No. 03 (40) - 2026

HOW CAN INTERNAL CONTROL SYSTEMS MEDIATE THE RELATIONSHIP BETWEEN DIGITAL TRANSFORMATION AND ACCOUNTABILITY? THE MODERATING ROLE OF INNOVATIVE LEADERSHIP

PhD. Tu Thanh Hoai* - Assoc.Prof.PhD. Bui Quang Hung*

Abstract: ***Grounded on the COSO framework and stewardship theory, this study proposes and examines a moderated mediation model that elucidates how digital transformation enhances accountability through the mediating role of internal control systems. Additionally, the study examines the moderating effect of innovative leadership on the relationship between digital transformation and internal control systems within the context of Vietnamese public sector organizations. Using partial least squares structural equation modeling (PLS-SEM), the research assesses the validity of the proposed model and hypotheses based on survey data collected from 91 public sector organizations in Vietnam. The findings are expected to enrich the limited body of intersectional literature on the positive impact of digital transformation on internal control systems and, in turn, the enhancement of accountability in the public sector. Moreover, the study confirms that the beneficial effect of digital transformation on internal control systems is amplified under the moderating influence of innovative leadership.***

• Keywords: *accountability, digital transformation, innovative leadership, internal control systems, Vietnam.*

Date of receipt: 27th Feb., 2026
Date of delivery revision: 06th Mar., 2026
Date of receipt revision: 20th Apr., 2026
Date of approval: 27th Apr., 2026

DOI: https://doi.org/10.71374/jfar.v26.i3.08

1. Introduction

Economic globalization has forced organizations globally to commit to continuous innovation, institutional reform, and technological upgrading in order to accelerate the process of digital transformation, thereby achieving strategic objectives and enhancing performance. Fundamentally, digital transformation refers to the process through which organizations intensify the adoption and integration of digital technologies to improve or fundamentally reconfigure operational processes, organizational culture, and customer experiences, enabling them to respond more effectively to environmental uncertainty (Vial, 2019). Within the context of the public sector, digital transformation extends beyond mere technical replication or incremental technological enhancement; rather, it may represent a profound transformation in the manner in which public sector organizations organize and manage bb, as well as in how decisions are formulated, implemented, and enforced (Ly, 2025).

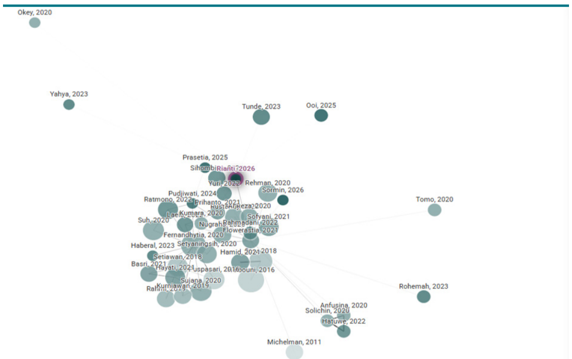
Moreover, digital transformation facilitates the systematic collection, analysis, storage, and visualization of data, ultimately strengthening organizational data-processing capabilities (Bui et al., 2023). As a result, information on internal control can be more comprehensively integrated and rigorously considered, thereby enhancing transparency and reinforcing accountability within the public sector. Specifically, when public sector organizations embed essential informational and control mechanisms through digital transformation (Ly, 2025), decision-making processes of internal control are increasingly grounded in data optimization and systematic analytical evaluation. This advance not only maintains the stability of organizational operations, improves reporting accuracy, and ensures regulatory compliance but also establishes a robust institutional foundation that enables public sector organizations to clarify and justify their mandates when confronted with public demands for accountability. Accordingly, strengthening internal control systems through digital transformation has become an imperative for

*** School of Accounting, College of Business, University of Economics Ho Chi Minh City; email: hoaitt@ueh.edu.vn; bqhung@ueh.edu.vn***

public sector organizations in Vietnam, particularly in the pursuit of enhanced accountability.

Recognizing the critical importance of this issue, this study develops and empirically tests a moderated mediation model in which internal control systems function as a mediating mechanism in the relationship between digital transformation and accountability within public sector organizations. In addition, the study examines whether innovative leadership moderates the influence of digital transformation on internal control systems. This research offers two primary contributions. First, it advances the limited body of literature addressing the pivotal role of internal control in linking digital transformation to accountability, particularly within the context of emerging economies like Vietnam. By empirically substantiating this mediating relationship, the study provides deeper insight into the mechanisms through which digital transformation translates into enhanced accountability. Second, the study bridges the previously fragmented streams of research on accounting and public governance by demonstrating that innovative leadership amplifies the influence of digital transformation on internal control, thereby enabling internal control to perform its essential function in a more effective way.

Figure 1. The prior studies focus on the impact of leadership practices and internal control systems



Source: Synthesized by the authors through the Connected Papers visualizer tool

2. Model and hypotheses development

2.1. The mediating role of internal control systems

It can be seen that digital transformation creates a robust foundation for public sector organizations to internally communicate information, including objectives and responsibilities for internal control that are necessary to support the functioning of internal control and public service improvement. Additionally, digital transformation supports these organizations in refining input data, streamlining internal processes, and promoting the quality of internal control outputs. This implies that, when faced with environmental uncertainty and stakeholder diversification, public sector organizations have to consider and utilize key data derived from digital transformation (Ly, 2025) to strengthen the effectiveness of the internal control systems. Accordingly, this study hypothesizes that:

H1. Digital transformation positively affects internal control systems.

According to the internal control framework (COSO, 2013), the effectiveness of internal control systems plays a pivotal role in mitigating fraudulent activities, strengthening compliance with ethical standards, and ensuring that organizational resources are utilized for their intended purposes. Public sector organizations are therefore expected to systematically identify, assess, and promptly communicate deficiencies in internal control to those responsible for implementing corrective actions, including senior management (Tu & Nguyen, 2023).

Furthermore, in the context of public sector organizations, which are attracting increasing scrutiny from both domestic and international stakeholders, effective internal control is widely anticipated to contribute substantially to the enhancement of accountability within these entities (Tu et al., 2022). More specifically, through the protective boundaries and governance safeguards established by internal control, public sector organizations are better positioned to critically evaluate their operational performance and determine whether resources are being deployed appropriately and efficiently. This process enables timely adjustments and facilitates transparent explanations when accountability is demanded by stakeholders. Drawing upon the foregoing arguments grounded in the internal control framework, the following hypothesis is suggested:

H2. Internal control systems positively affect accountability.

Both H1 and H2 illustrate that internal control systems serve as the central mediating conduit through which digital transformation contributes to enhanced accountability. As such, this study proposes the following hypothesis:

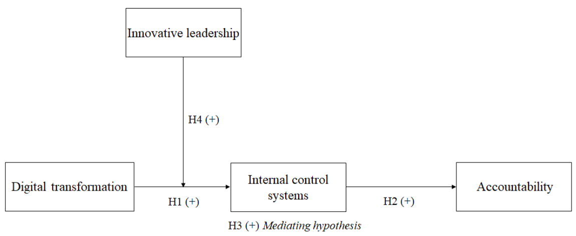
H3. Internal control systems positively mediate the relationship between digital transformation and accountability.

2.2. The moderating roles of innovative leadership

The effect of digital transformation on internal control becomes more pronounced when guided by innovative leadership. Innovative leadership boosts the internalization and acceptance of organizational objectives, thereby facilitating the achievement of internal control goals across three dimensions (operation, reporting, compliance). This argument is appropriate with stewardship theory (Davis et al., 1997), which posits that leaders that is driven by intrinsic motivation will act in the best interests of the organization. More specifically, innovative leadership characterized by creative thinking and a strong engagement with innovation (Zhu et al., 2024) is inclined to design differentiated and rigorous control mechanisms to ensure the effectiveness of internal control. They perform distinctiveness by instituting innovative governance structures and implementing novel ideas, supported by tolerance for diverse perspectives and a willingness to assume calculated risks (Tu & Bui, 2025) to secure advantages in internal control activities. Accordingly, public sector organizations exhibiting strong digital transformation alongside innovative leadership are more likely to achieve superior overall effectiveness in internal control. Building upon the preceding arguments grounded in stewardship theory, this study proposes the following:

H4. Innovative leadership positively moderates the relationship between the digital transformation and internal control systems.

Figure 2. Suggested model and hypotheses



Source: Proposed by the authors

3. Methods

3.1. Sampling and data collection

To date, collecting data from Vietnamese public sector organizations remains challenging. Thus, this study employed a combination of convenience sampling and snowball sampling techniques to approach potential participants. The target respondents comprised managers from public sector organizations that have established internal control systems within their organizational structures. The survey questionaires was designed based on scales of well-established and widely validated by prior studies. Then completion of the data collection stage, a total of 91 valid responses were obtained from public sector organizations. The sampling characteristics are presented in Table 1.

Table 1: Demographics of informants (*n* = 91)

Demographics	n	(%)	Demographics	n	(%)
Organizational size (employees)			*Position*		
51-200	71	78	Middle-level manager	91	100
201-500	18	19.8			
501-1.000	2	2.2			
Organizational age			*Work experience*		
5 -> 15 years	69	81.1	5 -> 10 years	75.8	77.6
16 -> 30 years	17	14.6	11 -> 20 years	18.7	14.7
31 -> 50 years	5	4.3	> 20 years	5.5	7.7

Source: Data analysis results of the authors

3.2. Measurement scales

The measurement of the digital transformation was proposed by Ly (2025). The internal control system was evaluated using the formative scale suggested by Chiu &Wang (2019), which is derived from the COSO framework. This study applied the measurement scale proposed by Mack & Ryan (2006) to evaluate accountability. The scale of innovative leadership used by Khalili (2017) was also used in other studies (e.g., Aman-Ullah et al., 2022; Carmeli et al., 2010; Lovelace et al., 2001; Zhu et al., 2024).

4. Findings

The results of the hypothesis testing for H1 indicate that public sector organizations with favorable foundational conditions and a strategic emphasis on digital transformation have made substantial progress in implementing internal controls. In particular, digital transformation equips public sector organizations with boosted capabilities across three key dimensions of the internal control system (operational, reporting, and compliance).

Support for H2 illustrates the central role of internal control systems in sustaining and fostering accountability through multiple complementary mechanisms (Qaiser & Hassan, 2025). Specifically, internal control improves the reliability and transparency of information systems, clarifies stakeholder roles and responsibilities, and reinforces monitoring and detection procedures (Tu Thanh Hoai, 2025), thereby promoting greater organizational discipline and accountability.

Evidence for H3 further underscores that internal control functions as a mediating mechanism through which digital transformation exerts its impact on accountability. This finding enriches previous studies on the relationship between digital transformation and accountability within emerging economy contexts, particularly in the Asian market, by figuring out the underlying pathway through which such effects materialize.

Given that scholarly attention to this mediating path remains relatively limited, the data analysis confirmed H4 provides a crucial additional perspective. It suggests that the effectiveness of digital transformation in enhancing internal control systems is amplified in the presence of innovative leadership, characterized by data-driven and innovation-oriented decision-making. Along with digital technologies, innovative leadership could redesign control mechanisms to be risk-based and context-sensitive, thereby transforming internal control from a rigid compliance instrument into an enabling governance system that facilitates oversight, learning, and continuous improvement.

Conclusion

Drawing on the internal control framework (COSO, 2013) and stewardship theory (Davis et al., 1997), this study hypothesizes that internal control systems mediate the relationship between digital transformation and accountability and that the effect of digital transformation on internal control systems is contingent upon innovative leadership. By suggesting and empirically testing a moderated mediation model using data collected from 91 public sector organizations in Vietnam, this study makes a significant contribution to the internal control literature. It represents one of the first pieces of empirical evidence to demonstrate that internal control systems promote accountability through the integrated effects of digital transformation and innovative leadership.

In practice, public sector organizations that implement digital transformation systematically and effectively are more likely to sustain and foster the internal control systems. More specifically, through digital transformation, digitized and synchronized control and verification mechanisms significantly enhance the efficiency of reporting and accountability processes. Accordingly, these advanced internal control mechanisms enable Vietnamese public organizations to more effectively evaluate and monitor compliance, ethical behavior, and overall performance. This, in turn, broadens their capacity to face public scrutiny and uphold accountability. Moreover, when leaders consistently demonstrate integrity and embody values associated with innovation, they are better positioned to transform the benefits of digital transformation for internal control into boosted effectiveness in public accountability.

Based on this research, the authors' messages to the audiences are that let's consider innovative leadership as a strategic catalyst for public sector organizations. It is because the digital tools (derived from digital transformation) alone are insufficient of improving the effectiveness of the internal control systems. Uniquely, digital transformation is the necessary condition, and innovative leadership is the prerequisite condition in this process. Notably, innovative leadership lay foundation for value-driven transformation. Through embodying integrity and innovation, the leaders create the ethical culture necessary for digitized control mechanisms to be taken seriously. As a result, they are the bridge that transforms the technical benefits of digital transformation into the "boosted effectiveness" required to face public scrutiny.

** This paper is a product of a university-level research project code [CS-COB-2025-20] funded by the University of Economics Ho Chi Minh City (UEH).*

References:

Aman-Ullah, A., Mehmood, W., Amin, S., & Abbas, Y. A. (2022). Human capital and organizational performance: A moderation study through innovative leadership. Journal of Innovation & Knowledge, 7(4), 100261.

Carmeli, A., Gelbard, R., & Gefen, D. (2010). The importance of innovation leadership in cultivating strategic fit and enhancing firm performance. The Leadership Quarterly, 21(3), 339-349.

COSO. (2013). Internal control-integrated framework

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. Academy of Management Review, 22(1), 20-47.

Ly, B. (2025). Digital Transformation, Organizational Culture, and Public Sector Flexibility in Emerging Economies: Insights from NCA and PLS-SEM Analysis. Journal of the Knowledge Economy, 1-33.

Tu Thanh Hoai & Bui Quang Hung (2025). Innovative leadership and innovation outcomes of the Vietnamese universities: The bridging role of co-innovation. Review of Finance, Vol. 11, Issue 11, 92-94.

Tu, H. T., Bui, H. Q., & Nguyen, N. P. (2022). The impact of internal control systems on the intensity of innovation and organizational performance of public sector organizations in Vietnam: the moderating role of transformational leadership. Heliyon, 8(2), e08954.

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, 28(2), 118-144.

Zhu, W., Yang, H., Yang, B., & Sosik, J. J. (2024). Innovative leadership in organizations: Dimensions, measurement, and validation. Journal of Business Research, 172, 114445.