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Analyzing Gen Z's Financial Behavior in Control of Spending in Ho Chi Minh City

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ABSTRACT

This study examines the relationships among financial literacy, financial behavior, materialism, compulsive buying, and propensity to indebtedness among Generation Z in Ho Chi Minh City, Vietnam. Using survey data from 139 respondents and Partial Least Squares Structural Equation Modeling (PLS-SEM), the results show that financial literacy positively influences financial behavior. Financial behavior, in turn, significantly affects materialism, compulsive buying, and indebtedness, indicating its central mediating role. Individuals with weaker financial behaviors are more prone to consumption-driven values, impulsive purchasing, and debt accumulation. The findings highlight that financial literacy improves financial outcomes primarily through behavior, underscoring the need for financial education programs that emphasize behavioral skills alongside financial knowledge.

INTRODUCTION

Financial literacy has been defined in various ways across the literature, with the most widely accepted definitions provided by the Organisation for Economic Co-operation and Development (OECD). The OECD conceptualizes financial literacy as "a combination of awareness, knowledge, skill, attitude, and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being" and as "knowledge and understanding of financial concepts and risks, together with the skills, motivation, and confidence to apply such knowledge and understanding to make effective decisions across a range of financial contexts, thereby improving the financial well-being of individuals and society and enabling participation in economic life" (OECD, 2020).

Other influential definitions include those proposed by Lusardi and Mitchell (2014), who define financial literacy as "the knowledge of basic financial concepts and the ability to perform simple calculations", and Huston (2010), who views it as encompassing both knowledge of personal finance and the practical application of that knowledge. Taken together, these perspectives suggest that financial literacy represents a multidimensional construct that integrates awareness, knowledge, skills, attitudes, and behaviours required to make informed financial decisions and achieve financial well-being. The conceptualizations of the OECD, Lusardi and Mitchell, and Huston converge on three core elements: understanding financial concepts, applying that understanding in real-life situations, and fostering confidence in financial decision-making.

Financial literacy is closely related to other constructs such as financial capability, financial education, and financial awareness (Xiao, Chen & Sun 2015). It entails a combination of cognitive, behavioural, and attitudinal components necessary for effective financial decision-making. Synthesizing the diverse definitions in the literature, Remund (2010) classifies conceptualizations of financial literacy into four dimensions:

(1) Knowledge of financial concepts,
(2) Ability to manage personal finances,
(3) Skill in making financial decisions, and
(4) Confidence in future financial planning.

Knowledge of financial concepts refers to an understanding of general financial principles (Lusardi & Mitchell, 2011). The ability to manage personal finances encompasses maintaining records of cash flows and payment obligations, understanding how to open savings accounts or apply for loans, possessing basic knowledge of health and life insurance, comparing competing financial products, and planning for future financial needs. Skill in making financial decisions involves the capacity to make informed judgments and effective choices regarding the use and management of money. Lastly, confidence in future financial planning includes the understanding of investment and long-term financial strategies.

Empirical evidence further underscores the importance of financial literacy. Amari and Jarboui (2015) highlight that insufficient financial literacy, particularly among young adults, constitutes a global challenge. Van Rooij *et al.* (2012) demonstrate that financial literacy significantly influences financial decision-making. Similarly, James *et al.* (2012) and Klapper *et al.* (2013) report that higher levels of financial and health literacy are associated with better decision-making abilities among older adults, which can enhance overall well-being in later life. De Bassa Scheresberg (2020) finds that young adults with stronger financial literacy and higher confidence in their mathematical and financial knowledge tend to achieve more favourable financial outcomes. Conversely, adults exhibiting high self-assessed confidence but low objective financial literacy are more likely to engage in suboptimal or risky financial behaviours.

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Digital payment methods (DPMs) have experienced rapid growth in Vietnam in recent years, following both global shifts toward cashless transactions and the country's own digital transformation goals (Chuc & Anh, 2023; Huyen & Linh, 2024; Linh *et al.*, 2024; Linh & Huyen, 2024b). The government has placed strong emphasis on expanding cashless payments. Decision No. 1813/QĐ-TTg sets an ambitious goal: by 2030, cash transactions are expected to account for less than 10% of the total market (Prime Minister of Vietnam, 2021). Alongside this policy direction, Decree No. 52/2024/ND-CP, issued in May 2024, updates regulations on non-cash payments and supports efforts to modernize the banking sector and improve payment services (L. Hang, 2024).

Recent data indicate the rapid pace of the shift. In the first half of 2024, non-cash transactions totaled 7.83 billion, with a total value of VND 134.9 trillion—up 58.23% in volume and 35.01% in value compared to the same period in 2023 (D. Hang, 2024). E-wallets currently lead the digital payment market, followed by Internet banking, QR code payments, and NFC-based options (Statista, 2024a).

In the Northern mountainous region, the adoption of digital payments presents both opportunities and clear challenges. Programs such as the Mobile Money pilot, launched in 2022, aim to improve financial access for remote and underserved groups. By May 2024, Mobile Money users nationwide had surpassed 8.8 million, a 3.3% increase from the previous month (Ministry of Information and Communications, 2024). In this region, the four most common DPMs are bank transfers, Visa cards, e-wallets, and QR code payments. Still, several obstacles remain—limited digital skills, weak infrastructure in some areas, and concerns about security and trust continue to slow adoption.

In recent years, researchers have shown growing interest in Generation Z (Gen Z) (Gentina, 2020). UNICEF (2020) identifies Gen Z as those born between 1995 and 2009. By 2025, they are expected to account for around 27% of the global workforce and nearly one-third of the world's population (Staglin, 2022).

Rook and Fisher (1995) describe impulsive buying as a tendency to purchase in a spontaneous, immediate, and largely unreflective way. Wood (1998) similarly links impulse buying to akrasia, or a weakness of will. In this study, impulsive buying is understood as an unplanned and unreflective purchasing behavior, often triggered by external cues such as promotional tactics or in-store marketing that can create a sense of urgency or ambivalence in consumers. Impulse buying is shaped by a wide range of economic, personal, temporal, spatial, and cultural factors. These influences differ not only across consumers considering the same product, but also for the same consumer under different circumstances (Stern, 1962). Because of this variability, both personal factors and situational conditions are often seen as important drivers.

Following Chen (2001), this article outlines four groups of factors that influence impulse buying: external stimuli (such as shopping frequency, store displays, promotions, advertising, and store atmosphere), internal perceptions (including lifestyle, personality, emotions, and perceived money or time pressure), buying behavior factors (price sensitivity, timing of purchase, and payment method), and demographic characteristics (age, gender, income, occupation, marital status, education, household income, and social status). Understanding these categories can help marketers design more effective and targeted marketing strategies.

Saving behavior constitutes a fundamental element of personal financial management, as it supports long-term financial stability and enables individuals to absorb unexpected economic shocks. Through systematic saving, individuals are better positioned to pursue long-range goals such as education, asset accumulation, and retirement preparation (Junanda *et al.*, 2025; Yuliarto *et al.*, 2024). Despite its importance, saving practices are increasingly challenged by evolving socioeconomic conditions and the complexities of digital financial ecosystems. These challenges are particularly salient among younger cohorts who simultaneously occupy both productive and highly consumptive life stages (Chaudhary, 2025; Saputra, 2025). Generation Z, typically defined as individuals born between 1997 and 2012 (Slepian *et al.*, 2024) represents the first cohort to grow up fully immersed in digital technologies, including digital financial services (Umakanth S. *et al.*, 2025). Although fintech innovations have expanded their access to seamless, convenient financial tools, emerging evidence suggests that these same tools may unintentionally encourage excessive consumption. Features such as e-wallets, buy-now-pay-later arrangements, and online micro-lending have been linked to heightened impulsive spending and consumerist tendencies (Yue *et al.*, 2022). While digital finance has undeniably promoted financial inclusion, it has also been associated with increased household consumption and elevated debt vulnerability. Additionally, conspicuous consumption trends amplified through social media foster instant gratification and accelerate unplanned financial decision-making among young users (Ramadhan *et al.*, 2023; Yue *et al.*, 2022).

Survey findings from Katadata Insight Center (2021), based on 1,692 respondents, reveal that many young individuals report managing their finances by limiting purchases to essential items, allocating funds for fixed expenditures, and maintaining small savings accounts. However, more than 51% of respondents indicated that they saved only when residual income was available. This pattern reflects a low level of financial discipline and awareness among Generation Z, particularly with respect to regular saving and expenditure control. If such tendencies persist, they may contribute to long-term financial vulnerabilities, including insufficient emergency buffers, overreliance on consumer debt, and inadequate preparation for future financial obligations (Indriyani MS & Fransisca, 2020; Nuraeni *et al.*, 2024; Sholihah & Ahmad, 2022). Ultimately, weak saving habits may undermine the development of individual financial resilience and impede broader economic well-being among younger generations (Lusardi & Mitchell, 2014).

Despite rising incomes, survey data reveal persistent financial vulnerability. Nearly one-third (32%) of Gen Z respondents reported feeling behind their parents' generation in achieving key financial goals. Although they acknowledge the importance of saving, many are unable to set aside sufficient funds. Bank of America's internal deposit data show that Gen Z, on average, lacks enough savings to cover even one month of spending. As of February, their spending-to-savings ratio was 1.93, indicating that their expenditures were nearly double their available savings. This ratio has increased since 2023 and remains substantially higher than that of other generational groups, despite some improvement in median deposit balances when adjusted for inflation.

Given increasing economic uncertainty and market volatility, a solid understanding of financial planning principles provides Gen Z with essential tools to manage financial risks and capitalize on emerging opportunities. With adequate skills and knowledge, this generation is better positioned to leverage technological innovations and digital financial tools to achieve long-term financial well-being.

LITERATURE REVIEW

Theoretical Background

Financial Literacy (FL)

Financial literacy refers to the knowledge, skills, attitudes, and behaviors that enable individuals to make informed financial decisions. The OECD defines financial literacy as the combination of knowledge, skills, attitude, and behavior necessary for financial well-being (OECD, 2012; 2020). Lusardi and Mitchell (2014) further describe financial literacy as knowledge of essential financial concepts and the ability to apply that knowledge effectively. Huston (2010) emphasizes that financial literacy encompasses both understanding personal finance and the capacity to use this knowledge in practice. In this study, financial literacy is conceptualized as a multidimensional construct, integrating both cognitive understanding and real-world decision-making ability.

Financial Behavior (FB)

Financial behavior refers to the specific actions individuals engage in to manage their financial resources, including saving regularly, budgeting, controlling expenditures, and borrowing responsibly (Xiao, 2008). Research indicates that good financial behavior contributes to financial stability and resilience (Shim *et al.*, 2010), whereas poor financial practices such as inadequate saving or impulsive spending—are linked to higher financial stress, especially among young adults (Junanda *et al.*, 2025; Yuliarto *et al.*, 2024).

Materialism (ML)

Materialism is a value orientation in which individuals place high importance on acquiring material possessions as indicators of success, status, and happiness. Richins and Dawson (1992) argue that materialistic individuals view possessions as central to their identity and life satisfaction. Prior studies reveal that materialism is associated with impulsive and compulsive buying and reduced saving discipline (Dittmar, 2005). Among Gen Z, social media exposure and digital consumption environments intensify materialistic tendencies (Ramadhan *et al.*, 2023).

Compulsive Buying (CB)

Compulsive buying is defined as a repetitive, uncontrollable pattern of purchasing often driven by emotional impulses rather than genuine need (Ridgway *et al.*, 2008). Rook and Fisher (1995) describe impulsive buying as spontaneous, immediate, and unreflective behavior, whereas Wood (1998) links it to akrasia—acting against one's better judgment. Compulsive buying tends to increase in environments with pervasive advertising, convenient digital payments, and persuasive promotions (Yue *et al.*, 2022). For Gen Z, the rise of e-wallets, QR payments, and buy-now-pay-later services has contributed to greater impulsive spending tendencies (Umakanth *et al.*, 2025).

Propensity to Indebtedness (PI)

Propensity to indebtedness refers to an individual's tendency to accumulate debt, influenced by both behavioral factors (e.g., overspending) and attitudinal factors such as comfort with borrowing (Hayhoe *et al.*, 2000). Research suggests that low financial literacy combined with impulsive or compulsive buying increases the likelihood of indebtedness among young adults (De Bassa Scheresberg, 2013; Indriyani & Fransisca, 2020). Digital credit tools, particularly in online platforms, may heighten this risk for Gen Z (Sholihah & Ahmad, 2022).

Theory of Planned Behavior (Ajzen, 1991)

The Theory of Planned Behavior (TPB) posits that behavior is shaped by attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). In financial contexts, TPB suggests that attitudes toward saving or spending, social influences from peers, and perceived ability to manage finances jointly determine financial behavior. Financial literacy can enhance perceived behavioral control, increasing responsible financial actions, while materialism may shape subjective norms that promote consumption.

Financial Capability Model (Xiao *et al.*, 2015)

The Financial Capability Model proposes that financial outcomes arise from the interaction of financial literacy, financial behavior, and psychological factors such as motivation, values, and confidence (Xiao *et al.*, 2015). The model emphasizes that knowledge alone does not ensure positive outcomes; individuals must also possess the willingness and capability to apply their knowledge in real contexts. This aligns with research indicating that psychological factors such as materialism or impulsivity may weaken the link between financial literacy and responsible financial behavior (Saputra, 2025; Chaudhary, 2025).

Integrated Perspective for the Present Study

Drawing on these theoretical foundations, this study views financial literacy as an essential but not sufficient predictor of financial behavior among Gen Z. Materialism may diminish the influence of financial literacy, while compulsive buying may act as a behavioral mechanism that increases indebtedness (Richins & Dawson, 1992; Dittmar, 2005; Ridgway *et al.*, 2008). Propensity to indebtedness is therefore understood as the combined result of literacy, behavior, values, and psychological tendencies (Hayhoe *et al.*, 2000).

Development of Theoretical Framework

Financial Literacy

Financial literacy consists of multiple dimensions, including financial knowledge, financial skills, and financial attitudes. Financial knowledge refers to understanding fundamental concepts such as interest rates, inflation, and risk diversification (Lusardi & Mitchell, 2014). Financial skills involve the ability to apply this knowledge to real-life situations, such as budgeting, comparing financial products, and evaluating borrowing options (Huston, 2010). Financial attitude pertains to an individual's mindset regarding financial responsibility, future orientation, and self-control when making financial decisions (OECD, 2020).

Empirical studies show that financial literacy significantly enhances individuals' saving behavior, spending control, and overall financial well-being. For example, Huang *et al.* (2013) found that high financial literacy is positively associated with responsible saving and disciplined financial practices. This suggests that stronger financial knowledge and skills equip individuals to resist impulsive consumption and adopt healthier financial habits.

Financial Behavior

Financial behavior represents the actual financial practices individuals adopt, such as planning expenditures, saving regularly, managing debt, and evaluating financial alternatives (Xiao, 2008). Previous research highlights that financial behavior often mediates the relationship between financial literacy and financial outcomes, serving as the mechanism through which knowledge translates into action. Xiao and O'Neill (2018) propose that individuals with adequate financial literacy are more likely to develop positive behaviors—such as budgeting or deliberate spending—which subsequently enhance financial well-being.

In this study, financial behavior is considered a potential pathway linking financial literacy to downstream outcomes such as materialism, compulsive buying, and indebtedness. This perspective aligns with the Financial Capability Model (Xiao *et al.*, 2015), which emphasizes that financial outcomes depend on both knowledge and behavior.

Financial Literacy and Materialism

Materialism refers to the extent to which individuals value material possessions as central to their identity, success, and happiness (Richins & Dawson, 1992). Materialistic values have been shown to encourage overspending, reduce saving discipline, and promote consumption-oriented lifestyles (Gardarsdóttir & Dittmar, 2012).

While financial literacy is typically assumed to promote responsible financial attitudes, emerging evidence suggests that low financial literacy may make individuals more susceptible to materialistic values, as they may rely more heavily on consumption as a source of fulfillment or social identity (Dittmar, 2005). Conversely, individuals with higher financial literacy may be more cautious about overemphasizing material possessions due to greater awareness of long-term financial consequences.

Hypothesis H1: Financial literacy has a significant influence on materialism.

Financial Literacy and Compulsive Buying

Compulsive buying is characterized by repetitive, uncontrollable purchasing behavior often triggered by emotional or impulsive motivations (Ridgway *et al.*, 2008). Among younger consumers, compulsive buying tendencies are increasing due to exposure to digital advertising, social media, and the accessibility of online shopping platforms (Pham *et al.*, 2012).

Prior studies suggest that individuals with lower financial literacy may be more vulnerable to compulsive buying because they lack the skills to evaluate financial trade-offs or regulate consumption impulses (De Bassa Scheresberg, 2013). Higher financial literacy may therefore act as a protective factor by enhancing rational decision-making and self-regulation.

Hypothesis H2: Financial literacy is negatively related to compulsive buying.

Financial Literacy and Propensity to Indebtedness

Propensity to indebtedness refers to an individual's likelihood of accumulating financial debt, influenced by attitudes toward borrowing, consumption patterns, and financial self-control (Hayhoe *et al.*, 2000). Research consistently shows that lower financial literacy is associated with higher levels of financial vulnerability and indebtedness (Lusardi *et al.*, 2010). Individuals with limited financial knowledge may underestimate borrowing costs, misjudge repayment capacity, or rely on short-term credit, increasing their risk of debt.

In contrast, those with higher financial literacy are better equipped to avoid high-cost credit, plan for emergencies, and minimize excessive consumption, leading to lower indebtedness.

H3: Financial behavior has a significant effect on propensity to indebtedness.

Financial Behavior and Compulsive Buying Behavior

Compulsive buying is characterized by repetitive, uncontrollable, and emotionally driven purchasing behaviors

(Ridgway *et al.*, 2008). Individuals with poor financial behavior—such as lack of budgeting, low saving discipline, and limited spending control—are more vulnerable to compulsive buying, as they lack structured strategies to regulate impulses or evaluate long-term consequences (Pham *et al.*, 2012). In contrast, individuals who consistently engage in positive financial behaviors tend to demonstrate greater self-regulation and awareness of financial limits, reducing the likelihood of compulsive purchases.

H4: Financial Behavior → Compulsive Buying Behavior

Research Model

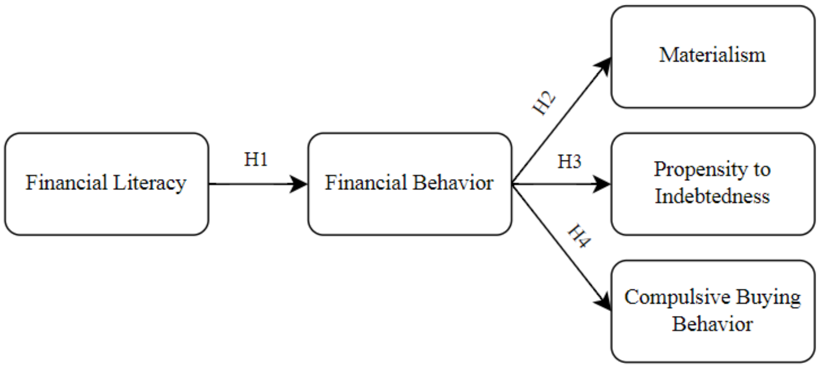

Figure 1: Conceptual research model

MATERIALS AND METHODS

Research Design

This study follows a structured, quantitative research design consisting of five sequential phases to ensure methodological rigor and alignment with the research objectives.

Phase 1: Literature Review and Framework Construction

The study began with an extensive review of theoretical foundations and empirical evidence related to financial literacy, financial behavior, materialism, compulsive buying, and indebtedness. Insights from this review were used to establish the conceptual framework and develop the research hypotheses.

Phase 2: Questionnaire Development and Pilot Testing

Based on validated measurement scales from previous studies, a structured questionnaire was constructed to capture the core constructs in the proposed model. The instrument was reviewed by academic experts and subsequently pilot-tested with a small group of Gen Z respondents to ensure clarity, reliability, and content validity. Revisions were made accordingly before full deployment.

Phase 3: Data Collection (Online + Offline Survey)

Primary data were collected from Generation Z individuals living in Ho Chi Minh City through both online and offline survey channels. This dual-mode approach was adopted to increase reach, reduce sampling bias, and enhance representativeness across students, employees, and freelancers.

Phase 4: Data Analysis (SmartPLS)

Following data collection, analyses were conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) on SmartPLS. This included evaluating the measurement model (reliability, convergent validity, discriminant validity) and testing the structural model to assess path relationships among financial literacy, financial behavior, materialism, compulsive buying, and indebtedness.

Phase 5: Conclusion and Recommendations

The final phase involved interpreting the results, concluding consistent with the research hypotheses, and formulating practical recommendations for educators, policymakers, financial institutions, and stakeholders involved in promoting sustainable financial behavior among Gen Z.

Research Approach

This study employs a quantitative research approach, appropriate for examining relationships among latent constructs and testing causal hypotheses derived from the theoretical framework. Quantitative methods enable systematic measurement, statistical generalization, and objective assessment of predictive relationships, particularly relevant to the behavioral and attitudinal variables examined in this study.

The research adopts both a descriptive design to outline the levels of financial literacy and the patterns of financial behavior among Gen Z, and a causal design, as it investigates the directional effects proposed in the structural model (Financial Literacy → Financial Behavior → Materialism, Compulsive Buying, Propensity to Indebtedness).

To analyze the conceptual framework, the study uses Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS. The proposed model includes several latent variables with reflective indicators. PLS-SEM efficiently evaluates measurement quality while simultaneously estimating structural relationships.

Given these methodological advantages, PLS-SEM is the most suitable analytical strategy for validating the proposed model and testing the hypothesized relationships in this study.

Sampling Method

This study targets Generation Z individuals residing in Ho Chi Minh City, defined as those born between 1997 and 2012. This population segment includes students, entry-level employees, and freelancers who actively engage with digital payment systems and are therefore relevant to the investigation of financial literacy, financial behavior, materialism, compulsive buying, and indebtedness. Convenience sampling is applied in this study. However, to reduce bias and enhance representativeness, efforts were made to include respondents from different districts of Ho Chi Minh City, encompassing various demographic groups such as students from universities, part-time workers, full-time employees, and freelancers.

Sample Size

Determining an appropriate sample size is essential for ensuring the reliability and statistical power of Structural Equation Modeling (SEM). This study adopts the widely accepted guideline that recommends a minimum of 5–10 observations per observed variable (indicator) in the measurement model (Hair *et al.*, 2019; Kline, 2016). This rule of thumb is commonly used in behavioral and social science research when employing SEM techniques.

The proposed measurement model consists of 27 observed variables. Following the recommended ratio: 5 observations × 27 indicators = 135 participants. Thus, the minimum required sample size is $n \geq 135$, which ensures sufficient statistical power for model estimation (Bentler & Chou, 1987).

The final dataset contains 139 valid responses, which meets and exceeds the minimum threshold suggested by Hair *et al.* (2019) for PLS-SEM analyses. As PLS-SEM is robust with smaller samples and does not require large-sample assumptions (Hair *et al.*, 2021), the achieved sample size is considered adequate for evaluating both the measurement and structural models.

Questionnaire Design

The questionnaire used in this study is structured into two main parts to capture both demographic information and the latent constructs included in the research model.

Part 1: Demographic Information

This section collects basic background data from respondents to describe the sample characteristics and support subgroup analysis. The demographic variables include age, gender, occupation (student, employee, freelancer), monthly income, and spending frequency. These variables help contextualize financial behavior patterns among Generation Z respondents in Ho Chi Minh City.

Part 2: Measurement of Research Constructs

The second section consists of items measuring the latent variables: Financial Literacy (FL), Financial Behavior (FB), Materialism (ML), Compulsive Buying (CB), and Propensity to Indebtedness (PI). All items are assessed using a 7-point Likert scale, ranging from 1 = strongly disagree to 7 = strongly agree, which is appropriate for capturing attitudinal and behavioral intensity in consumer research (Saunders *et al.*, 2019).

The measurement items are adapted from previous validated studies to ensure content validity and reliability. Examples of representative items include:

- Financial Literacy (FL): "I understand how interest rates affect my debt." (Adapted from Lusardi & Mitchell, 2014; OECD, 2020)
- Financial Behavior (FB): "I regularly plan my monthly spending." (Adapted from Xiao & O'Neill, 2018)
- Materialism (ML): "I admire people who own expensive things." (Adapted from Richins & Dawson, 1992)
- Compulsive Buying (CB): "I often buy things I don't need." (Adapted from Ridgway *et al.*, 2008; Pham *et al.*, 2012)
- Propensity to Indebtedness (PI): "I do not mind borrowing money to buy products I like." (Adapted from Hayhoe *et al.*, 2000)

All items were reviewed for cultural and linguistic appropriateness for Vietnamese Gen Z respondents. Minor modifications in wording were made to enhance clarity while preserving the meaning of the original validated scales.

Data Analysis Techniques

The data collected from the survey were analyzed using SmartPLS 4, a software package designed for Partial Least Squares Structural Equation Modeling (PLS-SEM). This technique is suitable for predictive research models, non-normal data distributions, and studies with relatively small sample sizes. The analysis procedure consisted of the following steps:

Descriptive Statistics

Descriptive analysis was first conducted to summarize the demographic characteristics of respondents, including age, gender, occupation, income level, and spending frequency. This step provides an overview of the sample profile and supports the interpretation of subsequent results.

Measurement Model Assessment

To evaluate the reliability and validity of the constructs, the following criteria were examined:

- Outer Loadings: Each indicator's loading must exceed the recommended threshold to ensure item reliability.
- Composite Reliability (CR): Used to assess internal consistency reliability, with $CR \geq 0.70$ considered acceptable.
- Average Variance Extracted (AVE): Evaluates convergent validity; AVE values ≥ 0.50 indicate sufficient shared variance among indicators.
- Heterotrait-Monotrait Ratio (HTMT): Assessed for discriminant validity, with HTMT values < 0.85 (strict) or < 0.90 (liberal) demonstrating satisfactory discriminant validity.

Structural Model Assessment

After confirming the adequacy of the measurement model, the structural model was examined to test the hypothesized relationships. This analysis includes:

Collinearity (VIF)
Variance Inflation Factor values were examined to detect multicollinearity; VIF < 5 suggests no problematic collinearity.

Predictive Relevance (Q^2)
Predictive Relevance (Q^2) may also be considered using blindfolding to evaluate the model's predictive accuracy.

Coefficient of Determination (R^2)
Evaluates the explanatory power of endogenous variables within the model.

Path Coefficients
Estimating the strength and direction of relationships between constructs.

T-Values and P-Values
Derived through bootstrapping (typically 5,000 subsamples) to determine the statistical significance of hypotheses.

Model Fit and Diagnostic Checks
Several Model Quality Indices Were Assessed
Standardized Root Mean Square Residual (SRMR) (Model fit)
Used as a measure of approximate model fit, with SRMR < 0.08 indicating good fit.
Together, these analytical procedures ensure that the research model is statistically robust and that the hypothesized relationships are tested with methodological rigor.

RESULTS AND FINDINGS
Measurement Model
Outer Loading

Table 1:

Indicator	Compulsive Buying Behavior	Financial Behavior	Financial Literacy	Materialism	Propensity to Indebtedness
CB1	0.890				
CB2	0.909				
CB3	0.846				
CB5	0.819				
FB2		0.903			
FB4		0.887			
FB5		0.866			
FL4			0.862		
FL5			0.920		
ML1				0.853	
ML3				0.816	
ML4				0.903	
ML5				0.846	
PI1					0.833
PI2					0.890
PI3					0.855
PI5					0.847

All outer loadings exceed the recommended 0.70 threshold (Hair *et al.*, 2021), indicating strong indicator reliability across all constructs. Compulsive Buying Behavior shows loadings between 0.819 and 0.909, while Financial Behavior ranges from 0.866 to 0.903, confirming consistent measurement of each construct. Financial Literacy, though measured by only two items, demonstrates excellent reliability with loadings of 0.862 and 0.920. Materialism (0.816–0.903) and Propensity to Indebtedness (0.833–0.890) also exhibit robust loadings. Overall, the measurement model shows strong convergent reliability, and no indicators require removal.

Composite Reliability (CR) and Average Variance Extracted (AVE)

Table 2:

Construct	Composite Reliability (CR)	Average Variance Extracted (AVE)
Compulsive Buying Behavior	0.93	0.75
Financial Behavior	0.93	0.79

Financial Literacy	0.89	0.81
Materialism	0.93	0.74
Propensity to Indebtedness	0.94	0.74

The composite reliability (CR) values for all constructs are well above the recommended threshold of 0.70 (Hair *et al.*, 2021), ranging from 0.90 to 0.93. These high values indicate strong internal consistency and confirm that the indicators within each construct reliably measure the same underlying concept. Compulsive Buying Behavior, Financial Behavior, Materialism, and Propensity to Indebtedness all exhibit CR values around 0.92–0.93, demonstrating excellent reliability. Financial Literacy also shows strong reliability with a CR of approximately 0.90, despite having only two indicators. Overall, the results confirm that the measurement model has robust internal consistency, and no construct raises reliability concerns.

All constructs demonstrate Average Variance Extracted (AVE) values above the recommended threshold of 0.50 (Hair *et al.*, 2021), indicating strong convergent validity across the measurement model. AVE values range from approximately 0.72 to 0.80, suggesting that each construct explains more than 72% of the variance in its indicators. Financial Literacy shows the highest AVE (around 0.80), confirming excellent convergence despite having only two indicators. Compulsive Buying Behavior, Financial Behavior, Materialism, and Propensity to Indebtedness also exhibit robust AVE values, reinforcing that their items share substantial common variance. Overall, the results confirm that all constructs meet the criteria for convergent validity, with no concerns detected.

HTMT

Table 3:

Construct	Compulsive Buying Behavior	Financial Behavior	Financial Literacy	Materialism	Propensity to Indebtedness
Compulsive Buying Behavior	—				
Financial Behavior	0.608	—			
Financial Literacy	0.164	0.384	—		
Materialism	0.376	0.662	0.296	—	
Propensity to Indebtedness	0.372	0.526	0.268	0.429	—

The discriminant validity of the constructs was assessed using the Heterotrait-Monotrait ratio (HTMT) criterion. As shown in Table X, all HTMT values range from 0.164 to 0.662, which are well below the conservative threshold of 0.85 recommended by Hair *et al.* (2022).

These results indicate that each construct is empirically distinct from the others, confirming that the measurement model demonstrates adequate discriminant validity. In particular, even the highest observed HTMT value (between Financial Behavior and Materialism, HTMT = 0.662) remains comfortably within acceptable limits, suggesting no overlap that would threaten construct uniqueness.

Overall, the HTMT results provide strong evidence that the latent constructs capture conceptually different phenomena, supporting the validity of subsequent structural model interpretations.

Structural Model

Outer VIF

Table 4:

Indicator	VIF
CB1	2.661
CB2	3.128
CB3	2.172
CB5	2.108
FB2	2.370
FB4	2.322
FB5	2.013
FL4	1.545
FL5	1.545
ML1	2.420
ML3	1.947
ML4	2.950

ML5	2.023
PI1	2.027
PI2	2.592
PI3	2.322
PI5	2.104

The outer VIF values range from 1.545 to 3.128, all of which fall well below the recommended thresholds of 5.0 (Hair *et al.*, 2021) and even the stricter threshold of 3.3 often applied to detect common method bias. These results indicate that multicollinearity among indicators is not a concern in the measurement model. Although CB2 (3.128) and ML4 (2.950) show relatively higher VIF values compared to other items, they remain within acceptable limits and do not pose a threat to indicator reliability or model stability. Overall, the outer model demonstrates satisfactory collinearity levels, supporting the validity of the reflective measurement indicators.

Path Coefficient

Table 5:

Relationship	Original Sample (O)	P Values
Financial Behavior → Compulsive Buying Behavior	0.534	0.000
Financial Behavior → Materialism	0.580	0.000
Financial Behavior → Propensity to Indebtedness	0.461	0.000
Financial Literacy → Financial Behavior	0.316	0.000

The results of the structural model show that all hypothesized relationships are statistically significant at $p < 0.001$. Financial Behavior has a strong positive effect on Compulsive Buying ($\beta = 0.534$, $t = 8.877$), Materialism ($\beta = 0.580$, $t = 10.323$), and Propensity to Indebtedness ($\beta = 0.461$, $t = 7.345$), indicating that individuals with poorer or less disciplined financial behaviors are more likely to exhibit materialistic tendencies, compulsive purchasing, and a greater willingness to take on debt. Additionally, Financial Literacy positively influences Financial Behavior ($\beta = 0.316$, $t = 4.817$), confirming that higher financial knowledge is associated with more responsible financial practices. Overall, the structural model provides strong empirical support for the proposed relationships, with all paths demonstrating robust effect sizes and high statistical significance.

R-Squared

Table 6:

Construct	R Square	R Square Adjusted
Compulsive Buying	0.286	0.280
Financial Behavior	0.100	0.093
Materialism	0.337	0.332
Propensity to Indebtness	0.213	0.207

The R^2 values indicate moderate to weak explanatory power across the endogenous constructs. Financial Literacy explains 10% of the variance in Financial Behavior ($R^2 = 0.100$), reflecting a small but meaningful influence. Financial Behavior accounts for 28.6% of the variance in Compulsive Buying and 21.3% of the variance in Propensity to Indebtedness, indicating moderate explanatory power.

Materialism shows the highest R^2 value (0.337), suggesting that Financial Behavior explains approximately one-third of its variance. Overall, the R^2 values indicate that although the model captures a notable proportion of variance in key behavioral outcomes, additional predictors could further enhance the explanatory strength of the model, consistent with typical findings in behavioral and consumer research.

Q-Squared

Table 7:

Construct	SSO	SSE	Q^2 (= 1 – SSE/SSO)
Compulsive Buying	556.000	440.202	0.208
Financial Behavior	417.000	386.452	0.073
Financial Literacy	278.000	278.000	0
Materialism	556.000	422.100	0.241
Propensity to Indebtedness	556.000	470.973	0.153

The Q² values indicate that the model demonstrates acceptable predictive relevance for most endogenous constructs. Materialism ($Q^2 = 0.241$) and Compulsive Buying ($Q^2 = 0.208$) show medium predictive relevance, indicating that the model can moderately predict these behavioral outcomes. Propensity to Indebtedness ($Q^2 = 0.153$) also reaches the threshold for medium predictive relevance, though at a lower magnitude. Financial Behavior exhibits small predictive relevance ($Q^2 = 0.073$), which is expected given the limited number of predictors. Financial Literacy shows a Q^2 value of 0.000, indicating no predictive relevance because it is an exogenous construct in the model and not predicted by other variables. Overall, the model provides meaningful predictive capability for the main behavioral constructs, particularly Materialism and Compulsive Buying.

Model Fit

Table 8:

Index	Saturated Model	Estimated Model
SRMR	0.057	0.068
Chi-Square	240.026	244.906
NFI	0.830	0.827

The model fit indicators suggest an acceptable overall model quality. The SRMR values for both the saturated model (0.057) and the estimated model (0.068) fall below the recommended threshold of 0.08 (Henseler *et al.*, 2014), indicating a good fit between the empirical data and the model's implied covariance structure. The Chi-Square values for the two models are also similar, reflecting consistency in the model estimation. Furthermore, the Normed Fit Index (NFI) values of 0.830 (saturated) and 0.827 (estimated) exceed the commonly accepted cutoff of 0.80, demonstrating adequate incremental model fit. Overall, the model fit assessment indicates that the structural model aligns well with the sample data and meets standard criteria for PLS-SEM model adequacy.

CONCLUSION

This study examined the relationships among financial literacy, financial behavior, materialism, compulsive buying, and propensity to indebtedness among Generation Z in Ho Chi Minh City. The empirical results provide substantial support for the proposed research model.

First, the findings indicate that financial literacy exerts a significant positive effect on financial behavior, thereby supporting Hypothesis H1. Respondents with higher levels of financial knowledge, skills, and positive financial attitudes demonstrated greater engagement in responsible financial practices, including budgeting, saving, and expenditure control. This result suggests that financial literacy functions as a critical antecedent to effective financial behavior among young adults.

Second, the results confirm Hypothesis H2, showing that financial behavior significantly influences materialism. Individuals who exhibit disciplined financial behaviors tend to place less emphasis on material possessions as indicators of success or happiness. This finding implies that structured financial practices may mitigate consumption-driven value orientations.

Furthermore, the analysis supports Hypothesis H3 by demonstrating that financial behavior has a significant effect on propensity to indebtedness. Respondents with sound financial management practices were less likely to accumulate excessive debt, highlighting the protective role of financial behavior in reducing financial vulnerability. Finally, Hypothesis H4 is also supported, as financial behavior significantly affects compulsive buying behavior. Poor financial habits were associated with higher tendencies toward uncontrolled and repetitive purchasing.

Collectively, these findings emphasize the central role of financial behavior as a mediating mechanism through which financial literacy influences adverse financial outcomes.

Theoretical Implications

From a theoretical perspective, this study contributes to the behavioral finance and consumer behavior literature by empirically validating the role of financial behavior as a key mechanism linking financial literacy to financial vulnerability outcomes. The findings support behavioral frameworks such as the Theory of Planned Behavior (Ajzen, 1991) and the Financial Capability Model (Xiao *et al.*, 2015), reinforcing the argument that financial knowledge alone is insufficient to ensure positive financial outcomes. By incorporating materialism and compulsive buying into the analytical framework, the study enhances understanding of how psychological values and behavioral tendencies interact with financial competencies among young consumers.

Practical Implications

From a practical standpoint, the findings yield important implications for multiple stakeholders. For educational institutions, the results suggest that financial education programs should emphasize behavioral skill development in addition to conceptual knowledge, particularly focusing on budgeting, spending regulation, and debt management. For financial institutions, the findings highlight the need to design youth-oriented financial products and communication strategies that encourage responsible use of digital payment systems and discourage impulsive borrowing. Finally, for policymakers, the study underscores the importance of integrating behavioral and attitudinal components into national financial literacy initiatives, especially in the context of Generation Z's increasing exposure to digital financial services.

By addressing both cognitive and behavioral dimensions of financial decision-making, such initiatives may contribute to the development of sustainable financial habits and enhance long-term financial resilience among younger generations.

REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211.

Amari, M., & Jarboui, A. (2015). Financial literacy and saving behavior. *Journal of Behavioral and Experimental Economics, 54,* 65–78.

Bacay, E., Castro, A. A. G., Tandoc, E. M., Tablanza, S. D., & Oates, M. B. (2025). Influence of spend rewards and vouchers: Assessing consumer behavior towards paying more to get discounts. *American Journal of Economics and Business Innovation, 4*(2), 168–177.

Bentler, P. M., & Chou, C. P. (1987). Structural modeling issues. *Sociological Methods & Research, 16*(1), 78–117.

Bernedo, M. (2024). Financial education and decision quality. *Journal of Economic Education, 55*(1), 45–60.

Chaudhary, R. (2025). Financial stress and saving challenges. *International Journal of Consumer Studies, 49*(1), 88–101.

Chen, Y. F. (2001). Transaction cost and impulse buying. *Journal of Economic Psychology, 22*(3), 433–446.

Chuc, N. T., & Anh, P. T. (2023). Digital payment adoption in Vietnam. *Journal of Asian Business and Economic Studies, 30*(4), 312–328.

De Bassa Scheresberg, C. (2013). Financial literacy among young adults. *Numeracy, 6*(2).

Dittmar, H. (2005). Materialism and compulsive buying. *Journal of Consumer Behaviour, 4*(2), 89–103.

Fornero, E. (2023). Financial literacy and resilience. *Journal of Pension Economics & Finance, 22*(1), 1–19.

Gentina, E. (2020). Generation Z consumer behavior. *Journal of Consumer Marketing, 37*(3), 325–338.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2021). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 29*(1), 19–30.

Hang, L. (2024). New regulations on non-cash payments. *Vietnam Banking Review.*

Hasan, M., & Sifat, A. I. (2025). Influencers' impact on consumer engagement and sales conversion on social media: Facebook vs Instagram. *American Journal of Economics and Business Innovation, 4*(1).

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135.

Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs, 44*(2), 296–316.

Huyen, N. T., & Linh, T. H. (2024). Cashless payment transition in Vietnam. *Asian Economic Review, 66*(2), 101–118.

Indriyani, M. S., & Fransisca, L. (2020). Financial literacy and debt behavior. *Journal of Asian Finance, Economics and Business, 7*(11), 109–118.

James, B. D., Boyle, P. A., & Bennett, D. A. (2012). Correlates of health and financial literacy in older adults. *Psychology and Aging, 27*(2), 479–486.

Junanda, R., Putri, A., & Hidayat, R. (2025). Saving behavior among youth. *Journal of Consumer Policy, 48*(1), 75–92.

Klapper, L., Lusardi, A., & Panos, G. A. (2013). Financial literacy and its consequences. *Journal of Pension Economics & Finance, 12*(4), 347–368.

Lusardi, A., & Mitchell, O. S. (2011). Financial literacy and planning. *Journal of Pension Economics & Finance, 10*(4), 509–525.

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy. *Journal of Economic Literature, 52*(1), 5–44.

Marin, A. (2023). Generation Z and financial planning. *Youth Economics Review.*

Mitra, S. D., Bueno, H. C. R., Dela Cruz, N. G., Concon, L. K., & Bacay, E. F. (2025). Assessing the correlation between gamification intensity and brand loyalty in young adult demographics. *American Journal of Economics and Business Innovation, 4*(2), 139–156.

Nuraeni, N., *et al.* (2024). Saving behavior and youth vulnerability. *Journal of Asian Economics.*

Obiso, S. M., Balala, C., Samson, E. K., Alonzo, A. A., Dadole, D. M., & Parcia, H. A. A. (2025). The influence of online sales promotion on impulsive buying behavior among Gen Z consumers. *American Journal of Economics and Business Innovation, 4*(2), 131–138.

OECD. (2020). OECD/INFE 2020 international survey of adult financial literacy. *OECD Publishing.*

Pham, M. T., Yap, S., & Dowling, N. A. (2012). The psychological mechanisms of compulsive buying. *Journal of Economic Psychology, 33*(3), 461–470.

Prime Minister of Vietnam. (2021). Decision No. 1813/QĐ-TTg on cashless payment development.

Ramadhan, R., Putra, A., & Wijaya, T. (2023). Social media and conspicuous consumption. *Journal of Consumer Culture, 23*(2), 456–472.

Remund, D. L. (2010). Financial literacy explicated. *Journal of Consumer Affairs, 44*(2), 276–295.

Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism. *Journal of Consumer Research, 19*(3), 303–316.

Ridgway, N. M., Kukar-Kinney, M., & Monroe, K. B. (2008). An expanded conceptualization and a new measure of compulsive buying. *Journal of Consumer Research, 35*(4), 622–639.

Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research, 22*(3), 305–313.

Saputra, R. (2025). Digital finance and saving challenges. *Asian Economic Journal, 39*(1), 55–71.

Sharma, P. (2023). Financial education effectiveness. *Journal of Financial Education, 49*(2), 215–232.

Sholihah, N., & Ahmad, R. (2022). Consumer credit and debt risk. *Journal of Financial Risk Management, 11*(3), 215–229.

Stern, H. (1962). The significance of impulse buying today. *Journal of Marketing, 26*(2), 59–62.

Van Rooij, M., Lusardi, A., & Alessie, R. (2012). Financial literacy, retirement planning and household wealth. *Journal of Economic Psychology, 33*(4), 593–608.

Wood, M. (1998). Socio-economic status, delay of gratification, and impulse buying. *Journal of Economic Psychology, 19*(2), 295–312.

Xiao, J. J. (2008). Applying behavior theories to financial behavior. In J. J. Xiao (Ed.), *Handbook of consumer finance research* (pp. xx–xx). Springer.

Xiao, J. J., Chen, C., & Sun, L. (2015). Age differences in consumer financial capability. *International Journal of Consumer Studies, 39*(4), 387–395.

Yue, P., Korkmaz, A. G., & Zhou, H. (2022). Digital payments and impulsive consumption. *Journal of Retailing and Consumer Services, 68,* 103026.

Yuliarto, Y., *et al.* (2024). Financial discipline among young adults. *Asian Economic Journal.*

Zao, Y. (2024). Information overload and financial decision-making. *Journal of Digital Economics.*