

Student Loans as a Mediator Between Financial Stress and Academic Engagement: Evidence from Philippine Higher Education

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Abstract. This study investigates the mediating role of student loans in the relationship between financial stress and academic engagement among tertiary students in a private, for-profit higher education institution in the Philippines. Anchored in the Challenge-Hindrances Stressor Framework, the research explores how financial stress, commonly viewed as a hindrance, may also function as a challenge stressor that motivates adaptive academic behaviors. Using a quantitative, causal research design, data were collected from 377 students and analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM). Results show that financial stress significantly predicts student loan applications, positively influencing academic engagement. Moreover, financial stress directly affects engagement, suggesting that it may stimulate proactive coping responses in resource-constrained contexts. The findings extend the Challenge-Hindrances Stressor Framework to a non-Western educational context and point out the critical role of student loans as a financial lifeline that supports academic engagement, particularly in private institutions not covered by the free tuition provisions of Republic Act No. 10931. Beyond theoretical contributions on stress appraisal, the study maintains key policy implications: expanding student loan access, ensuring transparent financial aid, and integrating financial literacy programs are vital to complement existing reforms in Philippine higher education. The study calls for policies that strengthen equity and sustainability in financing private higher education by situating student loans as both an economic necessity and an academic enabler.

Keywords: Financial stress; Student loan application; Academic engagement; Higher Education Institution; Philippines.

1.0 Introduction

Higher education has long been recognized as a driver of individual advancement and national development, yielding improved employability, civic engagement, and economic growth (Yannelis & Tracey, 2022; Casanova *et al.*, 2024). However, many college students struggle with persistent financial stress that undermines their academic experience, particularly in developing economies. Economic stress, often defined as the inability to meet financial obligations, is consistently cited as one of the leading sources of student anxiety (Heckman *et al.*, 2014; Nasr *et al.*, 2024). Rising tuition fees, limited income, and unstable employment aggravate these pressures, leading to reduced motivation, disengagement, and in many cases, attrition (Baker & Montalto, 2019; Parreño, 2019).

Globally, financial aid and student loans have become essential to mitigate these challenges. Research demonstrated that loans expand university access, support persistence, and improve graduation outcomes, particularly among financially disadvantaged students (Blom & Canton, 2004; Card & Solis, 2021). However, findings remain mixed; while loans can provide immediate relief, they may also introduce repayment anxieties and long-term financial vulnerability (Yannelis & Tracey, 2022). Students often face challenges navigating complex loan systems, delayed disbursements, and confusion about repayment terms, which disrupt academic performance (Miller *et al.*, 2021; Harper *et al.*, 2021; Bomer *et al.*, 2021). Restricting access to loans without alternative support has also worsened financial instability and default risks (Barr *et al.*, 2021).

In the Philippines, the Universal Access to Quality Tertiary Education Act (RA 10931) has been hailed as a landmark reform that provides free tuition and miscellaneous fees in public higher education institutions (CHED, 2018; Lim, Lomer, & Millora, 2018). While this policy has expanded opportunities for many students, it has primarily benefited those in state and local universities. Private higher education institutions (HEIs), which account for 72% of the country's providers, remain largely outside the law's coverage (Commission on Higher Education, 2023). Consequently, students in private HEIs continue to face substantial financial burdens, with inequities in enrollment and completion across income groups (Bayudan-Dacuycuy *et al.*, 2023).

Bayudan-Dacuycuy *et al.* (2023) observed that although participation among low-income students has improved, disparities remain stark between private and public institutions. Enrollment among wealthier households remains significantly higher, and competition for limited slots at public universities exacerbates access challenges. These conditions underscore the need for targeted financial mechanisms, such as student loan programs, to complement existing tuition subsidies and ensure that equity goals are met. At the same time, sustaining the financial stability of HEIs through long-term financing schemes is crucial for balancing both access and quality in Philippine higher education.

Beyond structural inequities, financial stress is also a deeply personal and psychological burden for students. It manifests in difficulties affording learning materials, prioritizing work over studies, and struggling to sustain career aspirations (Moore *et al.*, 2021). Financial hardship often contributes to anxiety, worry, and emotional strain (Rahman *et al.*, 2021; Xiao & Kim, 2021), while low financial self-efficacy intensifies feelings of powerlessness (Heckman *et al.*, 2014). At the micro level, such pressures hinder persistence and performance; at the macro level, they perpetuate social inequality and limit upward mobility (Sergeyev *et al.*, 2023; Giampaoli *et al.*, 2024). Loans offer one possible coping mechanism, but their role in transforming financial stress into sustained engagement remains insufficiently understood.

Academic engagement, defined as students' behavioral, cognitive, emotional, and agentic involvement in their learning (Skinner *et al.*, 2008; Alonso-Tapia *et al.*, 2022), is widely recognized as a predictor of student success and resilience. Engaged students exhibit persistence, enthusiasm, and self-regulation, contributing to academic performance and long-term career readiness (Datu & Buenconsejo, 2021; Casanova *et al.*, 2024; Labitad, 2025). The literature also reports engagement as a protective factor that buffers against risks such as burnout and dropout (Alves *et al.*, 2022; Acosta-Gonzaga, 2023). Thus, fostering engagement is central to ensuring that students thrive despite the challenges posed by financial stress.

This study draws on the Challenge–Hindrance Stressor Framework (CHSF) by LePine, Podsakoff, and LePine (2005) to better understand how financial stress can hinder and motivate students. Unlike traditional stress models that view stress as inherently harmful, CHSF distinguishes between challenge stressors—perceived as opportunities for growth, such as financial strain that motivates persistence—and hindrance stressors—perceived as barriers, such as bureaucratic obstacles. In higher education, loans may serve as a coping mechanism, enabling students to reframe financial stress as a challenge rather than a hindrance, thereby sustaining their motivation and engagement. This perspective aligns with Pearlin *et al.*'s (1981) stress process theory, which emphasizes the mediating role of coping responses in shaping outcomes.

Despite evidence linking financial stress to reduced academic success (Heckman *et al.*, 2014; Moore *et al.*, 2021) and student loans to improved persistence (Blom & Canton, 2004; Card & Solis, 2021), little is known about how these constructs intersect. Specifically, no study has tested whether student loans mediate the relationship between financial stress and academic engagement. This gap is particularly relevant in the Philippines, where students in private HEIs face disproportionate financial challenges. Addressing this gap, the present study

examined whether student loans function as a coping mechanism that sustains academic engagement amid financial stress, offering new insights into how higher education financing influences student outcomes in resource-constrained settings.

As shown in *Figure 1*, the conceptual framework positions financial stress as the independent variable, academic engagement as the dependent variable, and student loans as the mediating variable. The study contributes to the literature in three key ways: (1) it extends the application of the Challenge–Hindrance Stressor Framework to a non-Western, low-income higher education context; (2) it empirically tests the mediating role of student loans in shaping students’ academic engagement and (3) it provides practical insights for institutional policymakers seeking to design financial support mechanisms that not only alleviate economic pressures but also foster sustained academic success.

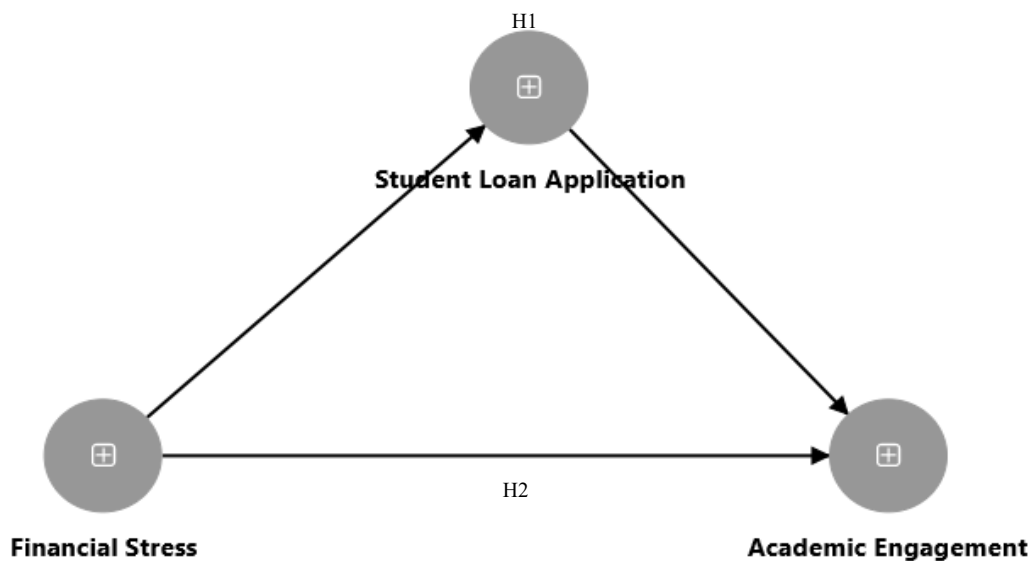


Figure 1. Conceptual framework illustrating the hypothesized relationships among financial stress, student loans, and academic engagement

2.0 Methodology

2.1 Research Design

This study adopted a quantitative, causal-explanatory design using Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the mediating role of student loans in the relationship between financial stress and academic engagement. Undergraduate students from the largest private higher education institution in Cagayan de Oro City, in terms of enrollment, were surveyed using validated Likert-scale instruments during the 2023–2024 academic year. Construct validity and reliability were confirmed through expert review, pilot testing, factor loadings, Cronbach’s alpha, composite reliability, and average variance extracted. PLS-SEM was performed in SmartPLS 4, with 5,000 bootstrap resamples to test direct, indirect, and mediating effects.

2.2 Participants and Sampling Technique

The study focused on undergraduate students who had applied for the institution’s internal student loan programs, as their experiences were central to the research objectives. Participation was voluntary, and informed consent was obtained in compliance with institutional ethical standards. The consent form emphasized four safeguards: voluntary participation, absence of penalties for non-participation, confidentiality of responses, and the right to withdraw at any time. The target population comprised the undergraduate students ($N = 21,000$). Using random sampling, 500 questionnaires were distributed, and all were returned. After screening for completeness of response and inclusion criteria, 377 valid surveys were retained for analysis. This number meets the Cochran-derived minimum sample size for a finite population at a 95% confidence level and 5% margin of error ($n \approx 377.3$) (Cochran, 1977), ensuring adequacy for population-level inference and sufficient power for structural equation modeling. Incomplete responses ($n = 123$) were excluded through listwise deletion.

2.3 Research Instrument

The survey instrument was adapted from established scales in the literature to ensure construct validity. It consisted of three sections: (1) six items measuring financial stress, (2) five items assessing student loan behavior, and (3) seven items evaluating academic engagement. Responses were recorded on a five-point Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). Content validity was established through expert review, and a pilot test was conducted with 30 students to refine item clarity and reliability.

Table 1. Indicators of Constructs and Summary of Factor Loadings

Variable	Indicators	Factor Loading
Academic Engagement (AE)	AE2: I exert more effort when I do complex tasks	0.852
	AE3: I am delighted and passionate about the assignments and activities in each of my subjects since they enable me to expand my knowledge	0.909
	AE4: I gain focus when I see technical problems related to my studies	0.868
	AE5: I actively participate in every discussion	0.869
	AE6: I am spending enough time on academic matters	0.876
	AE7: I keep up-to-date on my reading and homework assignments	0.876
	AE8: I have a clear idea of what I want to accomplish during the coming semester	0.843
	FS1: I feel stressed about my finances in general	0.829
Financial Stress	FS2: Financial problems cause me stress.	0.891
	FS3: I feel emotionally drained because of my financial situation	0.919
	FS4: I feel pressured as I cannot manage my weekly budget	0.900
	FS5: I am losing sleep because of financial stress	0.881
	FS6: I feel hopeless, depressed, or ashamed because of my financial situation	0.861
	SL1: I applied for a student loan	0.870
Student Loan	SL2: The current situation I am facing right now made me apply for a student loan at_____	0.915
	SL3: I am interested in availing of a student loan despite its possible effects	0.926
	SL4: I am interested in applying for a student loan so I can graduate on time	0.884
	SL5: I am glad that I was able to study with the help of the student loan	0.883

Factor loadings for all items exceeded 0.80, confirming indicator reliability. Table 1 summarizes the factor loadings for financial stress (≥ 0.829), student loan behavior (≥ 0.870), and academic engagement (≥ 0.843).

Table 2. Construct Validity and Reliability

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Academic Engagement	0.947	0.951	0.956	0.758
Financial Stress	0.942	0.945	0.954	0.775
Student Loan Application	0.938	0.942	0.953	0.802

Table 2 summarizes Cronbach's alpha values (0.938-0.947) and composite reliability values (rho_A, rho_C), both exceeding 0.94, confirming internal consistency. Average variance extracted (AVE) values for all constructs (0.758–0.802) surpassed the 0.50 benchmark, supporting convergent validity. Discriminant validity was tested using both the Fornell-Larcker criterion and heterotrait-monotrait ratio (HTMT), with results confirming construct distinctiveness.

2.4 Data Gathering Procedure and Ethical Considerations

Data were collected via a printed survey administered to undergraduate students who applied for internal loan programs at the participating higher education institution during the 2023–2024 academic year. Before responding, participants were apprised of the study's objectives and presented with an informed consent document outlining voluntary participation, confidentiality, the absence of repercussions for non-participation, and the right to withdraw at any time. Data collection occurred over a four-week duration, providing ample time for distribution, collection, and follow-up on unreturned forms. Completed questionnaires were meticulously evaluated for precision and thoroughness, yielding 377 valid responses for the study. All techniques adhered to institutional ethical requirements for research involving human subjects.

2.5 Data Analysis Procedure

Data analysis was conducted in two phases: descriptive study and structural modeling. Descriptive statistics, including means and standard deviations, were first computed to profile respondents and summarize item-level

responses. Normality was assessed using the Shapiro–Wilk test, which indicated non-normal distributions of the variables.

Given this result, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed using SmartPLS version 4. PLS-SEM was chosen because it is robust to non-normal data, suitable for models involving latent constructs and mediation effects, and aligned with the study’s goal of emphasizing prediction and theory development (Hair *et al.*, 2021). The measurement model was evaluated for reliability, convergent validity, and discriminant validity. Multicollinearity was assessed using variance inflation factors (VIF), with all values below 3.3, ruling out common method bias (Podsakoff *et al.*, 2003).

The structural model was tested by estimating path coefficients and their significance through bootstrapping with 5,000 subsamples. Model fit was examined using the standardized root mean square residual (SRMR), discrepancy indices (d_{ULS} , d_G), the chi-square statistic, and the normed fit index (NFI). To assess mediation, the indirect effect of financial stress on academic engagement through student loans was analyzed using bootstrapped confidence intervals. Effect sizes (f^2) and predictive relevance (Q^2) were also computed to evaluate the strength and predictive capability of the hypothesized relationships. This stepwise approach ensured rigorous validation of constructs and robust testing of direct and indirect effects, thereby strengthening the reliability and generalizability of the findings.

3.0 Results and Discussion

3.1 Frequency Distributions of Students' Profiles

Table 3 presents the frequency distribution of students by marital status. Most respondents are single, accounting for 373 students (98.9% of the total population). Only a small portion of the respondents are married (2 students, or 0.5%) or separated (2 students, or 0.5%).

Table 3. *Frequency Distribution of Marital Status of the Student*

Marital Status of the Student	Counts	Percentage	Cumulative Percentage
Single	373	98.99	98.90
Married	2	0.50	99.50
Separated	2	0.50	100.00

The descriptive results in Table 4 on family monthly income of students from higher education institutions (HEI) show that household earnings are generally concentrated at the lower end of the income distribution. The median monthly income of ₱15,000.00 (approximately US \$257.35) suggests that half of the students come from families with incomes below this level. At the same time, the mode of ₱10,000.00 (approximately US \$171.57) represents the most frequently reported household income. These measures suggest that the typical HEI student in the sample comes from a household with a lower- to middle-income level. Although the mean income was higher at ₱21,363.00, this figure is skewed by a small proportion of families with substantially higher earnings, as reflected in the significant standard deviation of ₱37,247.00, which revealed income disparities within the student population.

Table 4. *Descriptives of Students' Family Monthly Income*

	N	Mean	Median	Mode	SD
Family Monthly Income	377	P21, 363.00	P15, 000	P10, 000.00	P37, 247

As shown in Table 5, the frequency distribution of loan installment plans indicates that a substantial proportion of students (74.3%) chose a 12-installment scheme to repay their loans. In contrast, a smaller group (25.7%) opted for the shorter 3-installment option. The predominance of the 12-installment plan suggests a clear tendency among students to prefer longer and more manageable repayment periods.

Table 5. *Frequency Distribution of the Loan Installment Plan*

Loan Installment Plan	Counts	Percentage	Cumulative Percentage
12 months	280	74.30	74.30
3 months	97	25.70	100.00

Table 6 showed a median of ₱15,690.00, indicating that half of the students borrowed at or below this level. The mode of ₱20,000.00 further suggested that this amount was the most common loan size, which reflected a borrowing pattern concentrated around small to moderate loan levels. In contrast, the mean loan amount of

₱23,233.00, along with the significant standard deviation of ₱70,870.00, suggested the presence of outliers or a small number of students with considerably higher borrowing amounts.

Table 6. *Descriptives of Students' Loan Amounts*

	N	Mean	Median	Mode	SD
Student Loan Amount	377	P23, 233.00	P15, 690.00	P20, 000.00	P70, 870.00

3.2 Descriptives of Financial Stress

Table 7 presents the self-reported financial stress levels among 377 higher education students. The highest means were recorded for FS1 ($\bar{x}$ = 3.50, SD = 1.25) and FS2 ($\bar{x}$ = 3.42, SD = 1.20), demonstrating that students generally agree that financial concerns are a significant source of stress. These findings are consistent with Rahman *et al.* (2021), who identified anxiety over debt and difficulty meeting financial obligations as central indicators of financial distress. Similarly, Xiao and Kim (2021) emphasized that financial stress extends beyond financial shortages, manifesting as persistent worry and psychological strain—patterns evident in the present results.

Table 7. *Descriptives of Students' Financial Stress*

Indicators	N	Mean	SD	Interpretation
FS1: I feel stressed about my finances in general	377	3.51	1.25	Agree
FS2: Financial problems cause me stress	377	3.42	1.20	Agree
FS3: I feel emotionally drained because of my financial situation	377	3.21	1.25	Neutral
FS4: I feel pressured as I cannot manage my weekly budget	377	3.24	1.20	Neutral
FS5: I am losing sleep because of financial stress	377	2.97	1.24	Neutral
FS6: I feel hopeless, depressed, or ashamed because of my financial situation	377	3.28	1.27	Neutral
FS7: I find it difficult to talk about money	377	3.13	1.30	Neutral

Responses to emotional exhaustion (e.g., feeling drained, hopeless, or ashamed) and physical strain (e.g., losing sleep) were more neutral. While many students experience financial strain, not all report its most severe psychological or physical consequences. However, Heckman *et al.* (2014) cautioned that students with lower financial self-efficacy are more prone to higher perceived stress, meaning that even moderate strain could escalate for vulnerable groups.

The moderate variability in responses (SDs around 1.20–1.30) articulates heterogeneity in how students experience financial stress. While some manage their finances adequately, others report greater difficulty, particularly with budgeting and daily expenses. Moore *et al.* (2021) reported that such disparities can translate into tangible academic disadvantages, such as the inability to afford learning resources or the need to work long hours, thereby increasing stress levels. Moreover, Sergeyev *et al.* (2023) noted that financial stress perpetuates broader cycles of inequality, disproportionately affecting those already in disadvantaged circumstances.

3.3 Descriptives of Student Loans

Table 8 describes the extent to which students apply for institutional loans. The first three indicators (SL1–SL3) yielded mean scores between 2.93 and 3.17, indicating that students neither strongly agreed nor disagreed with actively applying for loans. This neutrality reflects a degree of hesitation or uncertainty, which may stem from concerns about repayment obligations or insufficient knowledge about loan systems. Such hesitation aligns with Miller *et al.* (2021) and Harper *et al.* (2021), who found that students often perceive loan information as confusing, inconsistent, or inadequate, leading to uncertainty in decision-making. Similarly, Yannelis and Tracey (2022) noted that the complexity of loan systems and lack of financial literacy contribute to cautious or ambivalent attitudes toward borrowing.

Table 8. *Descriptives of Students' Extent of Application for Student Loans*

Indicators	N	Mean	SD	Interpretation
SL1: I have applied for a student loan	377	2.93	1.52	Neutral
SL2: The current situation I am facing right now made me apply for a student loan	377	3.02	1.44	Neutral
SL3: I am interested in availing of a student loan despite its possible effects	377	3.17	1.40	Neutral
SL4: I am interested in applying for a student loan so I can graduate on time	377	3.46	1.33	Agree
SL5: I am glad that I was able to study with the help of the student loan	377	3.43	1.37	Agree

By contrast, items SL4 ($\bar{x}$ = 3.46) and SL5 ($\bar{x}$ = 3.43) received higher mean scores, conveying that many students are motivated to apply for loans to continue their studies and graduate on time. This finding supports evidence from Blom and Canton (2004), who observed that loan recipients in Mexico were more likely to persist in higher

education. Card and Solis (2021) reported that loans increase re-enrollment and graduation rates, particularly among financially challenged students. Expressions of gratitude toward in-house financing also underscore the importance of timely access to loans in reducing financial stress, a point reinforced by Chunchun *et al.* (2024), who found that adequate financial aid enhances academic focus and engagement by relieving students of the constant struggle to secure tuition and living expenses.

The standard deviations for student loan items (ranging from 1.33 to 1.52) indicate moderate variability in students' perceptions. This articulates that while some students fully embrace loan programs, others remain cautious or resistant, possibly due to concerns over long-term debt burdens. Barr *et al.* (2021) verified this dilemma, showing that discouraging borrowing without alternatives may worsen financial outcomes, while over-reliance on loans can expose students to repayment difficulties. Such variability reflects the ongoing policy debate identified by Yannelis and Tracey (2022), who argued that student loans remain insufficiently researched with respect to long-term borrower well-being and their impact on broader economic structures.

3.4 Descriptives of Academic Engagement

Table 9 reports the descriptive statistics of students' academic engagement. The highest mean score was observed in AE1 ($\bar{x}$ = 4.51), where students strongly agreed with the desire to achieve good grades. This finding proves a high level of goal orientation. It aligns with Labitad (2025), who emphasized that academic success in higher education reflects a multidimensional construct encompassing cognitive, affective, and behavioral commitment to learning.

Table 9. Descriptives of Students' Academic Engagement

Indicators	N	Mean	SD	Interpretation
AE1: I want to get good grades in every subject	377	4.51	0.882	Strongly Agree
AE2: I exert more effort when I do complex tasks	377	4.20	0.938	Agree
AE3: I am delighted with the assignments and activities in each subject, as they enable me to expand my knowledge.	377	4.07	0.961	Agree
AE4: I gain focus when I see technical problems related to my studies	377	3.84	0.994	Agree
AE5: I actively participate in every discussion	377	3.86	1.054	Agree
AE6: I am spending enough time on academic matters	377	3.90	1.020	Agree
AE7: I keep up-to-date on my reading and homework assignments	377	3.90	1.009	Agree
AE8: I have a clear idea of what I want to accomplish during the coming semester	377	3.97	1.009	Agree

Similarly, students agreed that they exert more effort when faced with complex tasks (AE2, $\bar{x}$ = 4.20) and that assignments and activities provide opportunities to expand knowledge (AE3, $\bar{x}$ = 4.07). These results align with those of Alonso-Tapia *et al.* (2022), who documented that engagement manifests in active participation across various learning activities, including analyzing texts, collaborative group work, and practical sessions. These findings also align with those of Casanova *et al.* (2024), who categorized engagement into behavioral (effort, persistence, attention) and emotional (enthusiasm, satisfaction, pride) components—both of which are evident in students' positive perceptions of their learning involvement.

Meanwhile, AE4 to AE8 (mean scores ranging from 3.84 to 3.97) confirm that students generally remained focused, participated in discussions, managed their academic responsibilities, and maintained a sense of direction in their studies. These indicators resonate with Skinner *et al.* (2008), who conceptualized engagement as sustained behavioral effort and positive emotional involvement in academic tasks. The findings also support Alves *et al.* (2022), who demonstrated that engagement is a protective factor against academic risks, such as burnout and dropout, by sustaining persistence even under stress.

The standard deviation values (0.882–1.054) reveal moderate response variability, reflecting individual differences in perceived engagement despite the overall positive trend. This variability is consistent with Acosta-Gonzaga (2023), who insisted that students' confidence, emotional regulation, and coping strategies significantly influence their level of engagement when confronted with academic challenges.

3.5 Mediation of Student Loan

The evaluation of model fit indices (Figure 2) for both the saturated and estimated models yielded identical results, indicating a high degree of congruence between the two. The Standardized Root Mean Square Residual (SRMR) was 0.047, which falls below the commonly accepted threshold of 0.08, signifying a good fit. Similarly, the discrepancy indices d_{ULS} (0.383) and d_G (0.242) further support an adequate model fit. The chi-square statistic

was 565.063, and while the absolute value may indicate some degree of model misfit, its interpretation is tempered by sensitivity to sample size. The Normed Fit Index (NFI) was 0.912, exceeding the conventional benchmark of 0.90, which reflects an acceptable model fit. The identical values across both models suggest that the estimated model closely approximates the saturated model, reinforcing its validity and robustness in representing the observed data.

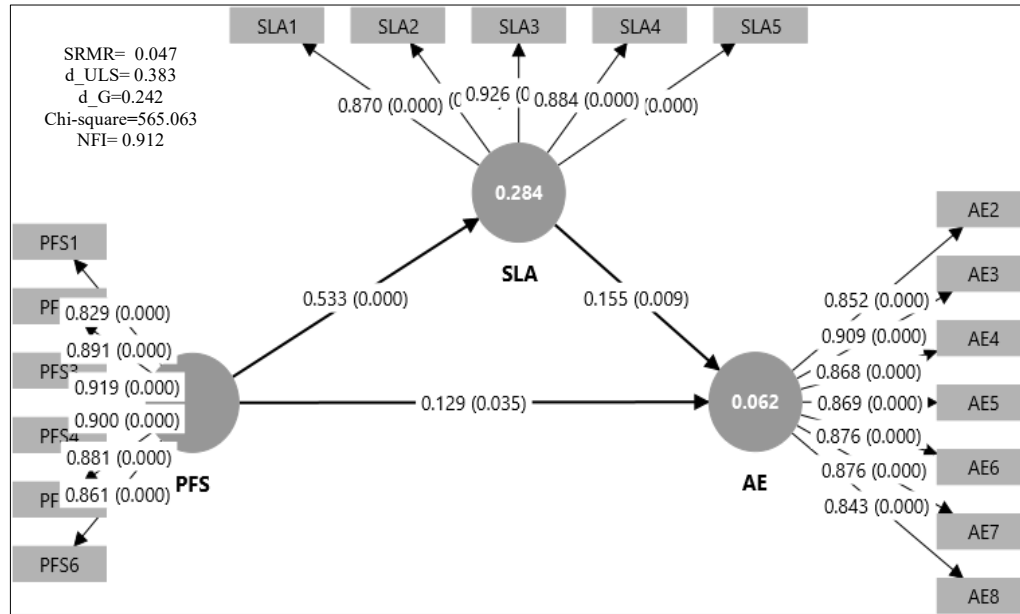


Figure 2. Structural Coefficients and P-values of the Constructs

Tables 10 and 11 present the results of the structural model, revealing that financial stress (FS) has a moderate positive direct effect on academic engagement (AE) ($\beta = 0.129$, $t = 2.105$, $p = .035$), significant at the 5% level. This postulates that financial pressure, while often perceived as a hindrance, can also serve as a motivating force, driving students to invest greater effort in their studies.

Table 10. Path Coefficients

	Original sample (O)	Sample mean (M)	SD (STDEV)	T statistics (O/STDEV)	P-value
FS -> AE	0.129	0.132	0.061	2.105	0.035**
FS -> SLA	0.533	0.534	0.042	12.562	0.00*
SLA -> AE	0.155	0.155	0.059	2.603	0.009*

*P-value significant at <0.01%; **P-value significant at <0.05%

Table 11. Specific Indirect Effect

	Original sample (O)	Sample mean (M)	SD (STDEV)	T statistics (O/STDEV)	P-value
FS -> SLA -> AE	0.083	0.083	0.032	2.580	0.010*

*P-value significant at <0.01

Consistent with the Challenge-Hindrance Stressor Framework (CHSF), stressors appraised as surmountable can stimulate persistence and resilience rather than disengagement (LePine *et al.*, 2005). Supporting this, Alonso-Tapia *et al.* (2022) and Casanova *et al.* (2024) emphasize that academic engagement often arises from students' ability to frame challenges as opportunities for growth. The results further reveal a strong positive effect of FS on student loan applications (SLA) ($\beta = 0.533$, $t = 12.562$, $p < .001$), accentuating that students experiencing greater financial strain are more likely to seek loans as a coping mechanism. This aligns with findings that financially constrained learners actively pursue borrowing to remain enrolled (Miller *et al.*, 2021; Harper *et al.*, 2021). In turn, SLA significantly and positively affects AE ($\beta = 0.155$, $t = 2.603$, $p = .009$), suggesting that loan access helps students sustain focus and engagement by alleviating immediate economic concerns. Chunchun *et al.* (2024) similarly reported that adequate aid improves motivation and learning outcomes, while Barr *et al.* (2021) cautioned that restricting loan uptake without alternatives can undermine engagement.

Most importantly, the mediation test indicates that FS has a significant indirect effect on AE via SLA ($\beta = 0.083$, $t = 2.580$, $p = .010$), which is essential at the 1% level. This confirms that SLA is a meaningful mediator, channeling part of FS's influence into increased engagement. In line with Pearlin *et al.*'s (1981) stress process theory, this suggests that loans shape stress outcomes by enabling students to transform financial stress into a challenge stressor, thereby sustaining motivation and persistence. International evidence supports this interpretation, as loans have been shown to expand access and improve persistence in both developed and developing contexts (Blom & Canton, 2004; Card & Solis, 2021).

Table 12 shows that the total effect of FS on AE is $\beta = 0.211$ ($t = 4.076$, $p < .001$), indicating a strong, highly significant overall effect. While the direct effect of FS on AE is moderate, its impact is substantially amplified by the indirect pathway through SLA. Specifically, FS exerts a strong impact on SLA ($\beta = 0.533$, $t = 12.562$, $p < .001$), while SLA independently demonstrates a moderate positive effect on AE ($\beta = 0.155$, $t = 2.603$, $p = .009$). Together, these results posit that FS influences AE directly and indirectly, with SLA as a critical mechanism that strengthens this overall relationship.

Table 12. Total Effects

	Original sample (O)	Sample mean (M)	SD (STDEV)	T statistics (O/STDEV)	P-value
FS -> AE	0.211	0.215	0.052	4.076	0.000*
FS -> SLA	0.533	0.534	0.042	12.562	0.000*
SLA -> AE	0.155	0.155	0.059	2.603	0.009*

*P-value significant at <0.01

The findings indicate that financial stress is associated with higher levels of academic engagement and a greater likelihood of seeking student loans, both of which relate to sustained engagement. The positive association between SLA and AE suggests that access to financial assistance can foster a sense of stability and help minimize distractions arising from economic constraints, thereby supporting students' continued academic participation. Interpreted through the lens of the Challenge-Hindrance Stress Framework (LePine *et al.*, 2005), both financial stress (FS) and student loan access (SLA) may operate as challenge-type stressors, potentially energizing students when perceived as valuable investments in their education. In parallel, Pearlin *et al.*'s (1981) stress process theory aligns with the idea that student loans can function as coping mechanisms that shape and buffer the relationship between stress and academic outcomes.

From a practical standpoint, the results accentuate the value of maintaining transparent, accessible, and timely student loan systems. Access to borrowing alleviates financial pressures and is linked to greater motivation and academic engagement. This observation aligns with international evidence of Card and Solis (2021) that found student loans are associated with higher re-enrollment and graduation rates among financially constrained learners; Jawahrani (2022) emphasized that loans serve as essential mechanisms for students who cannot pre-finance tuition and living costs; and Chunchun *et al.* (2024) reported that adequate financial aid access correlates with reduced financial stress, allowing students to dedicate more effort to their studies.

4.0 Conclusion

This study examined the association between student loans and the relationship between financial stress and academic engagement among students at a private higher education institution in the Philippines. Findings suggest that financial stress – often viewed as a hindrance – may also be associated with adaptive behaviors, such as seeking financial assistance through student loans. Moreover, access to student loans was positively associated with higher academic engagement, underscoring their potential role as a stabilizing support for students from lower-income households who are managing the financial demands of tertiary education.

The results carry significant implications for higher education policy in the Philippines. While Republic Act No. 10931, or the Universal Access to Quality Tertiary Education Act, has expanded opportunities in state universities and colleges by removing tuition and other fees, its benefits do not extend to most students enrolled in private higher education institutions (PHEIs). Since private HEIs account for more than 70% of tertiary providers, this limitation sustains educational access and completion inequities. The evidence from this study points to the importance of complementary student loan programs to bridge this policy gap, ensuring that financial assistance mechanisms reach students across both public and private sectors.

For policymakers, integrating student loan systems into the broader higher education financing framework

remains essential. Such programs should be accessible, transparent, and responsive to the needs of disadvantaged students while remaining financially sustainable. When paired with tuition-free education in public HEIs, well-managed loan schemes can serve as strategic instruments to support academic continuity and degree completion. Furthermore, embedding financial literacy components within these programs can mitigate anxiety surrounding debt and promote responsible borrowing and repayment behaviors.

Ultimately, future research may build on the present findings by exploring the long-term effects of student loan accessibility on academic performance, motivation, and post-graduation outcomes across diverse institutional contexts. Expanding the scope to include public universities, community colleges, and regional differences may reveal how varying financial aid systems shape students' coping strategies and levels of engagement.

5.0 Contribution of Authors

None declared.

6.0 Funding

None declared.

7.0 Conflict of Interest

The author conducted this study independently without internal or external funding, as part of a personal scholarly initiative. The research locale provided consent for data collection to support knowledge generation and policy implications, and the author's home institution approved the study for academic and intellectual contribution.

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