Macrothink Institute™

Business and Economic Research
ISSN 2162-4860
2025, Vol. 15, No. 4

Challenges and Determinants of Management Accounting in Non-Public Higher Education Institutions

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Received: October 4, 2025 Accepted: November 2, 2025 Published: November 9, 2025

doi:10.5296/ber.v15i4.23298 URL: https://doi.org/10.5296/ber.v15i4.23298

Abstract

This study analyzes the factors affecting management accounting systems (MAS) in non-public universities in Vietnam, in the context of higher education autonomy and international integration. Based on a survey of 210 managers and accountants, the SEM model indicates that legal-regulatory frameworks and accountants' competence exert the strongest influence, followed by organizational culture and technology adoption, while competitive pressure has only a limited effect. These findings reinforce institutional theory and the resource-based view, while providing important empirical evidence for the higher education context. The results suggest policy implications for the government, non-public universities, and professional associations in improving MAS towards financial transparency, enhanced governance capacity, and sustainable competitiveness.

Keywords: Management accounting, Non-public universities, Influencing factors, Education policy, International integration

1. Introduction

In recent years (2020-2025), international research on management accounting (MA) in higher education has increasingly focused on the integration of digital technologies, performance-based management, and sustainability-oriented governance, reflecting the global shift toward data-driven and accountable university management. Studies such as Vale et al. (2022) provided a comprehensive synthesis of the evolution of management accounting and control systems in higher education institutions (HEIs), emphasizing that effective MA implementation depends not only on technical systems but also on organizational culture, leadership vision, and the degree of institutional autonomy. Their findings reveal that HEIs with strong participatory governance and decentralized decision-making structures tend to adopt MA tools more effectively, aligning accounting practices with strategic objectives and stakeholder expectations. Similarly, Marlina and Tjahjadi (2023), through an empirical study of private universities in Indonesia, found that strategic orientation and innovation in management accounting particularly through integrated budgeting, performance-based measurement, and cost-benefit analysis significantly enhance financial efficiency and long-term competitiveness.

At the same time, emerging research underscores the transformative impact of digital technologies on MA practices. Ivanova and Petrov (2024) demonstrated that the integration of enterprise resource planning (ERP), artificial intelligence (AI), and big data analytics into MA frameworks has revolutionized how universities collect, process, and interpret financial and operational data. Such systems enable real-time monitoring of expenditures, academic outcomes, and resource utilization, facilitating evidence-based strategic planning. However, Al-Khoury (2025) cautioned that the digital divide arising from disparities in financial resources, human capital, and technological infrastructure continues to constrain the digital transformation of MA, particularly in non-public or resource-limited HEIs. Additionally, recent studies have extended the MA discussion into sustainability-oriented management. For instance, Rahman and Hassan (2023) highlighted that modern MA systems are increasingly linked with environmental, social, and governance (ESG) indicators, integrating sustainability performance into the budgeting and decision-making processes of universities.

These contemporary insights collectively indicate that MA is evolving from a traditional control-oriented system into a comprehensive strategic management framework, deeply intertwined with technology, governance, and sustainability imperatives. This evolution offers valuable implications for Vietnam's non-public universities, where financial autonomy and transparency are vital to institutional survival and credibility. Incorporating lessons from international experiences particularly the integration of digital MA systems and sustainability-based performance management can support Vietnamese universities in enhancing their decision-making capacity, improving financial governance, and aligning with global trends in higher education reform.

2. Theoretical Framework and Hypothesis Development

2.1 Theoretical Foundations

The management accounting (MA) system in educational institutions particularly in non-public universities is shaped and developed under the influence of several foundational theories:

- Agency Theory: Within the governance structure of non-public universities, information asymmetry exists among the board of trustees, university leadership, and other stakeholders such as investors, faculty, and students. MA functions as a mechanism to mitigate these agency problems by providing transparent information, enhancing cost control, and supporting monitoring activities.

- Resource-Based View (RBV): MA is considered a strategic resource that enables universities to effectively allocate and utilize financial, human, and physical resources, thereby strengthening their competitive advantages.

- Institutional Theory: The design and operation of MA systems are not only driven by internal efficiency considerations but are also subject to external pressures, including legal frameworks, state policies, accreditation requirements, and demands for financial transparency from society.

- Contingency Theory: The appropriateness of an MA system depends on organizational characteristics such as institutional size, training models, and the intensity of market competition. Consequently, factors such as technology adoption, governance culture, and market pressures determine the extent and manner in which MA is applied.

These theoretical foundations demonstrate that MA systems in non-public universities are not merely technical requirements but rather reflect a dynamic interaction between internal organizational conditions and external institutional forces.

2.2 Hypothesis Development

Building upon the theoretical foundations and the contextual realities of Vietnam’s higher education system, this study proposes the following hypotheses:

- H1: The legal framework and educational policies exert a positive influence on the level of development of management accounting (MA) systems in non-public universities.

- H2: The professional competence and analytical skills of accounting staff positively affect the operational effectiveness of MA systems.

- H3: An organizational culture that emphasizes transparency and accountability has a positive impact on the adoption of MA practices.

- H4: The application of information technology and digital transformation positively contributes to the modernization of MA systems.

- H5: Competitive pressures within the higher education environment drive non-public universities to strengthen the utilization of MA.

2.3 Proposed Research Model

The proposed research model is structured as follows:

Independent variables:

Legal framework and educational policies

Accounting staff competence

Organizational culture

Information technology adoption

Competitive pressure

Dependent variable:

Management accounting (MA) systems in non-public universities, measured in terms of their degree of sophistication and operational effectiveness.

The causal relationships among these variables will be empirically tested using a Structural Equation Modeling (SEM) approach. This method allows for the simultaneous assessment of both direct and indirect effects of the identified factors on the MA system.

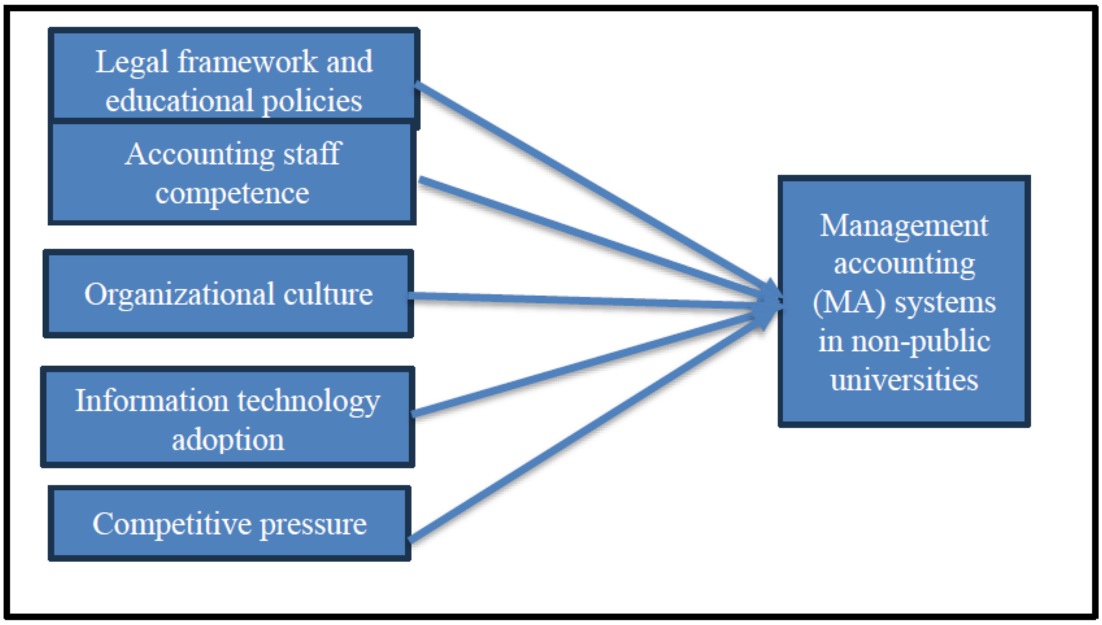

Figure 1. Proposed Research Model

(Source: Author's proposal)

General Research Equation:

$$MAS=\beta0+\beta1PL+\beta2NL+\beta3VH+\beta4CN+\beta5CT+\varepsilon$$

Where:

MA: Management Accounting system in non-public universities (degree of sophistication and operational effectiveness)

LFEP: Legal framework and educational policies

ACC: Accounting staff competence

OC: Organizational culture

ITA: Information technology adoption

CP: Competitive pressure

$\beta 0$: Constant

$\beta 1$; $\beta 2$; $\beta 3$; $\beta 4$; $\beta 5$: Regression coefficients

ε: Error term

3. Research Methodology

This study employs a mixed-methods approach, combining both qualitative and quantitative techniques to ensure theoretical rigor and the reliability of empirical evidence.

First, the qualitative phase was conducted to identify and refine the factors influencing the management accounting (MA) system in non-public universities. The research team reviewed both international and domestic literature on MA in the education sector, and carried out in-depth interviews with experts (chief accountants, university financial managers, and lecturers in accounting-auditing). The qualitative findings helped to supplement and adjust the measurement scales of the observed variables, ensuring their suitability to the specific characteristics of non-public higher education in Vietnam.

Second, the quantitative phase was implemented through a structured questionnaire survey. The measurement scales were designed using a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), capturing the independent variables: (i) Legal framework and educational policies; (ii) Competence of accounting staff; (iii) Organizational culture; (iv) Adoption of information technology; (v) Competitive pressure; and the dependent variable: the level of sophistication of the MA system in non-public universities.

The survey respondents consisted of financial managers, chief accountants, accountants, and mid- to senior-level administrators at non-public universities across the country. The sample was selected using a stratified combined with convenience sampling method to ensure diversity in terms of scale, ownership type, and geographical distribution. The minimum sample size was set at 200 observations, which meets the requirements for factor analysis and structural equation modeling (Hair et al., 2010).

The data processing and analysis followed these steps: (1) Reliability testing of the measurement scales using Cronbach's Alpha; (2) Exploratory Factor Analysis (EFA) to identify the latent structure of the data; (3) Confirmatory Factor Analysis (CFA) to assess convergent and discriminant validity; (4) Structural Equation Modeling (SEM) to evaluate the impact of each factor on the MA system. Data were processed using SPSS and AMOS software.

The reliability and internal validity of the study were ensured through: (i) expert consultation for refining the measurement scales; (ii) a pilot test with approximately 30 samples before the main survey; (iii) comparison between qualitative and quantitative results to enhance generalizability.

This methodology not only enables the testing of the proposed hypotheses but also provides crucial empirical evidence on the determinants of the MA system in non-public universities in

Vietnam, thereby laying the groundwork for proposing solutions tailored to the context of higher education governance reform and international integration.

4. Research Results and Discussion

Based on 210 valid survey responses collected from non-public universities, the research model was tested using structural equation modeling (SEM). The results indicate that the model demonstrates a high level of fit with the empirical data (CFI = 0.946; TLI = 0.931; RMSEA = 0.049), thereby meeting the requirements for a deeper analysis of the relationships between the influencing factors and the management accounting system (MAS).

First, the legal framework and educational policies exert a positive and statistically significant impact ($\beta = 0.315$; $p < 0.01$). This finding reflects the institutional orientation and regulatory pressures driving the adoption of MAS in non-public universities. Regulations related to university autonomy, quality assurance, and financial transparency create incentives that compel universities to improve their internal accounting systems. This result is consistent with Institutional Theory and contributes additional evidence to international studies on the role of institutional factors in shaping MAS practices in the public sector.

Second, accountant competency has the strongest effect ($\beta = 0.368$; $p < 0.01$) on the development of MAS. Universities with professionally trained accountants who are knowledgeable about international standards and proficient in management analysis tools operate MAS more effectively. This finding aligns with the Resource-Based View, which emphasizes human capabilities as a core source of competitive advantage.

Third, organizational culture oriented toward transparency and accountability also shows a significant influence ($\beta = 0.279$; $p < 0.05$). A governance environment that values transparency, encourages information sharing, and fosters objective performance evaluation promotes the use of MAS as a decision-support tool. This result adds to Scapens (2006), who highlighted the role of organizational culture in MAS adoption.

Fourth, the application of information technology and digital transformation exerts a positive effect ($\beta = 0.251$; $p < 0.05$). The adoption of ERP software, integrated tuition-training management systems, and data analytics tools substantially facilitates the collection, processing, and dissemination of management information. This result reflects the ongoing digital transformation in higher education and the growing role of technology in MAS.

Fifth, competitive pressure in the higher education sector shows a positive but relatively weaker impact compared to other factors ($\beta = 0.174$; $p < 0.1$). This can be explained by the fact that, although competitive pressure encourages universities to improve MAS, differences in resources and readiness levels lead to uneven effects across institutions.

5. Conclusion

This study confirms that the management accounting system (MAS) in non-public universities is simultaneously influenced by multiple factors, among which accountant competency and the legal-policy framework exert the strongest effects, followed by organizational culture and information technology adoption, while competitive pressure plays only a modest role. These findings not only reinforce institutional, resource-based, and environmental uncertainty theories but also provide empirical evidence within the specific context of non-public higher education in Vietnam. They emphasize that MAS is not merely a technical accounting tool but also a strategic management instrument closely tied to financial transparency, efficient resource utilization, and competitiveness.

Based on these results, the study proposes several important policy implications. The government should issue detailed guidelines and provide support for the implementation of MAS in higher education, while strengthening mechanisms of accreditation, transparency, and accountability. Non-public universities need to invest in training and developing accounting personnel, building a culture of transparency, and accelerating digital technology adoption to enhance the effectiveness of MAS. Meanwhile, professional associations and training institutions play a crucial role in designing specialized curricula, disseminating best practices, and supporting technology implementation.

In sum, improving MAS in non-public universities requires a holistic approach that harmoniously integrates policies, human resources, organizational culture, and technology. Such an approach will not only enhance governance efficiency and strengthen competitiveness but also contribute to sustainable development goals in the context of educational reform and international integration.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Macrothink Institute.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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