

FACTORS AFFECTING UNIVERSITY STUDENTS' PERSONAL FINANCIAL MANAGEMENT AND THE ROLE OF FINANCIAL LITERACY

CÁC YẾU TỐ ẢNH HƯỞNG ĐẾN QUẢN LÝ TÀI CHÍNH CÁ NHÂN CỦA SINH VIÊN HIỆN NAY VÀ VAI TRÒ CỦA HIỂU BIẾT TÀI CHÍNH

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ABSTRACT

This paper explores the factors that shape university students' personal financial management in the context of a rapidly evolving and globally integrated economy. Drawing on both domestic and international research, the findings highlight the pivotal role of financial literacy in fostering responsible financial behavior. Demographic and socio-economic characteristics including gender, work experience, academic major, parental education, educational environment, funding sources, family culture, and place of residence are shown to significantly influence students' financial literacy levels. A lack of financial literacy often leads to uncontrolled spending, persistent debt, and poor saving or investment planning. In contrast, students with stronger financial knowledge tend to budget more effectively, save consistently, and manage financial risks with greater confidence. This study contributes to the literature by offering empirical evidence and theoretical support for the development of financial education programs tailored to the practical needs of Vietnamese students, particularly those in the Southeastern region.

Keywords: *Financial literacy; personal financial management; university students; financial education.*

TÓM TẮT

Bài viết này tập trung phân tích các yếu tố ảnh hưởng đến việc quản lý tài chính cá nhân của sinh viên trong bối cảnh kinh tế hiện đại và hội nhập. Dựa trên tổng hợp các nghiên cứu trong và ngoài nước, bài báo chỉ ra rằng hiểu biết tài chính đóng vai trò then chốt trong việc hình thành và phát triển hành vi quản lý tài chính tích cực của sinh viên. Bên cạnh đó, các nhân tố như giới tính, kinh nghiệm làm việc, chuyên ngành học, trình độ học vấn của phụ huynh, môi trường giáo dục, nguồn tài trợ giáo dục, văn hóa gia đình và nơi cư trú cũng có tác động rõ rệt đến mức độ hiểu biết về tài chính của sinh viên. Thiếu hiểu biết về tài chính có thể dẫn đến các hệ lụy tiêu cực như chi tiêu không kiểm soát, nợ kéo dài và thiếu kế hoạch tiết kiệm - đầu tư. Ngược lại, sinh viên có nền tảng hiểu biết tài chính vững chắc sẽ chủ động hơn trong việc lập ngân sách, tiết kiệm và phòng tránh rủi ro tài chính. Kết quả nghiên cứu góp phần cung cấp luận cứ khoa học nhằm xây dựng các chương trình giáo dục tài chính phù hợp với nhu cầu thực tiễn của sinh viên hiện nay, nói chung, cũng như sinh viên tại các trường đại học ở khu vực Đông Nam Bộ nói riêng.

Từ khóa: *Hiểu biết tài chính, quản lý tài chính cá nhân, sinh viên đại học, giáo dục tài chính.*

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1. INTRODUCTION

In an increasingly integrated and rapidly evolving economy, personal financial management has become

an essential life skill, particularly for university students transitioning from financial dependence on their families to financial autonomy. A lack of financial literacy may

result in adverse consequences such as uncontrolled consumption, prolonged tuition-related debt, and insufficient savings and investment planning, thereby negatively affecting students' long-term financial stability and overall quality of life [1, 2]. Financial literacy is commonly defined as the ability to apply financial knowledge and competencies effectively to manage financial resources, thereby facilitating the development of sound financial management behavior [2].

Recent empirical studies indicate that various factors influence students' financial literacy. These include gender, work experience, academic major, parental educational attainment, and the educational environment [3, 4]. At the same time, financial literacy has been shown to be closely associated with financial management behavior, enabling students to adopt more proactive approaches to budgeting, saving, and financial risk mitigation [1, 5]. Nevertheless, beyond financial literacy, additional determinants such as family influence, saving attitudes, and individual psychological characteristics also play a significant role in shaping students' financial decision-making processes [1, 6].

Against this backdrop, the present study aims to analyze the determinants influencing university students' personal financial management while clarifying the role of financial literacy in fostering positive financial behavior. The findings are expected to provide empirical evidence and theoretical justification for the design and implementation of financial education programs that are aligned with the practical needs of university students in Vietnam.

2. LITERATURE REVIEW

Financial literacy is defined as the ability to apply financial knowledge and skills effectively in managing financial resources in order to achieve long-term financial stability [2]. In the context of digital economic transformation and the increasing complexity of financial products and services, financial literacy plays a critical role in shaping individuals' financial management behavior, particularly among university students who are undergoing a transitional stage from financial dependence on their families to financial independence. Recent studies indicate that students frequently encounter financial challenges such as tuition-related indebtedness, uncontrolled consumption, and insufficient savings plans, which consequently expose them to higher levels of financial risk [1].

This study, therefore, focuses on analyzing the determinants influencing students' financial literacy and financial management behavior, thereby providing a theoretical foundation for the formulation of financial education policies in higher education institutions.

2.1. Determinants of University Students' Financial Literacy

To provide a robust epistemological foundation for the structural relationships, this study integrates the Theory of Planned Behavior (TPB) proposed by [17]. In the context of student personal financial management, financial behavior is driven not merely by mathematical calculations but by complex cognitive and psychosocial mechanisms. TPB posits that behavior is dictated by behavioral intentions, which are shaped by attitudes, subjective norms, and perceived behavioral control. Within this analytical framework, Financial Literacy represents a critical cognitive resource that fundamentally shapes an individual's attitudes toward long-term budgeting and sharpens their perceived behavioral control over limited financial resources. Consequently, background factors such as family culture, employment experience, and the higher education environment do not simply act as isolated variables; rather, they serve as distal antecedent factors that enrich an individual's financial knowledge base, which sequentially translates into structured financial management behaviors through the mediating pathway of financial literacy.

A substantial body of empirical research has identified demographic and environmental factors that influence students' levels of financial literacy. Gender represents an important determinant, as male students often exhibit higher financial literacy than female students, largely due to differences in access to financial education opportunities and prevailing socio-cultural stereotypes [3].

Work experience also contributes positively to financial literacy development. Students engaged in part-time employment are more likely to gain practical exposure to income management and expenditure planning, thereby enhancing their knowledge of saving practices and borrowing behavior [3].

Academic major constitutes another significant factor. Students specializing in economics, finance, or business disciplines generally demonstrate higher financial literacy than those in other fields, primarily because their academic curricula incorporate financial knowledge and

analytical competencies relevant to personal financial decision-making [3].

In addition, parental educational attainment, particularly maternal education, has been identified as a strong predictor of students' financial literacy. Parents with higher educational backgrounds are more likely to transmit fundamental financial knowledge and prudent financial attitudes to their children through everyday communication and guidance [3].

Other determinants include sources of educational funding. Students who rely on student loans or structured financial support mechanisms may develop greater awareness of financial risks and responsibility [4]. Furthermore, the quality of financial education provided by universities, including diversified pedagogical approaches and the use of practical learning materials, contributes significantly to financial literacy by equipping students with competencies in money management, investment decision-making, and insurance planning [7].

Some studies also emphasize the role of family culture and peer influence, noting that students from financially stable households tend to exhibit more positive attitudes towards saving and investment activities [4]. Within the Vietnamese context, recent research suggests that gender (with male students demonstrating stronger financial management capability), academic major (with economics students outperforming others), residential background (with rural students exhibiting stronger basic financial knowledge), and financial education obtained through family guidance or training workshops represent key determinants of financial literacy among newly graduated students [8].

2.2. Relationship between Financial Literacy and Financial Management Behavior

Financial literacy has been widely recognized as a crucial determinant influencing students' financial management behavior. Students with higher levels of financial literacy are more likely to adopt constructive financial practices such as systematic budgeting, regular saving, and avoidance of excessive or non-performing debt [1].

Empirical evidence indicates that financial literacy explains approximately 29.6% of the variation in financial management behavior, enabling individuals to make more proactive and effective financial decisions in the face of economic uncertainty [1]. For example, knowledge of interest rates and inflation enhances

students' ability to manage student loan obligations more effectively and reduces the risk of financial distress or default [7].

Nevertheless, the relationship between financial literacy and financial behavior is not always linear. Certain students may possess substantial financial knowledge but fail to apply it in practice due to low financial self-confidence or behavioral constraints [7].

Theoretical frameworks such as the Theory of Planned Behavior have been employed to explain how financial knowledge influences behavioral intentions and actual financial practices. In Vietnam, empirical studies conducted among university students in Hanoi demonstrate that financial literacy has a statistically significant positive impact on investment decisions, saving behavior, and consumption patterns, based on regression analysis using a sample of 401 students from 30 universities [10].

However, structural equation modelling results also indicate that financial knowledge may not directly influence expenditure management; instead, financial behavior patterns and parental influence constitute statistically significant predictors [6].

2.3. Other Determinants Influencing Students' Financial Management Behavior

In addition to financial literacy, other determinants play important roles in shaping students' financial management behavior. Family influence has been identified as the most significant factor, accounting for approximately 38.3% of behavioral variation, primarily through intergenerational learning processes related to saving and spending practices [1].

Saving attitudes also contribute substantially, explaining approximately 26.6% of behavioral variation. Students who develop consistent saving habits tend to manage financial resources more effectively [1]. Psychological attributes such as internal locus of control and expenditure categorization have been found to exert positive effects on financial management behavior, whereas general financial attitudes may not always demonstrate statistically significant impacts.

Lifestyle patterns, self-discipline, and income derived from allowances or part-time employment also represent influential determinants, particularly in an environment where students face increasing consumption pressure driven by digital technologies and social media influences [4]. Collectively, these determinants explain

approximately 63.3% of the variation in students' financial management behavior [1].

Within Vietnam, newly graduated students often encounter difficulties in managing personal finances due to insufficient financial management skills. This situation frequently results in uncontrolled spending and reliance on informal borrowing channels. Financial education delivered through family guidance and training workshops has been shown to play a positive role in improving financial literacy and financial behavior among young graduates [8].

Overall, the literature suggests that students' financial literacy and financial management behavior are shaped by a diverse range of demographic, environmental, and psychological determinants. Enhancing financial literacy through formal education initiatives and family-based support mechanisms is therefore likely to improve financial behavior and reduce financial vulnerability among younger generations.

Empirical studies conducted in Vietnam further highlight the necessity of integrating financial education into university curricula in order to address knowledge gaps and promote sustainable financial behavior in the context of evolving local economic conditions [6, 8, 10]. Policies such as the introduction of compulsory financial education programs at the tertiary level may therefore be recommended based on these findings.

3. METHODOLOGY AND RESEARCH MODEL

Partial Least Squares Structural Equation Modelling (PLS-SEM) was employed to test the research model and the proposed hypotheses. Model estimation and evaluation were performed using Smart PLS software. To make sure the measurements are accurate, we adapted our scales from well-known previous studies in the literature (Table 1). The scale for Employment Experience looks at how working helps students learn to manage money, which draws on the ideas of [3]. For the academic major, we wanted to see how a student's field of study changes their view on financial risk. This part was adjusted from the framework of [8]. Lastly, the Funding Sources scale checks how different money streams, like student loans or allowances, force students to plan ahead. This adapts the financial concepts used by [4]. We slightly tweaked all these questions. This ensures they perfectly fit the current situation of university students living and studying in the Southeastern region of Vietnam [1, 2].

The research sample comprised undergraduate students from universities located in Ho Chi Minh City,

particularly institutions situated in the former Binh Duong province, including Thu Dau Mot University, Binh Duong University, Vietnamese-German University, and Eastern International University. An equal allocation sampling method was adopted, whereby approximately 150 respondents were surveyed at each institution, resulting in a total sample size of 600 observations.

Here is a quick look at who took part in our survey. Out of 600 students, female respondents made up 54.5% (327 students), while male respondents accounted for 45.5% (273 students). Around 42% of them study economics or business. The rest, about 58%, are from other fields like engineering and social sciences. Most of the participants are in their first or second year. Specifically, freshmen represent 28.3%, and sophomores make up 31.7%. Juniors account for 25%, and seniors account for the remaining 15%. When it comes to money, 46.2% of these students get or earn between 3 and 6 million VND a month. About 38.5% live on less than 3 million VND, and only 15.3% have more than 6 million VND. Interestingly, 62.7% of the total sample have had a part-time job. In terms of hometowns, 58.3% come from rural areas, while 41.7% are from cities. This mix gives a good picture of the student population in the Southeastern economic zone.

Table 1. Measurement Scales, Observational Items, and Source Adaptations with Original Codes

Construct	Code	Measurement Items (Variables)	Source Adaptation
Financial Literacy	HBTC1	I understand the time value of money and compound interest.	[1] Adapted from Lusardi & Mitchell
	HBTC2	I can differentiate between nominal and real interest rates.	
	HBTC3	I know how to evaluate the risk-return trade-off in financial products.	
	HBTC4	I am aware of the financial inflation impacts on purchasing power.	
Personal Financial Management	QLTCCN1	I maintain a strict weekly/monthly written budget.	[11] Adapted from Dew & Xiao
	QLTCCN2	I track my personal daily expenditures systematically.	
	QLTCCN3	I regularly allocate a fixed portion of my income to savings.	

Family Culture	VH1	My parents frequently discuss household financial budgeting with me.	[12] Adapted from Shim et al.
	VH2	My family environment encourages autonomous financial decisions.	
	VH3	My parents model prudent saving and investment behaviors.	
	VH4	Family values guide my long-term resource allocation choices.	
Employment Experience	VL1	Part-time or full-time work experience has enhanced my financial independence.	Adapted from Dynamic Items
	VL2	Handling earned income has made me more responsible with money.	
	VL3	Extracurricular business activities sharpen my commercial acumen.	
	VL4	Involvement in research projects expanded my analytical budgeting skills.	
Academic Major	NN1	My university business/economics courses provide practical financial skills.	Self-developed based on the curriculum
	NN2	My specialized field of study changes how I perceive risk management.	
	NN3	Academic training exposes me to advanced quantitative evaluation tools.	
	NN4	Disciplinary background affects my efficiency in managing financial resources.	
Higher Education Environment	MT1	My university organizes workshops or seminars on personal finance.	[13] Bandura, A
	MT2	The campus culture promotes financial awareness and smart spending.	
	MT3	Student clubs offer practical simulations of dynamic market operations.	
	MT4	Academic conferences provide in-depth exposure to global trends	

Funding Sources	TT1	Managing student loans or educational allowances requires strict planning.	Adapted from Institutional Reports
	TT2	The nature of my educational funding affects my budgeting strategy.	
	TT3	Relying on multiple income streams diversifies my financial obligations.	
	TT4	Personal savings combined with institutional support dictate my habits.	

Based on prior empirical studies, the research model (Figure 1) proposes that students' personal financial management is influenced by financial literacy, which in turn is affected by several determinants, including gender, family culture, employment experience, academic major, educational environment, and sources of educational funding. The hypotheses are formulated as follows:

H1: Family culture builds a student's basic financial attitude. Following the TPB framework by [20], this early guide helps boost their overall financial literacy.

H2: Having a job gives students real-world practice. It makes them feel in control of their money, which directly improves their financial knowledge [20].

H3: Studying business or economics provides useful tools. This academic background naturally leads to higher financial literacy [20].

H4: University workshops and activities act as positive reminders. These environmental factors help students become more aware of financial matters [20].

H5: Managing different funding sources forces students to be responsible. This active budgeting sharpens their personal financial literacy [20].

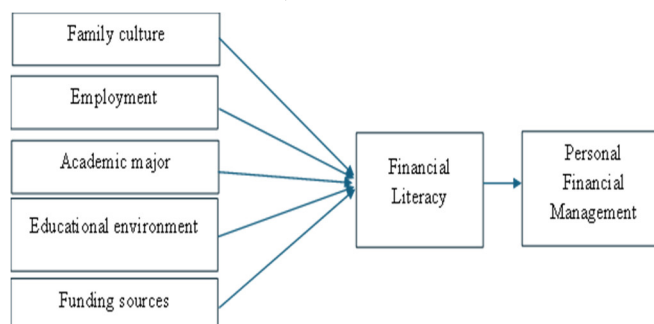


Figure 1. Research Model

4. RESEARCH RESULTS

4.1. Measurement Model Assessment

The measurement model was evaluated based on four primary criteria, including internal consistency reliability, composite reliability, convergent validity assessed through the Average Variance Extracted (AVE) and outer loadings, as well as discriminant validity examined using the Heterotrait-Monotrait ratio (HTMT) and the latent variable correlation matrix.

Internal consistency and composite reliability

Cronbach's alpha coefficient was employed to assess the internal consistency of indicators associated with each latent construct, with the recommended threshold set at ≥ 0.70 [9]. In the present study, Cronbach's alpha values ranged from 0.848 for personal financial management to 0.899 for family culture, indicating that all measurement scales exhibited high reliability and no evidence of internal inconsistency. For instance, the family culture construct demonstrated strong homogeneity among its indicators, such as parental educational attainment and family financial socialization.

Composite reliability (ρ_c) values ranged from 0.900 for funding sources to 0.927 for family culture, exceeding the acceptable threshold range of 0.70 - 0.95 and thus confirming robust measurement reliability without indications of redundancy [10]. Similarly, the reliability coefficient (ρ_a) varied from 0.852 to 0.904, further supporting the adequacy of construct reliability. Notably, the employment construct ($\rho_c = 0.904$) showed strong measurement reliability, reflecting the consistent representation of indicators such as participation in part-time work and engagement in extracurricular activities.

Convergent validity

Table 2, Convergent validity was assessed using the Average Variance Extracted (AVE), which measures the proportion of variance in the indicators explained by the latent construct. All AVE values exceeded the recommended threshold of 0.50 [14], ranging from 0.693 for funding sources to 0.765 for personal financial management. These results indicate satisfactory convergent validity across all constructs. For example, the AVE value of 0.697 for financial literacy implies that more than 69.7% of the variance in indicators such as knowledge of interest rates and inflation is explained by the underlying construct.

Outer loadings were generally above the acceptable threshold of 0.70, with the lowest loading observed for

MT1 (0.785) and the highest for VH4 (0.927). All factor loadings were statistically significant at the 0.001 level based on bootstrapping results. No indicator required elimination, as even the lowest loading (HBTC4 = 0.789) contributed positively to construct validity without reducing the overall AVE Table 2.

Discriminant validity

Discriminant validity was evaluated using the Heterotrait-Monotrait ratio (HTMT). All HTMT values were below the conservative threshold of 0.85, ranging from 0.059 (between educational environment and family culture) to 0.699 (between financial literacy and personal financial management), thereby satisfying the stringent criterion proposed by [15] and indicating the absence of conceptual overlap among constructs.

The latent variable correlation matrix further supported discriminant validity, with correlation coefficients ranging from 0.037 to 0.537 and no values exceeding 0.90. These findings confirm the relative independence of the latent constructs.

Overall, the measurement model demonstrates strong psychometric properties, with no evidence of multicollinearity, as all internal VIF values were below 5.. Consequently, the structural model can be evaluated without requiring model re-specification or indicator modification.

Table 2. Reliability and Validity of the Measurement Model

Latent variable	Cronbach's alpha	ρ_c (Composite Reliability)	ρ_a (Reliability Coefficient)	AVE (Average Variance Extracted)
HBTC	0.864	0.902	0.867	0.697
MT	0.869	0.905	0.872	0.704
NN	0.865	0.903	0.869	0.700
QLTCCN	0.848	0.907	0.852	0.765
TT	0.859	0.900	0.864	0.693
VH	0.899	0.927	0.904	0.761
VL	0.870	0.904	0.873	0.702

Note: All values exceed the recommended threshold levels; data were generated using Smart PLS4.

4.2. Structural Model Assessment

The structural model was evaluated based on the coefficient of determination (R^2 and adjusted R^2), effect size (f^2), predictive relevance (Q^2 obtained through the blindfolding procedure), and overall model fit indices. The

statistical significance of these indicators was confirmed using bootstrapping techniques.

Coefficient of determination (R^2 and adjusted R^2)

The coefficient of determination (R^2) measures the proportion of variance in the endogenous construct explained by its exogenous predictors. For financial literacy, the model reports an R^2 value of 0.758 (adjusted $R^2 = 0.755$), indicating that 75.8% of the variance is explained by family culture, employment experience, academic major, educational environment, and funding sources. According to [16], this represents a substantial level of explanatory power and exceeds the findings reported in comparable studies such as s[1], which documented an explanatory level of 63.3% (Table 3).

With respect to personal financial management, the R^2 value is 0.519 (adjusted $R^2 = 0.518$), suggesting that financial literacy explains 51.9% of the variance in this construct. This level of explanatory power can be considered moderate to substantial and is notably higher than the 29.6% reported in the study by[5]. These findings underscore the mediating role of financial literacy in the Vietnamese student context, where both demographic and environmental factors exert considerable influence on financial behavior Table 3.

Effect size (f^2)

Effect size analysis evaluates the individual contribution of each exogenous construct to the R^2 value of the endogenous variable (Table 2). As stated in guidelines [17], f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively.

The results show that employment experience has a large effect on financial literacy ($f^2 = 0.314$), while academic major ($f^2 = 0.163$) and funding sources ($f^2 = 0.159$) demonstrate medium effects. Family culture ($f^2 = 0.047$) and educational environment ($f^2 = 0.019$) exhibit relatively small effects. In contrast, financial literacy has a very large effect on personal financial management ($f^2 = 1.081$), indicating that the removal of financial literacy from the model would substantially reduce the model's explanatory power for financial management behavior.

Predictive relevance (Q^2)

Predictive relevance was assessed using the blindfolding procedure with an omission distance of seven. The redundancy Q^2 values for financial literacy

($Q^2 = 0.364$) and personal financial management ($Q^2 = 0.388$) are both greater than zero, confirming that the model possesses adequate predictive relevance (Q^2)² values range from 0.440 for financial literacy to 0.600 for predictive capability [18]. Communality family culture, further supporting the predictive validity of the individual measurement indicators (Table 3).

Overall model fit

Global model fit indices indicate satisfactory model adequacy. Specifically, the Standardized Root Mean Square Residual (SRMR) value is 0.049, which is below the recommended threshold of 0.08. In addition, the discrepancy measures d_ULS (1.234) and d_G (0.567) fall within acceptable limits [19]. These results suggest that the proposed structural model provides a good representation of the empirical data and does not exhibit specification errors (Table 3).

Table 3. Structural Model Evaluation Indicators (R^2 , f^2 , Q^2)

Dependent variable	R^2	R^2 adjusted	f^2 (effect size of the independent variables)	Q^2 redundancy	Q^2 communality
HBTC	0.758	0.755	VL=0.314; NN=0.163; TT=0.159; VH=0.047; MT=0.019	0.364	0.440
QLTCN	0.519	0.518	HBTC=1.081	0.388	0.490

Note: Data were obtained from Smart PLS 4; effect size (f^2) values are reported only for the primary structural paths.

4.3. Hypothesis Testing and Relationship Analysis

Hypotheses H1-H5 were tested using path coefficients (β), t-statistics, p-values, and confidence intervals obtained through the bootstrapping procedure. The results indicate that all structural paths are positive and statistically significant at the 1% level ($p < 0.01$), thereby supporting all proposed hypotheses. A detailed examination of each relationship, including indirect and total effects, is presented as follows.

The role of financial literacy in personal financial management

Financial literacy exerts a strong positive effect on personal financial management ($\beta = 0.720$; $t = 21.287$; $p = 0.000$; confidence interval [0.646, 0.778]). This substantial impact confirms that financial literacy

represents a key determinant explaining more than 50% of the variance in financial management behavior, consistent with prior studies by Lusardi and [1, 18]. Within the Vietnamese student sample, individuals with higher levels of financial literacy, such as a sound understanding of interest rates, are more likely to improve financial practices, including budgeting and precautionary saving, thereby reducing the risk of indebtedness.

Family culture and financial literacy (H1)

Family culture has a positive and statistically significant influence on financial literacy ($\beta = 0.172$; $t = 5.395$; $p = 0.000$; confidence interval [0.105, 0.231]). This represents a moderate effect and supports the findings of [3]. Indicators such as parental educational attainment and family-based financial socialization contribute to higher financial literacy through the transmission of saving norms and prudent financial attitudes. The indirect effect of family culture on personal financial management through financial literacy is estimated at 0.124, with a corresponding total effect of 0.124 (Table 4).

Employment experience and financial literacy (H2)

Employment experience demonstrates the strongest effect on financial literacy ($\beta = 0.455$; $t = 11.404$; $p = 0.000$; confidence interval [0.374, 0.529]), consistent with the empirical evidence reported by [4]. Indicators such as part-time employment and exposure to business activities enhance students' practical financial knowledge and real-world financial awareness. The indirect effect on personal financial management is 0.327, which is also equal to the total effect (Table 4).

Academic major and financial literacy (H3)

Table 4, Academic major has a positive and statistically significant impact on financial literacy ($\beta = 0.322$; $t = 8.775$; $p = 0.000$; confidence interval [0.247, 0.390]), indicating a moderate effect size. This finding aligns with previous research suggesting that students enrolled in economics-related disciplines possess higher levels of financial knowledge due to curriculum exposure[8]. The indirect and total effects of academic major on personal financial management are estimated at 0.232 (Table 4)

Educational environment and financial literacy (H4)

The educational environment exerts a relatively weak yet statistically significant effect on financial literacy ($\beta = 0.111$; $t = 3.268$; $p = 0.001$; confidence interval [0.039, 0.173]). This finding is consistent with [6], suggesting that institutional financial education initiatives such as workshops and training programs have limited influence when financial education is not systematically integrated into university curricula. The indirect effect on personal financial management is 0.080, which is also the total effect.

Funding sources and financial literacy (H5)

Table 4 sources of educational funding have a positive and statistically significant effect on financial literacy ($\beta = 0.318$; $t = 8.279$; $p = 0.000$; confidence interval [0.241, 0.393]), representing a moderate effect size. This result supports the findings of [9], indicating that reliance on student loans or financial support mechanisms increases students' awareness of financial risk and encourages more responsible financial planning. The indirect and total effects on personal financial management are estimated at 0.229.

Table 4. Path Coefficients, Indirect Effects, and Total Effects (Bootstrapping Results)

Structural path	β (Path)	t-value	p-value	Confidence interval [2.5%, 97.5%]	Indirect effect (β)	Total effect (β)
HBTC $\rightarrow$ QLTCN	0.720	21.287	0.000	[0.646, 0.778]	-	0.720
VH $\rightarrow$ HBTC (H1)	0.172	5.395	0.000	[0.105, 0.231]	0.124	0.124
VL $\rightarrow$ HBTC (H2)	0.455	11.404	0.000	[0.374, 0.529]	0.327	0.327
NN $\rightarrow$ HBTC (H3)	0.322	8.775	0.000	[0.247, 0.390]	0.232	0.232
MT $\rightarrow$ HBTC (H4)	0.111	3.268	0.001	[0.039, 0.173]	0.080	0.080
TT $\rightarrow$ HBTC (H5)	0.318	8.279	0.000	[0.241, 0.393]	0.229	0.229

Note: All coefficients are statistically significant at the 1% level ($p < 0.01$); data were generated using SmartPLS 4

Following the statistical steps suggested by [10], we ran a bootstrap test with 5,000 samples to double-check how Financial Literacy works as a middle link. The results are clear. The indirect path from work experience to money management is statistically strong $\beta = 0.327$. Since the confidence interval 95% does not include zero, the mediation effect is real. We found similar strong results for academic majors $\beta = 0.232$) and funding sources

$\beta = 0.229$). Family culture $\beta = 0.124$) and the university environment $\beta = 0.080$) also work through this same path. It means background factors don't automatically change spending habits. Instead, they first build up a student's financial knowledge, which aligns with the behavioral ideas of [20]. Then, this knowledge drives better daily financial actions.

environment, and funding sources-to students' personal financial management behavior.

Compared with prior studies, the relatively stronger effects of employment experience and funding sources observed in the Vietnamese context may reflect the characteristics of a transitional economy, where increased

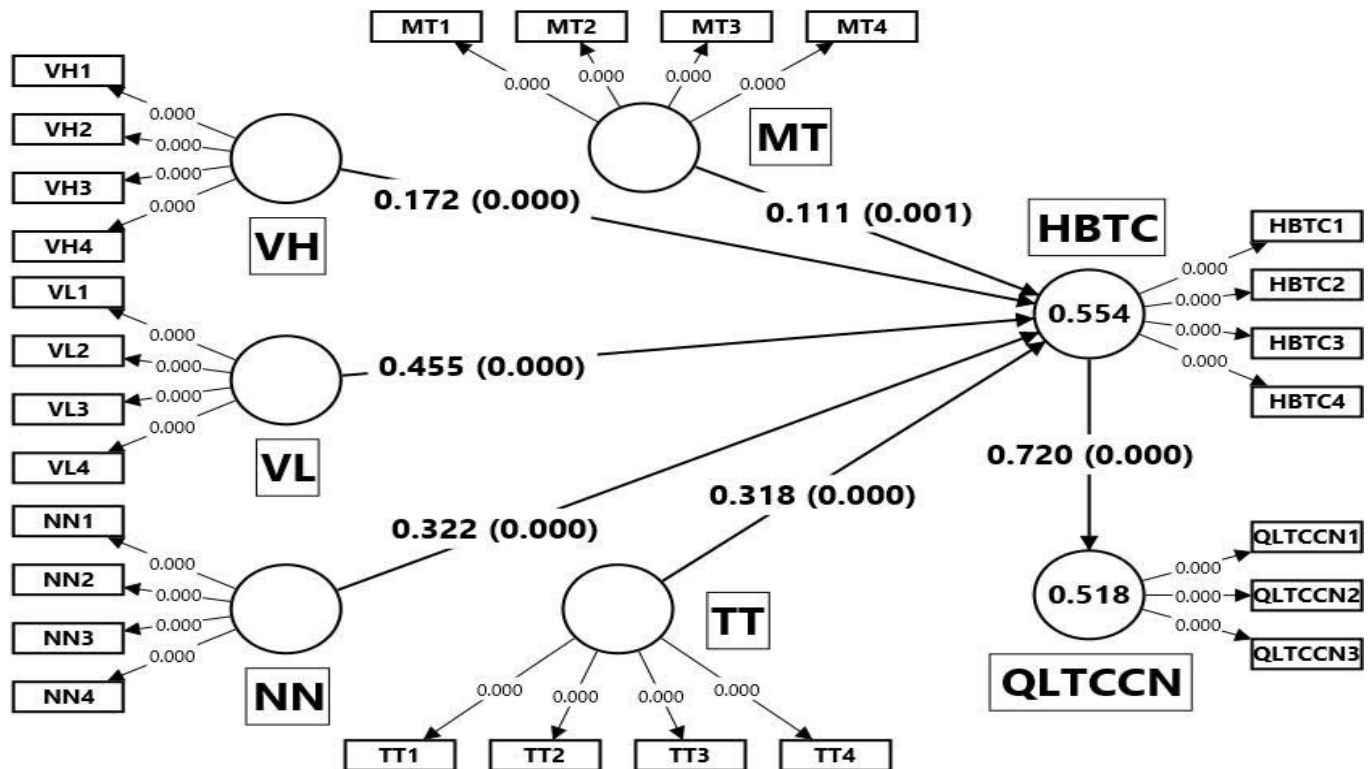


Figure 2. Personal Financial Management and the Role of Financial Literacy

4.4. Discussion

To make sure our stats are solid, we performed a few extra technical checks based on the guidelines by [10]. First, we investigated Common Method Bias because students evaluated themselves. The VIF scores were all between 1.124 and 2.415. Since these are well below the usual cutoff values suggested by [9], this bias isn't a problem here. Next, we checked for endogeneity issues using the Gaussian copula method. No significant errors popped up, meaning our main variables are clean. Finally, we compared the students who answered the survey early with those who answered late. We found no big differences between the two groups. This proves our data is stable and trustworthy.

The empirical findings confirm and extend the applicability of the Theory of Planned Behavior, in which financial literacy operates as a mediating mechanism linking antecedent factors-such as family culture, employment experience, academic major, educational

financial responsibility, labor market participation, and social media-driven consumption pressures play a more pronounced role in shaping financial behavior. Conversely, the relatively weak influence of the educational environment suggests the presence of institutional gaps in the provision of structured financial education within university curricula.

Despite its theoretical and practical contributions, the study is subject to several limitations. The research sample is geographically concentrated in Ho Chi Minh City and the former Binh Duong province, which may constrain the generalizability of the findings to other regions. In addition, the model does not incorporate certain control variables, such as gender, that may further explain variations in financial behavior. Future research is therefore encouraged to adopt more diversified sampling strategies and to integrate qualitative approaches in order to obtain deeper insights into the processes underlying financial capability development among university students.

Overall, the results provide an empirical foundation for policy initiatives aimed at integrating financial education into higher education programs in Vietnam.

5. CONCLUSION AND POLICY IMPLICATIONS

5.1. Conclusion

This study investigates the determinants influencing personal financial management among university students in Vietnam, with particular emphasis on the mediating role of financial literacy. Using the Partial Least Squares Structural Equation Modelling (PLS-SEM) approach and a sample of 600 students drawn primarily from universities located in Ho Chi Minh City and Binh Duong province, the empirical results confirm that all proposed hypotheses (H1-H5) are supported, as evidenced by positive and statistically significant structural path coefficients ($p < 0.01$).

Specifically, family culture ($\beta = 0.172$), employment experience ($\beta = 0.455$), academic major ($\beta = 0.322$), educational environment ($\beta = 0.111$), and sources of educational funding ($\beta = 0.318$) all exert significant positive effects on financial literacy, collectively explaining 75.8% of its variance. In turn, financial literacy demonstrates a strong positive impact on personal financial management behavior ($\beta = 0.720$), accounting for 51.9% of the variance in this construct. These findings underscore the critical role of financial knowledge in fostering prudent financial practices such as systematic budgeting, regular saving, and effective financial risk management.

The results are consistent with both international and domestic empirical evidence, including studies by [1, 5], which report that financial literacy explains approximately 29.6% to 63.3% of the variation in financial behavior. However, the present study extends the existing literature by identifying employment experience as the most influential determinant within the Vietnamese context, reflecting the practical relevance of part-time work and extracurricular engagement in shaping students' financial capability. Conversely, the relatively weak influence of the educational environment highlights an important gap in current university curricula, where financial education has not yet been widely institutionalized.

A crucial theoretical contribution of this study lies in confirming the robust mediating mechanism of Financial Literacy (HBTC) between socio-environmental antecedents and Personal Financial Management

(QLTCCN). From a theoretical standpoint, background factors like family culture (VH), employment experience (VL), academic major (NN), higher education environment (MT), and funding sources (TT) act as external stimuli that provide raw information and socialization opportunities. However, according to cognitive psychology and behavioral finance, external stimuli cannot automatically generate structured actions without an internal cognitive processing lens. Financial Literacy (HBTC) functions exactly as this cognitive mediator. When students absorb parental guidance or gain insight from part-time work, these experiences are cognitively crystallized into financial literacy, enhancing their ability to compute interest, evaluate risks, and understand inflation. This heightened literacy alters their inner mental accounting and psychological utility functions, which directly translates into disciplined financial behaviors such as strategic budgeting, risk mitigation, and systematic saving. Therefore, university intervention programs that fail to elevate actual cognitive literacy (HBTC), focusing only on environment modification, will witness a bottleneck in shifting student behaviors.

Overall, the study provides empirical evidence supporting the necessity of enhancing financial literacy in order to improve students' personal financial management behavior and reduce financial vulnerability among young adults in the context of digitalization and increasing economic integration.

5.2. Policy Implications

Based on the empirical findings, several policy recommendations may be proposed.

First, universities should think about making financial education a required course. Right now, campus events only have a small impact. A mandatory personal finance class-maybe worth two or three credits would be a great step for first-year or second-year students. Schools could use quick online tests and fun group projects where students build real budgets. As noted in past studies like Tran et al. [5], this kind of training will slowly but surely boost financial knowledge. Over time, it will help students avoid reckless spending, build healthy saving habits, and lower the risk of missing tuition payments.

Second, policies aimed at promoting part-time employment and extracurricular engagement should be strengthened in order to enhance students' practical financial experience. Employment experience represents the most influential determinant of financial literacy

($\beta = 0.455$; $r^2 = 0.314$), indicating that exposure to income generation and financial responsibility significantly contributes to financial capability development. Universities may collaborate with local enterprises to establish structured student employment programs, such as campus-based part-time work schemes. These initiatives should particularly target third- and fourth-year students, especially those from rural or economically disadvantaged backgrounds. By increasing access to practical work experience, such policies may reduce financial dependence on families and improve personal financial management by lowering the likelihood of reliance on informal borrowing.

Third, family-oriented financial education programs should be developed to strengthen the intergenerational transmission of financial knowledge and attitudes. Given the moderate influence of family culture on financial literacy ($\beta = 0.172$; $r^2 = 0.047$), universities and policymakers may consider disseminating digital educational materials such as instructional videos and infographics on saving and investment through widely used communication platforms. Community-based workshops tailored to varying educational backgrounds may also be organized on a quarterly basis, particularly targeting parents of first-year students in rural areas. Such initiatives could indirectly enhance students' financial literacy through daily family interactions and support mechanisms.

Fourth, improvements in student financing systems and debt management policies are necessary to enhance financial risk awareness. The results indicate that funding sources exert a moderate influence on financial literacy ($\beta = 0.318$; $r^2 = 0.159$). Expanding student credit programs such as government-supported education loan funds while requiring borrowers to complete online financial management training prior to loan approval could improve financial responsibility. Partnerships with commercial banks to provide low-interest loans combined with personalized financial advisory services and digital expenditure-tracking tools may further support financially vulnerable students. These measures could reduce tuition default risk, strengthen financial literacy through experiential learning, and promote inclusive financial access in line with national financial development strategies.

Finally, curriculum reforms across academic disciplines are recommended in order to reduce disparities in financial literacy between students from

economics-related fields and those from other areas of study. Academic major demonstrates a moderate effect on financial literacy ($\beta = 0.322$; $r^2 = 0.163$), indicating that students enrolled in economics and business programs tend to possess superior financial capability. Universities should therefore integrate fundamental financial literacy modules into engineering, social sciences, and other non-business disciplines. Such initiatives are expected to narrow financial knowledge gaps, encourage positive investment behavior, and contribute to achieving broader educational development goals by promoting equitable access to financial competence and long-term financial stability among graduates.

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