







“Examining the effectiveness and implementation challenges of internal control systems for strategic risk management in private higher education institutions”

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ARTICLE INFO	Lorelie Alarcon, Jeffrey Franco, Gina Garcia and Bryan Barlis (2026). Examining the effectiveness and implementation challenges of internal control systems for strategic risk management in private higher education institutions. <i>Problems and Perspectives in Management</i> , 24(1), 292-304. doi: 10.21511/ppm.24(1).2026.20
DOI	http://dx.doi.org/10.21511/ppm.24(1).2026.20
RELEASED ON	Tuesday, 10 February 2026
RECEIVED ON	Friday, 17 October 2025
ACCEPTED ON	Tuesday, 13 January 2026
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Problems and Perspectives in Management"
ISSN PRINT	1727-7051
ISSN ONLINE	1810-5467
PUBLISHER	LLC "Consulting Publishing Company "Business Perspectives"
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"



NUMBER OF REFERENCES

36



NUMBER OF FIGURES

0



NUMBER OF TABLES

7

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BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Type of the article: Research Article

Received on: 17th of October, 2025

Accepted on: 13th of January, 2026

Published on: 10th of February, 2026

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Conflict of interest statement:

Author(s) reported no conflict of interest

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EXAMINING THE EFFECTIVENESS AND IMPLEMENTATION CHALLENGES OF INTERNAL CONTROL SYSTEMS FOR STRATEGIC RISK MANAGEMENT IN PRIVATE HIGHER EDUCATION INSTITUTIONS

Abstract

Private higher education institutions (HEIs) in the Philippines face persistent governance and accountability challenges due to weak internal control systems. These weaknesses contribute to financial inefficiencies, compliance risks, and a decline in institutional trust. Addressing this issue is crucial as HEIs adapt to evolving regulatory requirements and sustainability demands. This study aims to examine the effectiveness, implementation challenges, and strategic risk management practices associated with internal control systems among eight private HEIs in Nueva Ecija, the Philippines, during the 2024–2025 academic year. A descriptive-quantitative approach was employed, utilizing a validated survey instrument administered to 69 finance-related personnel, including cashiers, budget officers, and accountants, yielding a high reliability score (Cronbach's $\alpha = 0.917$). The findings reveal that internal control systems are generally effective (mean score = 4.12, SD = 0.56), yet constrained by weaknesses in risk mitigation, monitoring, and personnel engagement. Significant correlations ($p < 0.05$) were observed between control effectiveness, implementation challenges, and risk management practices, indicating that organizational culture and institutional capacity strongly influence system performance. The study concludes that strengthening audit communication, monitoring mechanisms, and staff competence through technology-supported risk management initiatives can enhance institutional governance, accountability, and long-term sustainability in private higher education institutions.

Keywords

internal control, risk management, governance, accountability, sustainability, higher education, the Philippines

JEL Classification

M42, G32, I23

INTRODUCTION

Effective internal control systems are essential for ensuring transparency, accountability, and sustainability in organizational governance. They serve as critical mechanisms for mitigating risks, safeguarding institutional assets, and ensuring compliance with laws, regulations, and functions that uphold organizational integrity and performance. Within higher education institutions, particularly those operating in the private sector, internal controls form the backbone of financial management and operational accountability. However, the effectiveness of these systems depends largely on the institution's capacity to integrate control mechanisms with strategic risk management practices that respond to evolving internal and external challenges.

In the Philippines, private higher education institutions (HEIs) play a pivotal role in expanding access to tertiary education and contributing to socio-economic development. Despite their importance, many private HEIs face persistent challenges in maintaining robust internal control systems due to limited financial resources, inadequate audit structures, and insufficient technical expertise. These institutional weaknesses increase the risk of operational inefficiencies, financial irregularities, and governance lapses that compromise long-term sustainability. Furthermore, the increasing complexity of regulatory requirements and competitive pressures intensifies the need for effective internal control mechanisms aligned with risk-based management approaches.

The scientific problem addressed in this study lies in the persistent gap between the formal establishment of internal control systems and their actual effectiveness in managing strategic and operational risks within private HEIs. While frameworks such as the Committee of Sponsoring Organizations' (COSO, 2013) Internal Control – Integrated Framework provide theoretical guidance for designing and evaluating control processes, their practical application in Philippine private HEIs remains underexplored. Many institutions implement internal controls primarily for compliance purposes, often neglecting their strategic function as tools for proactive risk management. This misalignment between design and practice results in fragmented governance processes and diminished institutional resilience.

Given these realities, there is an urgent need to understand how internal control systems drive strategic risk management in private higher education. By examining the underlying challenges affecting control implementation and effectiveness, this study contributes to the broader discourse on strengthening governance and accountability in educational institutions operating under resource and regulatory constraints.

1. LITERATURE REVIEW

1.1. Overview of internal control in organizational governance

Internal control systems (ICS) are vital mechanisms for promoting transparency, accountability, and effective risk governance. According to the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2013), internal control is a structured process providing reasonable assurance that objectives in operations, reporting, and compliance are achieved. The COSO Internal Control–Integrated Framework remains a global benchmark for evaluating institutional control systems, identifying five core components: control environment, risk assessment, control activities, information and communication, and monitoring.

Arens et al. (2017) and Whittington and Pany (2018) stress that internal controls serve as both compliance and strategic governance tools, preventing mismanagement and improving resource stewardship. Noviliani et al. (2025) and Courage and Omogbeme (2025) found that organizations

with mature control frameworks demonstrate stronger integration of governance and risk management, linking control systems to long-term sustainability. Effective governance mechanisms and a robust risk management culture are found to significantly enhance organizational performance when internal controls are utilized as instruments of strategic alignment rather than mere administrative requirements (Lämsiluoto et al., 2016). This perspective is further supported by Al-Nimer et al. (2021), who demonstrate that integrating risk culture into the broader governance framework directly contributes to institutional resilience and efficiency in emerging economies.

1.2. Theoretical and empirical foundations of internal control

Internal control is not a static regulatory requirement but a dynamic management process that enhances decision quality and strategic adaptability. COSO (2013) emphasizes that an ethical and competent control environment anchors system effectiveness by setting behavioral norms across organizational hierarchies. In higher education institutions (HEIs), Nillos and Libo-on (2024) ob-

served that internal controls ensure responsible resource management and maintain stakeholder trust. Ahmad and Muslim (2024) found that well-designed control structures reinforce transparency and governance accountability, while Xu (2025) demonstrated that internal control integrity significantly contributes to firm performance by reducing monitoring inefficiencies.

Recent studies highlight the transformative impact of digitalization on internal control systems. Gao and Gu (2025) found that digital transformation improves total factor productivity by embedding automated controls within business operations, enhancing precision and responsiveness. Mo (2023) similarly concluded that digitalization improves internal control quality across all five COSO components, particularly monitoring and information communication. Boubouh and Ghanim (2025) further advanced this discourse by examining whether digitalization simplifies or complicates control processes, finding that while automation streamlines reporting and monitoring, it also introduces new risks related to cybersecurity, data governance, and algorithmic transparency. Their study emphasizes that digital transformation, though beneficial, necessitates complementary human oversight and updated ethical frameworks to prevent overreliance on technology. Collectively, these studies suggest that digital tools both strengthen and complicate governance environments, expanding the scope of internal control research to include technology and data ethics.

1.3. Components of the internal control framework

The ethical tone and integrity of leadership define the reliability of the control system (COSO, 2013). Arens et al. (2017) and Limbore et al. (2025) emphasized that leadership ethics and moral courage foster organizational compliance and reinforce accountability. In the digital era, maintaining ethical standards is critical as technological controls replace traditional human oversight (Gao & Gu, 2025).

COSO (2013) defines risk assessment as the process of identifying, analyzing, and managing risks that affect organizational goals. Limbore et al.

(2025) and Ofori and Larrey (2022) found that institutions with structured risk assessment frameworks are more resilient to uncertainty. The integration of data-driven tools in risk assessment enables predictive analytics for early risk detection (Mo, 2023).

Control activities are procedural actions, such as authorization, verification, and reconciliation, that enforce management directives. Yulianti et al. (2024) confirmed that strong control activities reduce fraud exposure. Wahyuandari et al. (2025) found that risk-based auditing significantly improves financial performance, linking robust control activities to measurable outcomes. Mo (2023) further showed that digitalization automates these control activities, enhancing efficiency and traceability.

Effective internal control is fundamentally dependent on the transparency and timeliness of information flows, which facilitate organizational alignment and risk mitigation (Arwinge, 2013). In the contemporary landscape, digital technologies have significantly optimized these flows by enabling real-time financial reporting and continuous monitoring (Gao & Gu, 2025). However, while automation enhances efficiency, scholars caution that an over-reliance on algorithmic or automated systems without robust human oversight can lead to “algorithmic opacity,” ultimately complicating institutional accountability and decision-making integrity (Appelbaum et al., 2017; Rikhardsson & Yigitbasioglu, 2018).

Effective control relies on transparent, timely information flow (Abu Naser et al., 2017). Digital technologies enhance this flow by enabling real-time reporting (Gao & Gu, 2025). However, as internal controls in the digital age (Boubouh & Ghanim, 2025) caution, over-reliance on automated systems without human oversight can complicate decision accountability.

Continuous monitoring ensures that control mechanisms function effectively over time (Tenbele, 2019). Kova and Zulkifli (2025) found that documentation-based control systems strengthen compliance and oversight, while Mo (2023) demonstrated that digital monitoring systems improve responsiveness and accuracy.

1.4. Challenges in implementing internal control systems

Despite theoretical advancements, implementing internal control systems remains complex, particularly in institutions undergoing digital transformations. Limbore et al. (2025) identified structural weaknesses, including limited supervision, poor documentation, and inadequate segregation of duties. Owusu-Ansah (2019) found similar deficiencies in the public sector, where insufficient funding for audits undermines system reliability. Ahmad and Muslim (2024) emphasized that governance culture influences control success; organizations with strong ethical climates exhibit greater consistency in compliance.

In the digital context, Mo (2023) and Gao and Gu (2025) noted that technology-based control frameworks enhance operational visibility but require advanced risk mitigation strategies. Boubouh and Ghanim (2025) warned that over-digitalization may obscure accountability, particularly when decision processes are automated without corresponding oversight mechanisms. Their findings underscore that digital controls must evolve alongside managerial competence and cybersecurity measures to prevent new forms of operational risk. Similarly, Mohammed et al. (2022) and Hanum et al. (2020) emphasized that institutions must strike a balance between automation and human judgment to maintain ethical accountability. In the Philippine higher education context, recent assessments indicate that inadequate digital infrastructure and limited institutional capacities continue to hinder the comprehensive modernization of regulatory and control systems (Seráfica & Oren, 2022). These gaps in “digital connectivity” create significant bottlenecks for monitoring and quality assurance, particularly as institutions attempt to align with international standards (Aldaba et al., 2024).

1.5. Integration of internal control and strategic risk management

Integrating internal control systems with strategic risk management (SRM) enhances institutional governance and strengthens organizational resilience. Fraser and Simkins (2016) describe SRM as a proactive approach to identifying and mitigating

risks that may affect strategic objectives. Building on this perspective, Mohammed et al. (2022) found that aligning internal control frameworks with SRM processes improves risk responsiveness and promotes greater transparency. Hamed (2023) similarly demonstrated that effective internal control systems contribute to sustained organizational performance, reinforcing the value of integrated control and risk mechanisms. In addition, Almgrashi and Mujalli (2024) showed that sustainable risk-management practices support risk-based auditing and strengthen governance structures, underscoring the interconnected roles of sustainability, control quality, and risk responsiveness.

However, the effectiveness of this strategic alignment is increasingly dependent on the technological infrastructure that enables these controls. Gao and Gu (2025) and Mo (2023) observed that digital transformation strengthens the strategic role of internal control by enhancing data-driven decision-making. Yoo et al. (2024) found that the three-way interaction between corporate social responsibility, digitalization, and control quality significantly enhances firm value, suggesting that control systems must now integrate sustainability and digital ethics into their governance. Neneh (2022) and Kova and Zulkifli (2025) similarly argue that documentation and control systems aligned with SRM support accountability and stakeholder trust. In the Philippine higher education context, recent evidence suggests that while internal control systems are formally structured, institutions face significant challenges in adapting these mechanisms to a complex and evolving regulatory environment (Nillos & Libo-on, 2024). This underscores the critical need for localized frameworks that harmonize institutional policies with national standards to ensure risk-informed governance and long-term accountability.

The reviewed literature consistently emphasizes that internal control systems are a cornerstone of organizational governance, promoting transparency, accountability, and sustainable performance. However, digital transformation introduces both opportunities and complexities for the design and execution of internal control. Recent empirical evidence demonstrates that while automation and digital auditing tools enhance moni-

toring efficiency and data accuracy (Mo, 2023; Gao & Gu, 2025; Boubouh & Ghanim, 2025), they simultaneously generate new governance challenges related to cybersecurity, data integrity, and ethical oversight. Moreover, studies show that integrating sustainability and corporate social responsibility with digitalized control mechanisms significantly strengthens governance and risk management outcomes (Almgrashi & Mujalli, 2024; Yoo et al., 2024). Despite these advances, private higher education institutions in developing economies continue to face persistent implementation barriers, including limited resources, fragmented governance structures, and inadequate digital competence (Nillos & Libo-on, 2024; Abu Naser et al., 2017).

To address this empirical and contextual gap, the present study aims to examine the effectiveness, implementation challenges, and strategic risk management practices associated with internal control systems among private higher education institutions in Nueva Ecija, the Philippines. Based on the reviewed literature, the following hypotheses are formulated:

- H1: There is a significant positive relationship between the effectiveness of internal control components and strategic risk management practices among private HEIs in Nueva Ecija.*
- H2: Implementation challenges have a significant negative effect on the effectiveness of internal control systems.*
- H3: Organizational culture and digital competence mediate the relationship between internal control effectiveness and risk management outcomes.*
- H4: Strengthening audit communication, digital monitoring frameworks, and staff competence significantly enhances institutional governance and sustainability.*

2. METHOD

This study employed a descriptive–correlational quantitative design, appropriate for determining the degree of association among naturally oc-

curing variables without manipulation. The descriptive component examined the existing state of internal control systems in private higher education institutions (HEIs), while the correlational component tested the hypothesized relationships among internal control effectiveness, implementation challenges, and strategic risk management practices.

The research followed five sequential stages:

- 1) problem identification and instrument design;
- 2) instrument development and validation;
- 3) data collection;
- 4) data processing and analysis; and
- 5) interpretation and validation.

This structured procedure ensured methodological coherence and replicability.

The study was conducted in eight (8) private HEIs located in Nueva Ecija, the Philippines. The province was selected due to its concentration of private educational institutions and increasing demands for governance efficiency. Data were collected from January to April 2024, a period coinciding with the end of the fiscal and academic year, when internal controls and audits are most actively implemented.

The population consisted of finance-related personnel from accredited HEIs in Nueva Ecija. Using a stratified purposive sampling technique, sixty-nine ($N = 69$) qualified respondents were selected from the eight institutions. Stratification ensured balanced representation across institutional classifications, sizes, and accreditation levels. Within each stratum, participants were selected based on their involvement in financial management and internal control implementation, as they are directly responsible for maintaining accountability and operational efficiency.

Table 1 presents the distribution of respondents per institution, providing a clear view of the data source representation across participating HEIs.

Table 1. Distribution of respondents per HEI

Higher Education Institution (HEI)	Number of Respondents	Percentage (%)
General de Jesus College	13	18.8
Wesleyan University – Philippines	12	17.4
PHINMA Araullo University	10	14.5
Good Samaritan Colleges	10	14.5
College of Research and Technology	10	14.5
Holy Cross College Sta. Rosa, N.E., Inc.	3	4.3
Maria Assumpta Seminary	3	4.3
Dr. Gloria Lacson Foundation Colleges	8	11.6
Total	69	100.0

The study employed a structured survey questionnaire comprising five sections. The first part collected institutional and respondent profiles, while the second part described the internal control structure and operational context. The third part assessed the effectiveness of internal control systems based on the five COSO components: control environment, risk assessment, control activities, information and communication, and monitoring. The fourth part measured implementation challenges, including governance support, resource constraints, and staff competence. The final section examined strategic risk management practices, including audit communication, segregation of duties, and compliance monitoring.

All items were measured using a four-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree). The questionnaire was developed based on the COSO (2013) framework and validated using instruments from prior studies on organizational control and risk governance. To ensure instrument reliability, a pilot test was conducted with two HEIs not included in the main sample. Cronbach's alpha coefficients ranged from 0.754 to 0.975, indicating strong to excellent internal consistency across constructs. A panel of three experts in auditing and higher education governance verified the content validity of the instrument.

Prior to data collection, institutional permission from participating HEIs and ethical clearance from the Nueva Ecija Research Ethics Committee (Approval No. NE-REC-2023-112) were obtained. All participants provided informed consent after being briefed about the study's objectives, data handling, and their right to withdraw at any time. Participation was voluntary, and respondents' identities were not disclosed to ensure impartiality. To safeguard anonymity and confidentiality,

responses were collected through encrypted online forms and securely stored digital files accessible only to the research team.

Data were analyzed using descriptive and inferential statistics in IBM SPSS Statistics version 26. Descriptive statistics, including frequency counts, percentages, and weighted means, were used to summarize the respondents' demographic and institutional characteristics. Cronbach's alpha determined the reliability and consistency across questionnaire items. Weighted means were interpreted using four-point interval scales to classify results from "Ineffective" to "Highly Effective" for internal control, from "Not Challenging" to "Very Challenging" for implementation, and from "Poorly Managed" to "Excellent Managed" for risk management. Correlation analysis using Pearson's *r* examined the relationships among internal control effectiveness, implementation challenges, and strategic risk management. Meanwhile, regression analysis identified the predictive power of internal control components on risk management practices.

3. RESULTS

The participating private higher education institutions (HEIs) in Nueva Ecija varied in terms of years of operation, classification, number of employees, and student enrollment, as shown in Table 2.

In terms of years of operation, one-half (50%) of the HEIs had been in operation for 71 to 80 years, while the other 25% had been in business for 31 to 40 years and 51 to 60 years, respectively. This suggests that the majority of the subject institutions have achieved institutional stability and effective organizational governance. The majority

of these institutions (75%) were colleges, while the remaining 25% were universities. This indicates that most private higher education institutions in the province are predominantly colleges. However, they operate on a smaller scale, as reflected in the number of employees and enrollees, and maintain more direct administrative control, unlike universities, which have broader governance structures and multilayered management. Meanwhile, 25% of the institutions had student enrollees in the ranges 1,001 to 2,000 and 4,001 to 5,000, respectively. The remaining 12.5% reported enrollments of fewer than 1,000, 3,001 to 4,000, 5,001 to 10,000, and over 10,000. This variation suggests differences in the institutions' capacity, operational complexity, and financial management demands.

Table 2. Profile of HEIs

Items	Number	Percentage
Years of Operation		
31–40	2	25%
41–50	0	0%
51–60	2	25%
61–70	0	0%
71–80	4	50%
School Classification		
College	6	75%
University	2	25%
Number of Employees		
1–100	3	37.5%
101–200	3	37.5%
201–300	0	0%
301–400	2	25%
Number of Enrollees		
< 1,000	1	12.5%
1,001–2,000	2	25%
2,001–3,000	0	25%
3,001–4,000	1	12.5%
4,001–5,000	2	25%
5,001–10,000	1	12.5%
> 10,000	1	12.5%

These institutional traits may influence the design and implementation of internal control systems. Institutions with longstanding governance traditions are more likely to have formalized control structures, while smaller and less resourced institutions may struggle to maintain adequate segregation of duties, effective monitoring, and thorough risk assessment. Similarly, institutions with fewer personnel may resort to multitasking, which can increase their susceptibility to control flaws. In contrast, universities may have more advanced

systems but still encounter problems with uniform departmental oversight. These contextual elements offer crucial information for comprehending differences in the efficacy of internal control across private HEIs.

Table 3. Internal control system of private educational institutions

Indicators	Mean	Verbal description
Scope	3.22	Good
Structure	3.14	Good
Users	3.06	Good
Integrity	3.13	Good
Accountability	3.23	Good
General Weighted Mean	3.16	Good

Note: Legend: 3.25–4.00 Excellent; 2.50–3.24 Good; 1.75–2.49 Fair; and 1.00–1.74 Poor.

The respondents' evaluation of the internal control systems of private educational institutions across five indicators of scope, structure, users, integrity, and accountability is presented in Table 3.

The results show that accountability obtained the highest mean score of 3.23, indicating a good level of accountability. Scope was followed closely, with a mean of 3.22, which is also described as good. Structure was rated 3.14, while integrity was 3.13, both within the good range. Users received the lowest mean score of 3.06, yet still fell within the good interpretation range. The overall findings suggest that the internal control systems of private educational institutions are functioning satisfactorily, demonstrating compliance with basic governance and accountability standards. However, these institutions still need to strengthen and improve several crucial areas to transition from merely following procedures to a more proactive and strategic internal control environment that can maintain long-term institutional resilience, operational effectiveness, and financial integrity.

The effectiveness of the internal control system of higher education institutions was evaluated based on the following indicators: organizational policies, risk assessment, control activities, information and communication, and monitoring, as shown in Table 4. Of the assessed indicators, monitoring received the highest mean score of 3.43, followed by information and communication (3.40), risk assessment (3.36), and control activities

Table 4. Effectiveness of private HEIs' internal control system

Indicators	Mean	Verbal description
Organizational Policies	3.22	Moderately Effective
Risk Assessment	3.36	Highly Effective
Control Activities	3.35	Highly Effective
Information and Communication	3.40	Highly Effective
Monitoring	3.43	Highly Effective
General Weighted Mean	3.35	Highly Effective

Note: Legend: 3.25–4.00 Highly Effective; 2.50–3.24 Moderately Effective; 1.75–2.49 Slightly Effective; and 1.00–1.74 Ineffective.

Table 5. Challenges in the implementation of an internal control system

Indicators	Mean	Verbal description
User Engagement	2.76	Moderately Challenging
Risk Mitigation	2.84	Moderately Challenging
Governance	2.55	Moderately Challenging
Resources	2.67	Moderately Challenging
Sustainability	2.59	Moderately Challenging
General Weighted Mean	2.68	Moderately Challenging

Note: Legend: 3.25–4.00 Excellent; 2.50–3.24 Good; 1.75–2.49 Fair; and 1.00–1.74 Poor.

(3.36), all of which are interpreted as highly effective. Only the organizational policies received the lowest evaluation, with a mean score of 3.22, categorized as moderately effective. The findings reveal that the internal control systems of the highest education institutions are generally highly effective, though the institutions' organizational policies need strengthening.

The analysis of the challenges in implementing internal control systems in private higher education institutions (HEIs) is shown in Table 5. The findings revealed that the respondents' perceptions of these are moderately challenging, with a mean of 2.68. Among the specific indicators, risk mitigation had the highest mean score at 2.84, followed by user engagement at 2.76, resources at 2.67, and sustainability at 2.59; all were generally perceived as moderately challenging. Meanwhile,

governance-related challenges received the lowest mean score at 2.55. The results show that while the barriers to implementation of the system in higher education institutions are not severe, they remain significant enough to warrant attention, particularly in the areas of governance and sustainability.

The risk management procedures within the internal control systems of private higher education institutions are assessed as being moderately managed, reflected in the overall mean score of 3.13 in Table 6. Providing proper training and supervision, with a mean score of 3.19, and routinely reviewing and updating procedures, with a mean score of 3.18, received the highest scores among the indicators. Following regular internal audits, we obtained a mean score of 3.15 for internal communication systems and 3.08 for segregation of duties. Assigning responsibilities and

Table 6. Description of the risk management on the internal control system

Indicators	Mean	Verbal description
Segregation of Duties	3.08	Moderately managed
Assigning Responsibilities	3.08	Moderately managed
Conducting Regular Internal Audit	3.15	Moderately managed
Providing adequate training and supervision	3.19	Moderately managed
Establishing a system of internal communication	3.15	Moderately managed
Regularly reviewing and updating the internal control procedure	3.18	Moderately managed
General Weighted Mean	3.13	Moderately managed

Note: Legend: 3.25–4.00 Excellent; 2.50–3.24 Good; 1.75–2.49 Fair; and 1.00–1.74 Poor.

Table 7. Pearson correlations among internal control components and risk-management indicators

Variables	1	2	3	4	5	6
1. Organizational Policies	–					
2. Risk Assessment	.619***	–				
3. Control Activities	.613***	.631***	–			
4. Information & Communication	.340**	.616***	.716***	–		
5. Monitoring	.498***	.762***	.666***	.668***	–	
6. Strategic Risk-Management Practices†	.393***	.410***	.269*	.112	.256*	–

Note: $p < .05^*$, $p < .01^{**}$, $^{***}p < .001$.

segregation of duties received the lowest score of 3.08, indicating that although risk management procedures are generally established, role clarity is lacking, and enforcement of responsibilities is inconsistent. This suggests a possible weakness in task definition and supervision, which could lead to procedural duplication, a lack of accountability, and operational inefficiencies within institutions.

The correlation analysis in Table 7 indicates that several internal control components are significantly and positively associated with strategic risk-management practices among private HEIs in Nueva Ecija. Organizational policies showed moderate correlations with both risk assessment ($r = .619$, $p < .001$) and control activities ($r = .613$, $p < .001$), suggesting that structured policies support more consistent risk identification and control implementation. Control activities also correlated strongly with information and communication ($r = .716$, $p < .001$) and monitoring ($r = .666$, $p < .001$), reflecting the close linkage between operational controls, information flow, and oversight processes. Monitoring demonstrated the strongest internal relationship with risk assessment ($r = .762$, $p < .001$), suggesting that institutions proficient in risk evaluation tend to maintain stronger monitoring systems.

Strategic risk-management practices showed significant associations with organizational policies ($r = .393$, $p < .001$), risk assessment ($r = .410$, $p < .001$), and monitoring ($r = .256$, $p = .034$). Although the relationship with information and communication was not statistically significant ($r = .112$, $p = .359$), the overall pattern demonstrates that most internal control components contribute meaningfully to the institution's ability to manage risks strategically. These results collectively support the acceptance of the hypothesis that internal control effectiveness is positively related to strategic risk-management practices, showing that improve-

ments in policy structure, risk assessment, and monitoring processes correspond to stronger institutional risk-management performance.

4. DISCUSSION

The analysis of the internal control systems across private higher educational institutions (HEIs) in Nueva Ecija revealed a generally effective operational environment. The study found that accountability and scope emerged as the strongest indicators of internal control performance, achieving the highest effectiveness ratings. This strong performance reflects the institutions' capacity to establish transparent reporting mechanisms and ensure the delineation of responsibilities across governance levels.

This finding confirms the theoretical importance of these foundational elements, as argued by previous studies. The high rating in accountability aligns directly with Sanusi and Hassan (2015), who emphasize that strong accountability mechanisms are essential for fostering a culture of responsibility, ethical conduct, and continuous improvement, particularly vital for addressing risks like fraud and resource mismanagement in educational settings.

Similarly, the high rating for scope, indicating that internal control systems extend beyond mere financial monitoring into administrative and operational domains, supports Santana et al. (2025) and Shehu (2025). These authors highlight that for private HEIs, whose revenue streams are heavily dependent on tuition fees, grants, and donations, a well-defined, comprehensive control scope is crucial to financial sustainability. The observed strength in both accountability and scope suggests a high level of maturity in the procedural foundations of governance within these HEIs,

demonstrating responsiveness to frameworks that prioritize transparency and resilience.

A key finding is the documented highly effective ratings for risk assessment and control activities in the private HEIs. This indicates that institutions in Nueva Ecija have a structured, proactive approach to identifying operational uncertainties and have successfully operationalized specific policies and procedures to enforce compliance and guide administrative operations.

This result presents a direct contrast to several previous studies, thereby establishing the unique position of these HEIs. Zitha et al. (2024) highlighted that many institutions struggle to fully implement effective internal control systems, noting gaps in risk assessment and monitoring that hinder overall system effectiveness. The high ratings achieved by the HEIs in this study suggest they have overcome some of the common implementation hurdles reported in comparative contexts.

The success observed in control activities and the translation of policies into practical safeguards reiterate the fundamental assertion by Santana et al. (2025) that a strong control environment is the primary driver of establishing an effective control culture and ensuring that institutional responses are consistent and comprehensive, safeguarding financial stability. Furthermore, Wang (2024) notes that this commitment to identifying and managing risks builds stakeholder trust, which is crucial for maintaining competitiveness and resource mobilization in the HEI sector.

Despite the documented strengths in operational controls, the analysis revealed a crucial gap: a demonstrated moderate effectiveness in risk mitigation and strategic risk management. This finding highlights a deficiency in institutional maturity, where efficiency in control procedures is not yet matched by adaptive, proactive governance.

The observed low-to-moderate efficacy suggests that while risk-focused policies exist, they are often structurally rigid and lack the adaptive capacity necessary to navigate a dynamic threat landscape. This observation is not isolated and aligns closely with broader international findings. The struggle to move beyond a compliance-based approach toward a culture of good governance has been documented in other Southeast Asian higher education contexts, where the internal control system's role is found to be a critical determinant of institutional integrity and transparency (Hanum et al., 2020).

Similarly, Wang (2024) reported that Chinese private colleges face similar difficulties, including financial instability and market-related challenges stemming from weaknesses in their existing risk management frameworks. This consistency confirms that the risk management shortcomings observed in Nueva Ecija's private HEIs reflect a structural issue common to the global private education sector.

The observed disparity between highly effective control activities and moderately managed risk mitigation reveals a clear opportunity for managerial intervention. While the institutions demonstrate efficiency in implementing internal control procedures, a significant deficit remains in strategic and adaptive risk governance.

Addressing this divergence requires a fundamental shift toward proactive governance. These institutions must prioritize integrating comprehensive risk management into strategic decision-making, coupled with ongoing employee training and risk-informed leadership. By developing a culture of shared responsibility and moving beyond simple procedural adherence, private HEIs can transition to creating flexible, robust, and sustainable governance frameworks necessary to secure long-term viability in today's complex operating environment.

CONCLUSION

The primary objective of this study was to evaluate the internal control systems of selected private higher education institutions (HEIs) in Nueva Ecija, the Philippines, to assess their operational effectiveness, identify implementation challenges, and examine their relationship with strategic risk management practices. The analysis confirmed that HEIs have generally achieved a high level of effectiveness in

the operational dimensions of internal control, particularly in control activities, monitoring, and accountability, indicating a strong procedural foundation for compliance and transparency in financial governance.

However, the findings also exposed a notable strategic gap. Despite functional compliance mechanisms, several institutions, particularly smaller and resource-constrained ones, demonstrate only a moderate capacity for proactive risk mitigation and adaptive governance. These results suggest that while control structures are formally established, their integration with institutional strategy and risk-based decision-making remains limited. The presence of such implementation gaps aligns with prior research, which emphasizes that the maturity of internal control frameworks depends on institutional capacity, management support, and the level of digital integration.

From these findings, it can be concluded that private HEIs in Nueva Ecija operate within a compliance-oriented control environment rather than a fully risk-aware and strategically aligned governance culture. To achieve long-term resilience and sustainability, HEIs must strengthen their internal audit independence, enhance risk communication mechanisms, and institutionalize continuous monitoring processes that link operational controls with strategic objectives. Institutional size and available resources continue to influence control maturity, underscoring the need for differentiated strategies tailored to institutional scale and capability.

Future research should extend this investigation by incorporating longitudinal data and comparative analyses across regions to assess how control maturity evolves over time. Exploring the role of digital transformation, artificial intelligence-based monitoring, and data-driven audit systems could also provide deeper insights into how emerging technologies can enhance the transparency, adaptability, and strategic relevance of internal control frameworks in higher education institutions.

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ACKNOWLEDGMENT

The authors used an AI-based assistant (ScholarGPT, built on the GPT-5 framework and Gemini) to support the organization and refinement of the literature review section. The tool was employed strictly for improving structure, clarity, and coherence. All conceptual analyses, interpretations, and conclusions were developed and verified by the authors to ensure accuracy and compliance with *Problems and Perspectives in Management* editorial and ethical standards.

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