***	0.025	0.293***	0.053	0.104	-0.437***	1.000		
(11) Grade	0.025	-0.557***	-0.130*	0.116 *	-0.073	0.208***	0.057	0.131*	-0.480***	0.926***	1.000	
(12) Mon	0.337***	0.471***	0.099	-0.010	0.078	-0.117*	0.091	-0.181***	0.019	-0.331***	-0.363***	1.000

Note: Here, *** p < 0.01 = Very Significant, ** p<0.05 = Significant, *p<0.1 = Weak Significance.

4.2. Impact of Digital Financial Literacy on Consumption Behavior

This regression analysis of table 5 uses four separate models to assess the effects first between composite DFL variables and total consumption type and consumption frequency in columns (1) and (2) and then individually tests each DFL dimension of Digital Credit, Digital Investment, Digital Security, and Digital Payment and Account on total consumption type and consumption frequency in columns (3) and (4).

Table 5. Baseline Regression Results on Digital Financial Literacy and Consumption Behavior

	(1)	(2)	(3)	(4)
VARIABLES	LnCT1	CF1	LnCT2	CF2
DFL	-0.0056	-0.0798***		
	(-0.8050)	(-3.7674)		
DC			-0.0175	0.4221***
			(-0.4301)	(3.7064)
DI			0.0324	-0.6158***
			(0.8611)	(-5.8282)
DS			-0.0500	0.1186
			(-1.4316)	(1.2099)
DPA			0.1534***	0.5949***
			(3.5527)	(4.9099)
Age	0.1412***	0.0942	0.1317***	0.1037
	(3.0605)	(0.6770)	(2.9374)	(0.8239)
Male	-0.1459***	0.1076	-0.1573***	0.1698
	(-2.7161)	(0.6640)	(-3.0117)	(1.1579)
Grade	-0.1610***	-0.5282***	-0.1644***	-0.4764***
	(-2.9945)	(-3.2564)	(-3.1210)	(-3.2234)
Mon	0.1494***	0.4996***	0.1742***	0.4916***
	(5.1174)	(5.6740)	(5.9584)	(5.9913)
Constant	5.0910***	3.6654	4.7474***	1.1442
	(6.1693)	(1.4723)	(5.9110)	(0.5077)
Observations	211	211	211	211
R-squared	0.1984	0.4389	0.2585	0.5509

Note: Here, *** p < 0.01 = Very Significant, ** p<0.05 = Significant, *p<0.1 = Weak Significance.

The research results show that a combination of DFL components leads to fewer purchasing occasions thus supporting H1 since better financial knowledge leads to limited spending. Financial knowledge based on digital payments and account management increases both the amount someone spends and how often they do so thus create an opposing relationship between

generic financial competency and specific payment handling abilities. The increase in frequent buying behavior corresponds to H2 because of digital credit usage. Students who use digital credit instruments including online loans and credit cards show greater purchase frequency without changes to their total spending levels. Research evidence confirms that young consumers' demand for credit is influenced by their perceived value and costs associated with credit services (Zou & Fu, 2024). Following investment knowledge instruction leads to better results than digital security training when it comes to controlling excessive spending according to H3. Explore into digital investment leads to extended financial planning that decreases purchasing habits but digital security does not affect these behaviors. The ability to be knowledgeable about investments serves as a potent tool for developing controlled spending behavior (Borden et al., 2008).

The control variables show that total consumption levels increase with student age since older university students possess better independence to spend their money (Leclerc, 2012). Male students spend less money in total although they consume their funds more often during the semester as reported by James and Agunsoye (2023) in their study. Financial support sent monthly to university students creates both higher total spending levels and increased shopping frequency because it enhances their purchasing power (Andriani & Nugraha, 2018).

4.3. Robustness Analysis

The robustness test in Table 6 proves the reliability of regression results through its ability to conserve identical patterns between primary variables. Digital financial literacy combined with payment and account access maintains its documented negative effect on purchase frequency while keeping digital payment and account use as the primary drivers of consumption quantity and occurrence. Digital investment displays a distinct negative relationship with consumption frequency, but digital security does not affect frequency measurements in any way. The control variables age, gender, grade, and monthly financial support keep their expected signs along with their significance levels intact to confirm the initial study results. The study’s findings are strengthened by its consistent results, which confirm both the strong conclusion that Gen Z’s consumption behavior responds to digital financial literacy and the robustness of all hypotheses.

Table 6. Robustness Checks

	(1)	(2)	(3)	(4)
VARIABLES	LnCT1	CF1	LnCT2	CF2
DFL	-0.0056	-0.0798***		
	(-0.6966)	(-2.8471)		
DC			-0.0175	0.4221***
			(-0.3657)	(2.9149)
DI			0.0324	-0.6158***

			(0.7939)	(-5.2910)
DS			-0.0500	0.1186
			(-1.0130)	(0.9097)
DPA			0.1534**	0.5949***
			(2.5432)	(4.1656)
Age	0.1412***	0.0942	0.1317**	0.1037
	(2.7504)	(0.5548)	(2.5485)	(0.6373)
Male	-0.1459**	0.1076	-0.1573**	0.1698
	(-2.4347)	(0.6159)	(-2.5878)	(1.0167)
Grade	-0.1610**	-0.5282***	-0.1644***	-0.4764***
	(-2.5998)	(-2.8008)	(-2.6824)	(-2.6822)
Mon	0.1494***	0.4996***	0.1742***	0.4916***
	(4.9437)	(4.1516)	(5.3748)	(5.0887)
Constant	5.0910***	3.6654	4.7474***	1.1442
	(5.4948)	(1.2081)	(4.9204)	(0.3943)
Observations	211	211	211	211
R-squared	0.1984	0.4389	0.2585	0.5509

Note: Here, *** p < 0.01 = Very Significant, ** p<0.05 = Significant, *p<0.1 = Weak Significance.

4.4. Mediating Role of Consumption Attitudes

Table 7 evaluates the influence of consumption attitude on how digital financial literacy affects consumer behaviors. The studies in Column (1) investigate how composite DFL influences consumption attitude, and then Columns (2) and (3) analyze its effects on total consumption type and frequency by using consumption attitude as the intermediary factor. Columns (4), (5), and (6) of the analysis study how individual dimensions of digital financial literacy affect consumption attitude, consumption type and consumption frequency.

Table 7. Mediation Effects of Consumption Attitudes on the Relationship Between Digital Financial Literacy and Consumption Behavior

	(1)	(2)	(3)	(4)	(5)	(6)
	CA1	LnCT1	CF1	CA2	LnCT2	CF2
VARIABLES	CA	LnCT	CF	CA	LnCT	CF
CA		-0.0173	-0.4960***		-0.0049	-0.4672***
		(-0.3633)	(-3.5543)		(-0.0954)	(-3.3499)
DFL	0.1140***	-0.0037	-0.0232			
	(11.0622)	(-0.4135)	(-0.8916)			
DC				0.3284***	-0.0159	0.5756***
				(5.8593)	(-0.3603)	(4.7891)
DI				0.1523***	0.0332	-0.5446***
				(2.9282)	(0.8605)	(-5.1750)
DS				-0.2277***	-0.0511	0.0122
				(-4.7185)	(-1.3854)	(0.1215)
DPA				-0.0259	0.1533***	0.5828***
				(-0.4349)	(3.5394)	(4.9278)
Age	0.0315	0.1418***	0.1099	0.0170	0.1318***	0.1116
	(0.4652)	(3.0642)	(0.8110)	(0.2743)	(2.9314)	(0.9090)
Male	-0.0591	-0.1470***	0.0783	-0.1083	-0.1579***	0.1192
	(-0.7493)	(-2.7256)	(0.4959)	(-1.5005)	(-2.9977)	(0.8286)
Grade	-0.1451*	-0.1635***	-0.6001***	-0.0927	-0.1648***	-0.5197***
	(-1.8372)	(-3.0101)	(-3.7727)	(-1.2743)	(-3.1094)	(-3.5900)
Mon	0.0205	0.1497***	0.5098***	0.0432	0.1744***	0.5118***
	(0.4792)	(5.1159)	(5.9484)	(1.0707)	(5.9341)	(6.3753)
Constant	2.3904**	5.1324***	4.8509**	2.0727*	4.7575***	2.1126
	(1.9720)	(6.1482)	(1.9843)	(1.8687)	(5.8586)	(0.9526)
Observations	211	211	211	211	211	211
R-squared	0.4246	0.1990	0.4716	0.5295	0.2586	0.5747

Note: Here, *** p < 0.01 = Very Significant, ** p<0.05 = Significant, *p<0.1 = Weak Significance.

The mediation analysis shows that Consumption Attitude significantly reduces consumption frequency but has an insignificant effect on total consumption, affirming H4. This result indicates that stronger consumption attitudes reflect the cautious behavior of young students, which primarily limits how often Gen Z spends rather than how much. The literature Nano (2015) shows how financial attitude acts as an important mediator that influences the relationship between financial knowledge and financial behavior among university students. The study Furnham and Fenton-O'Creevy (2024) suggests that pronounced effect on frequency over amount suggests that

attitudes shape habitual spending patterns more than overall expenditure.

4.5. Heterogeneous Effects by Gender and Financial Support

This heterogeneity analysis in Table 8 demonstrates that Digital Financial Literacy effect on consumption behavior shows different results between men and women and depends on the amount of the student's monthly financial support. Analysis of gender differences appears in Columns (1) and (2), while Columns (3) and (4) examine consumption variations according to monthly financial support.

Table 8. Heterogeneous Effects of Digital Financial Literacy by Gender and Monthly Financial Support

	(1)	(2)	(2)	(3)
	LnCT_Gen1	CF_Gen1	LnCT_Gen2	CF_Gen2
VARIABLES	LnCT	CF	LnCT	CF
DFL	0.0031	0.0207	0.0235	-0.4321***
	(0.2778)	(0.6324)	(0.6127)	(-3.9126)
DFL x Male	-0.0140	-0.1609***		
	(-1.0027)	(-3.9420)		
DFL x 1,000-2,000 Yuan			-0.0300	0.4302***
			(-0.7469)	(3.7113)
DFL x 2,001-3,000 Yuan			-0.0099	0.3805***
			(-0.2420)	(3.2184)
DFL x 3,001-4,000 Yuan			-0.0379	0.3184***
			(-0.9264)	(2.7026)
DFL x More than 4,000 Yuan			-0.0560	0.1863
			(-1.2410)	(1.4324)
Age	0.1345***	0.0169	0.1409***	0.0874
	(2.8839)	(0.1246)	(3.0107)	(0.6484)
Male	-0.1417***	0.1563	-0.1412**	0.1468
	(-2.6289)	(0.9948)	(-2.5855)	(0.9321)
Grade	-0.1515***	-0.4199***	-0.1587***	-0.5822***
	(-2.7765)	(-2.6390)	(-2.9196)	(-3.7165)
Mon	0.1500***	0.5068***	0.1558***	0.4351***
	(5.1379)	(5.9550)	(5.0022)	(4.8481)
Constant	5.1944***	4.8509**	5.0638***	4.1607*
	(6.2461)	(2.0008)	(6.0657)	(1.7291)
Observations	211	211	211	211
R-squared	0.2024	0.4786	0.2147	0.4982

Note: Here, *** p < 0.01 = Very Significant, ** p<0.05 = Significant, *p<0.1 = Weak Significance.

The research validates H5 which shows that DFL produces better results at lowering frequent spending behavior among male learners with minimal monetary backing. Male college students reduce their consumption level to a substantial extent which aligns with the past results that men participate in planned financial activities when they possess more financial knowledge (Rudeloff et al., 2019). On the other hand, female students show no such drop, indicating gender differences in financial decision-making. These differences may result from social expectations or gender differences in attitude toward risk and managing money (James & Agunsoye, 2023). Students who get limited financial aid demonstrate a major drop in their shopping frequency because, regardless of gender limited resources leads to tights spending habit (Andriani & Nugraha, 2018). However, as financial assistance increases, the effect becomes weaker, and students with >4000 yuan have no behavioral change. This highlights the study of Morewedge et al. (2007) how abundant resources can reduce the perceived pressure of disciplined consumption even among financially literate individuals. Research findings support Leclerc (2012) when showing that students who are older than their peers as well as those with greater financial support spend more frequently. This analysis demonstrates an innovative method for studying how environmental factors determine the effectiveness of digital financial literacy.

5. Discussion

This study provides support to the emerging body of literature on digital financial literacy (DFL) which is one of the essential determinants of the digital age financial behavior. In line with the general studies of digital financial literacy and financial behavior, people with high DFL have more deliberate and controlled choices about finance, which is manifested in the lower occurrence of consumption in our Gen Z sample for example, higher DFL leads to fewer spontaneous purchases even without necessarily a drastic reduction in the volume of consumption. This is consistent with the recent systematic reviews that point out DFL will improve financial decision-making and sound use of the digital financial service by creating awareness and comprehension of the financial products, risk, and consequences of financial decision-making in a digital setting (Grohmann, 2018; Yadav & Banerji, 2024). Further, studies on digital literacy indicators demonstrate that digital financial competencies determine the way individuals approach digital financial devices, which affect budgeting, saving, and consumption practices, in particularly digitally immersed generations (Gulati et al., 2025).

Simultaneously, our findings indicate that not every aspect of DFL works in the same direction: such dimensions as a digital payment and account management can enhance consumption attitudes, which is probably because of lower transaction friction, better accessibility, and less psychological impediments to spending, the behavioral economics literature on digital payment effects and the “pain of paying” also addresses this aspect (Efriyanto & Anggun, 2025). Instead, digital investment literacy is associated with reduced spending frequency, which indicates that prospective financial ability facilitates greater self-control and opportunity-cost awareness, whereas digital credit literacy leads to more purchases because it helps to address short-term liquidity limitations (Liu & Zhang, 2021). This highlights the duality of digital financial skills as general DFL can lead to financial self-control, but certain digital abilities can also imply that

people spend more money by making it easier to complete their transactions. These complexities are also reported in the empirical research between the digital financial application and the rational and impulsive consumption behaviors where ease of use increases financial participation but unintentionally triggers over-spending without proper financial knowledge (Awaluddin et al., 2025). The heterogeneous impacts also imply that the disciplining role of DFL is more pronounced in male students and those with a lower monthly financial support, which aligns with the existing studies noting that the constrained budgetary resources and gendered financial socialization increases the behavioral implications of financial knowledge (Rudeloff et al., 2019; Sarial-Abi et al., 2021).Together, the findings in this paper imply that the design of DFL programs should be oriented at balancing technical skills and financial self-regulation education, instead of placing emphasis on the usage of specific tools, to realize comprehensive financial health among young digital consumers.

6. Conclusion

The analysis demonstrates that advanced Digital Financial Literacy (DFL) diminishes constant buying, whereas individual elements, especially digital payments, elevate overall consumption levels among Generation Z. The research supports the intermediary position of consumption attitudes together with findings that demonstrate both gender and financial support act as moderation factors. Furthermore, it demonstrates a necessity to develop specialized educational programs about finances because they help digitally native youth develop responsible spending behaviors. Finally, the research helps establish essential foundations which will encourage Gen Z to handle modern consumption effectively.

Author Contributions:

Conceptualization: L. C; Methodology: L. C; Formal Analysis: L. C; Investigation: L. C; Resources: L. C; Data Curation: L. C; Writing — Original Draft Preparation:L. C; Writing — Review and Editing: L. C; Visualization: L. C; Supervision: L. C; Funding Acquisition: L. C. All authors have read and agreed to the published version of the manuscript.

Data Availability Statement:

The raw data supporting the conclusions of this article will be made available by the authors on request.

Conflict of Interest:

The authors declare no conflict of interest.

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