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Implementing VPSAS 31 in Vietnam's Public Service Accounting: Recognition, Valuation, and Management Challenges of Intangible Assets

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ABSTRACT: Vietnam's rapid digitalization has intensified the need for reliable accounting of intangible assets across the public sector. Although VPSAS 31 signals a shift toward international standards, its implementation remains constrained by the rules-based administrative regime of Circular 24/2024/TT-BTC. This study offers a novel contribution by integrating regulatory analysis, procurement practices, and digital governance dynamics into a unified three-pillar framework—recognition, valuation, and management. The findings show that misclassification of R&D activities, cost invisibility in bundled ICT contracts, and weak lifecycle documentation systematically undermine compliance. To explain these cross-cutting patterns, the study introduces the **Hybrid Gap Model**, which conceptualizes how principles-based standards are reshaped by procedural accounting norms and fragmented digital governance structures. The model extends existing IPSAS literature by demonstrating that implementation failures stem not only from technical limitations but from institutional misalignment inherent in digital government ecosystems. Policy recommendations highlight regulatory harmonization, improved cost-tracking architecture, and strengthened digital asset stewardship to enhance transparency and sustainability in Vietnam's public sector.

KEYWORDS: VPSAS 31; Intangible Assets, Public Service Accounting, Circular 24/2024/TT-BTC**,** Public Sector Accounting Reform, Digital Government, Asset Recognition and Valuation.

1. INTRODUCTION

The digital transformation of the public sector has elevated intangible assets—software, databases, algorithms, and digital platforms—to essential public infrastructure. International organizations, including the OECD (2024) and the World Bank (2021), emphasize that transparent recognition and monitoring of digital assets are critical for fiscal sustainability, accountability, and effective digital governance.

Vietnam faces similar pressures as digital systems expand across government operations. The issuance of VPSAS, particularly VPSAS 31 on intangible assets, marks a key step toward IPSAS alignment by introducing the criteria of identifiability, control, and service potential (MOF, 2023). Circular 24/2024/TT-BTC complements this principles-based standard with detailed documentation, accounts, and reporting procedures for public service units (MOF, 2024), forming the regulatory foundation for the 2021–2030 digital government strategy.

However, international experience shows that adopting IPSAS-based standards does not ensure effective implementation. Countries such as Indonesia, Kenya, and Chile continue to face fragmented documentation, bundled ICT procurement, weak cost structures, and limited IT–accounting coordination (Harun et al., 2012; PwC EU Services, 2013). Vietnam exhibits similar issues, with audit reports noting misclassification of software costs, inconsistent amortization, and limited impairment assessment (SAO, 2022).

Despite rising interest in VPSAS adoption, Vietnamese research remains largely descriptive and has not examined how VPSAS 31 interacts with the documentation-driven, rules-based logic of Circular 24. Lifecycle characteristics of digital assets—iterative development, updates, interoperability, and vendor dependence—and practical issues such as cloud architectures, internal software development, and fragmented data governance are also insufficiently analyzed.

This study addresses these gaps through a three-pillar framework of recognition, valuation, and management. Using documentary analysis, regulatory mapping, and practice-based insights, it identifies mechanisms generating inconsistencies and develops a Hybrid Gap Model explaining misalignment between principles-based standards and rules-based administrative procedures. It

also integrates digital governance dynamics—including procurement practices, IT–accounting coordination, lifecycle documentation, and vendor lock-in—into the analysis of intangible asset accounting.

Conceptually, the study shows that implementation challenges arise not only from technical accounting issues but also from institutional arrangements and digital governance structures. Practically, it proposes policy measures to strengthen regulatory coherence, documentation systems, digital asset stewardship, and accounting–IT capacity, thereby supporting higher-quality financial reporting and advancing Vietnam's digital government reforms

2. LITERATURE REVIEW

2.1. International Research on Public Sector Intangible Assets

Global digital transformation has increased scholarly attention to intangible assets as critical components of public sector infrastructure. OECD (2024) identifies digital platforms, data systems, and software as "digital public infrastructure," stressing that their recognition and monitoring are essential for fiscal transparency and service continuity. Academic literature similarly highlights that intangible assets now underpin government performance, yet remain difficult to classify and measure due to their technological and iterative nature (Agostino, D et al., 2022).

A persistent challenge concerns the application of conceptual criteria—identifiability, control, and service potential—to digital assets. Modern software rarely develops linearly; instead, functionality evolves through ongoing customization and updates, complicating distinctions between research and development (Pina, V et al., 2009). Additionally, bundled ICT procurement—where licenses, customization, maintenance, cloud hosting, and training are consolidated—prevents cost segregation, leading to systematic under-recognition or misclassification (European Court of Auditors, 2022; Koutoupis, A et al., 2025).

Internally generated software introduces another difficulty. Studies indicate that public entities often lack systems to track internal labor, design phases, or development activities, making reliable capitalization impossible (Heiling, 2025). Cloud-based and vendor-hosted solutions also blur the boundary of "control," raising questions about whether governments own an asset or merely access a service (OECD, 2024). Collectively, this literature suggests that digital assets cannot be understood solely through accounting rules; they must be examined within broader digital governance frameworks.

2.2. IPSAS 31 Implementation Challenges in Developing Countries

Substantial research documents the obstacles developing countries encounter when adopting IPSAS-based standards. A central issue is the mismatch between principles-based standards and rules-based administrative systems (Christiaens et al., 2010; Noha Alessa, 2014). IPSAS 31 assumes reliable documentation, cost tracking, and professional judgment, whereas many governments prioritize procedural compliance.

Empirical studies reinforce these tensions. Indonesia struggles with incomplete documentation and cost allocation for digital projects, resulting in inconsistent capitalization (Harun et al., 2012). Kenya reports difficulties differentiating research and development phases and assessing control over vendor-managed systems (PwC EU Services, 2013). IFAC (2023) identifies intangible assets as among the least consistently implemented IPSAS areas due to governments' inability to disaggregate costs or monitor technological obsolescence.

Impairment assessment is similarly weak. Evidence from Latin America and Africa shows software assets often remain at full value despite non-use or outdated functionality (Christiaens et al., 2010). These findings underscore that IPSAS implementation requires coordinated reforms in procurement, documentation, and digital governance—not only technical accounting adjustments.

2.3. Research on Vietnam's Public Sector Accounting and Digital Assets

Vietnamese scholarship recognizes VPSAS adoption as an important public financial management reform, highlighting the need for conceptual change, better documentation, and improved capacity (Nguyễn & Hồ, 2022; Phạm, 2021). Audit reports consistently show misclassification of software costs, lack of impairment, and weak cost tracking, reflecting international patterns (SAO, 2022).

However, existing literature is fragmented and shows several limitations.

First, no study systematically examines how VPSAS 31 interacts with Circular 24/2024/TT-BTC. The latter establishes a documentation-centric accounting regime, whereas VPSAS 31 relies on judgment-based assessment of control and service potential.

Second, Vietnamese research rarely analyzes intangible assets from a lifecycle perspective, despite their iterative development, interoperability requirements, and vendor dependencies.

Third, practical digital governance challenges—including cloud adoption, internal software development, and vendor lock-in—are not linked to their accounting implications, despite their prevalence in hospitals, universities, and provincial agencies.

Fourth, no conceptual framework exists to explain why implementation gaps persist even when standards are clearly articulated. International literature discusses principles-vs-rules tensions broadly, but Vietnam's context includes additional complexity from fragmented IT–procurement–accounting coordination.

2.4. Summary and Research Gap

Literature across international, IPSAS, and Vietnamese contexts suggests that intangible asset accounting faces intertwined technical and governance challenges. Yet no study integrates these perspectives to analyze VPSAS 31 implementation in a comprehensive way.

This study fills four key gaps:

- It provides a structured lifecycle-based analysis of intangible assets in Vietnam.
- It offers the first systematic comparison between VPSAS 31 and Circular 24.
- It incorporates digital governance factors—procurement design, IT coordination, documentation systems—into intangible asset accounting.
- It develops a Hybrid Gap Model to explain the persistent misalignment between standards and practice.

These contributions position the study to advance both academic understanding and policy reform in Vietnam's transition toward accrual-based digital asset accounting.

3. THEORETICAL & LEGAL FRAMEWORK

3.1. Core Accounting Principles Under IPSAS/VPSAS 31

IPSAS 31 sets out three core criteria for recognizing intangible assets—identifiability, control, and future economic benefits or service potential (IFAC, 2021). VPSAS 31 adopts these principles in full (MOF, 2023), providing Vietnam with a conceptual basis for accounting for software, databases, and other digital assets. Applying these criteria requires judgment, technical documentation, and clear evidence of development activities

A major theoretical challenge involves distinguishing research from development. IPSAS/VPSAS require expensing research costs while capitalizing development costs only when feasibility, reliable measurement, and control can be demonstrated. However, modern digital systems evolve iteratively, making it difficult to delineate development stages. International studies show that governments struggle to document phase-based activities, especially in IT projects involving continuous customization and updates (Agostino, D et al., 2022; Noella et al., 2023).

Subsequent measurement under IPSAS/VPSAS 31 requires amortization based on expected service potential and impairment testing when technological changes or operational factors reduce asset value. Many public entities—globally and in Vietnam—lack lifecycle documentation needed to perform impairment assessments (Pina, V et al., 2009; European Court of Auditors, 2022), highlighting the gap between conceptual requirements and practical capability.

3.2. Legal and Operational Framework Under Circular 24/2024/TT-BTC

While VPSAS 31 provides principles-based guidance, Circular 24/2024/TT-BTC prescribes a detailed administrative accounting regime emphasizing consistency, documentation, and procedural compliance (MOF, 2024). It requires:

- Accumulating software development costs in Account 241;
- Recording completed intangible assets in Account 213;
- Maintaining full procurement and acceptance documentation;
- Applying preset amortization schedules;
- Using uniform reporting formats and journal entries.

Circular 24 strengthens traceability but reinforces a form-based approach in which recognition depends heavily on invoices, contracts, and acceptance minutes. This contrasts with VPSAS 31, which requires assessing economic substance, control rights, and service potential—criteria not explicitly addressed by administrative procedures.

International research shows similar tensions in developing countries, where administrative rules dominate accounting processes, limiting the exercise of professional judgment required under IPSAS (Harun et al., 2012; Noha Alessa, 2024).

3.3. Conceptual–Operational Gaps and Their Implications

The coexistence of VPSAS 31 and Circular 24 creates a conceptual–operational gap in which principles-based standards and procedural regulations diverge. This study identifies three main manifestations of this misalignment.

First, recognition decisions are documentation-driven. Entities frequently determine whether software qualifies as an intangible asset based on procurement documentation rather than on identifiability, control, or service potential. Cloud subscriptions and

vendor-managed systems may be wrongly capitalized, while internally developed software is expensed due to insufficient documentation.

Second, valuation is shaped by procurement practices. Digital projects are often procured through bundled contracts that combine software, customization, hosting, training, and maintenance. Without disaggregated cost schedules, entities cannot measure historical cost reliably or separate capitalizable from non-capitalizable activities. This reflects international evidence showing that procurement design directly affects intangible asset accounting (European Court of Auditors, 2022; Heiling, 2025).

Third, lifecycle management is weak. Many entities lack digital asset registers, version histories, and performance monitoring systems necessary for impairment assessments. Vendor lock-in further limits control and restricts updates or migration. Consequently, assets often remain recorded at full carrying amount despite reduced functionality—an issue repeatedly raised by the State Audit Office (SAO, 2022).

Illustrative Example (Vietnam)

A provincial hospital's 12-billion-VND HIS procurement bundled hardware, software, training, and maintenance into one contract, preventing the segregation of development versus service components. The system was expensed entirely, despite providing long-term service potential—demonstrating the practical impact of conceptual–operational gaps.

Implications

These gaps reveal structural constraints within Vietnam's administrative accounting environment: reliance on form over substance, fragmented IT–procurement–accounting coordination, and limited capability for lifecycle governance. They provide the foundation for the Hybrid Gap Model, which integrates accounting principles and digital governance dynamics to explain why implementation inconsistencies persist.

4. METHODOLOGY

4.1. Research Design

This study adopts a qualitative research design to examine how VPSAS 31 operates within Vietnam's rules-based administrative accounting environment. Qualitative methods are well suited for public sector accounting research where implementation depends on institutional dynamics, professional judgment, and interpretation of standards rather than quantifiable indicators (Modell, 2009). Because concepts such as control, service potential, and technological relevance cannot be reduced to numerical metrics, qualitative inquiry provides the depth needed to understand inconsistencies between conceptual principles and administrative practice.

The study combines documentary analysis, regulatory mapping, and practice-based insights, consistent with international IPSAS research that analyzes interactions between standards, procedures, and governance structures (Harun et al., 2012; Noha Alessa, 2024). This approach also reflects contemporary literature emphasizing lifecycle and governance perspectives for digital assets (Agostino, D et al., 2022).

The methodological logic progresses from conceptual interpretation to examination of operational realities. The study:

(1) interprets IPSAS/VPSAS 31 requirements;

(2) maps them onto Circular 24;

(3) compares regulatory expectations with observed practices; and

(4) synthesizes findings to construct a conceptual model explaining implementation gaps.

This structured progression ensures coherence between theory and evidence.

4.2. Data Sources

To ensure triangulation and validity (Flick, 2018), the study draws on three data categories:

(1) Regulatory and Normative Documents

Primary sources include VPSAS 31 (MOF, 2023), Circular 24/2024/TT-BTC (MOF, 2024), IPSAS 31 (IFAC, 2021), and supporting administrative accounting regulations. These documents form the basis for evaluating recognition, valuation, and management requirements.

(2) Academic and International Literature

Peer-reviewed studies on intangible assets, IPSAS implementation, digital government, procurement practices, and asset lifecycle management provide comparative insight (Brusca et al., 2016; Heiling, 2025). Reports from the OECD, World Bank, and European Court of Auditors contribute additional evidence on systemic challenges in digital public infrastructure.

(3) Applied Accounting Insights

The study incorporates practice observations derived from public sector consulting and training in Vietnam and Laos. Examples include HIS implementations, LMS deployments, ERP projects, and database management challenges. These insights illustrate how conceptual–operational gaps manifest in practice, consistent with public sector accounting traditions that integrate practitioner knowledge for contextual understanding (Liguori & Steccolini, 2012).

Together, these data allow comparison between what standards prescribe, what regulations require, and what organizations actually do.

4.3. Analytical Procedure

The analysis follows four steps:

Step 1: Regulatory Mapping

VPSAS 31 requirements were systematically compared with Circular 24 procedures to identify areas of alignment and divergence, following methods commonly used in public financial management research (Pina, V et al., 2009).

Step 2: Thematic Coding

Findings were coded into three analytical pillars—recognition, valuation, and management—reflecting widely accepted lifecycle-oriented structures for analyzing digital assets (Agostino, D et al., 2022).

Step 3: Triangulation with Practice Evidence

Illustrative cases from hospitals, universities, and provincial departments were used to validate whether conceptual–operational gaps identified in regulations occur in practice (Modell, 2009).

Step 4: Synthesis and Model Development

Insights were consolidated to develop the Hybrid Gap Model, explaining how principles-based standards interact with rules-based administrative systems and fragmented digital governance (Noha Alessa, 2024).

4.4. Methodological Contribution

This methodology contributes by integrating accounting and digital governance perspectives, recognizing that intangible assets are shaped by procurement design, system architecture, and lifecycle management—not solely by accounting rules. It also offers a replicable approach for studying how principles-based standards function within procedural administrative environments, providing a foundation for examining intangible asset accounting in other developing economies.

5. FINDINGS

5.1. Recognition Challenges

Recognition is the most foundational and frequently misunderstood aspect of VPSAS 31 implementation. Under IPSAS/VPSAS 31, an intangible asset must be identifiable, controlled by the entity, and capable of generating future economic benefits or service potential (IFAC, 2021; MOF, 2023). Applying these judgment-based criteria within Vietnam's documentation-driven administrative system creates several difficulties.

Difficulty distinguishing research and development.

Digital transformation projects—such as HIS, ERP, and LMS—are commonly procured through integrated packages that do not separate research, pilot testing, customization, and full development. This complicates compliance with VPSAS 31, which requires research costs to be expensed and development costs capitalized only when feasibility and reliable measurement are demonstrated. Consistent with international findings, bundled procurement obscures boundaries between capitalizable and non-capitalizable costs, contributing to both under- and overcapitalization (Harun et al., 2012; PwC EU Services, 2013; European Court of Auditors, 2022).

Challenges assessing control in cloud and vendor-managed environments.

VPSAS 31 requires entities to demonstrate control—i.e., the ability to obtain service potential and restrict others' access. In Vietnam, many digital systems are vendor-hosted or built on proprietary platforms, making it unclear whether public entities control the software or merely access a service. OECD (2024) reports similar global patterns, where subscription-based and cloud platforms are mistakenly capitalized as intangible assets.

Documentation-driven decision-making.

Because Circular 24 prioritizes documentation completeness, recognition often depends on the presence of invoices and acceptance records rather than assessment of identifiability, control, or service potential. This produces a substance–form conflict typical of procedural accounting environments (Christiaens et al., 2010; Noha Alessa, 2024).

Example from Vietnam.

A provincial hospital procured a 12-billion-VND HIS package covering software, customization, training, hardware, and maintenance. Lacking cost breakdowns, the hospital expensed the entire project despite its clear long-term service potential. Similar issues occur in LMS deployments at universities and ERP systems in provincial departments.

Table 5.1. Common Recognition Errors in Vietnam's Public Sector

Case	VPSAS31 Requirement	Actual Practice	Consequence
HIS – 12 billion VND	Capitalize development costs when future service potential is established	Entire project expensed to operating costs	Intangible assets understated; no amortization recognized
LMS – 6.5 billion VND	Recognize intangible assets when they are available for use	Asset not recognized in the accounting system	Missing amortization; financial statements do not reflect asset existence
ERP – 18 billion VND	Separate research and development phases; capitalize development costs	Entire cost recorded under Account 611 (operating expenses)	Incorrect valuation; non-compliance with VPSAS 31; misstatement of expenditures

Recognition inconsistencies arise not because entities reject VPSAS 31 conceptually, but because administrative procedures under Circular 24 do not provide the documentation or governance mechanisms needed to satisfy judgment-based criteria. These issues directly influence valuation and management, creating systemic distortions in financial reporting.

5.2. Valuation Challenges

Valuation under VPSAS 31 requires reliable measurement of historical cost, estimation of useful life, and ongoing impairment assessment. In Vietnam, these requirements are constrained by procurement structures, documentation gaps, and administrative rules.

Cost identification and measurement difficulties

Digital projects are commonly procured through bundled ICT contracts that combine software modules, customization, data migration, training, cloud hosting, maintenance, and hardware. VPSAS 31 requires separating capitalizable development costs from non-capitalizable services, yet such disaggregation is often impossible without detailed cost schedules. As in other jurisdictions, bundled procurement obscures cost assignments and leads to inconsistent use of Account 241 (construction in progress) (Koutoupis et al., 2025; European Court of Auditors, 2022; Heiling, 2025).

Table 5.2. Typical Components of Digital Projects and VPSAS 31 Treatment

Component	VPSAS 31 Treatment	Issue in VN Practice
Software modules	Capitalize	No cost breakdown
Customization	Capitalize	Often expensed or bundled
Data migration	Capitalize when essential	Not recorded
Training	Expense	Sometimes capitalized wrongly
Cloud hosting	Expense	Confused with assets
Maintenance	Expense	Put into Account 241
Hardware	Separate asset	Bundled with software

Rigid administrative amortization rules

Circular 24 applies uniform amortization schedules to intangible assets regardless of technological characteristics. In practice, digital systems such as HIS, ERP, and LMS undergo rapid upgrades and often become obsolete earlier than administrative schedules imply. International evidence confirms that fixed amortization periods fail to capture digital technologies' economic lifespan and distort asset values (Agostino et al., 2022; OECD, 2024).

Lack of impairment assessments

Although VPSAS 31 requires impairment testing when service potential decreases, it is rarely performed. The lack of operational guidance, limited IT performance monitoring, fragmented data flows between IT and accounting, and leadership focus on

procedural compliance contribute to this gap. As a result, obsolete or partially functioning systems remain recorded at full carrying amount, inflating intangible asset values and weakening financial statement reliability.

Under-recognition of internally developed software

Internally generated software is increasing within universities, health agencies, and provincial ICT centers, yet it is seldom capitalized. Entities lack time-tracking tools, documentation of development stages, and mechanisms to measure internal labor costs. International findings similarly show systematic under-recognition of internally generated software in the public sector (Heiling, 2025).

Summary

Valuation challenges in Vietnam's public sector arise from five interrelated constraints:

(1) bundled ICT procurement that obscures cost structures;

(2) incomplete documentation for Account 241, limiting capitalization;

(3) rigid administrative amortization rules misaligned with technological lifecycles;

(4) the absence of practical impairment mechanisms;

(5) the near-total omission of internally generated software.

Collectively, these constraints reduce the accuracy of intangible asset measurement, distort financial reporting outcomes, and undermine transparency in public sector digital investment.

5.3. Management Challenges

The management of intangible assets reveals structural governance weaknesses that extend far beyond accounting procedures. Although VPSAS 31 requires continuous monitoring, impairment assessment, and lifecycle documentation, digital assets in Vietnam are commonly treated as procurement outputs rather than long-lived infrastructure. This orientation narrows managerial attention to acquisition rather than stewardship.

Weak lifecycle governance.

Most public service units maintain documentation only at the point of purchase. Version histories, upgrade logs, configuration records, integration reports, and performance benchmarks are seldom preserved. OECD (2024) characterizes this pattern as "recorded once, forgotten," leading to the gradual erosion of service potential and impeding accurate assessment of useful life.

Fragmented responsibilities.

Governance responsibilities are distributed across four domains: IT manages deployment, procurement handles contracting, accounting records financial data, and leadership allocates funding. No actor oversees the full lifecycle of intangible assets. Consistent with international evidence, such fragmentation dilutes accountability and undermines valuation, control, and impairment processes (Agostino, D et al., 2022).

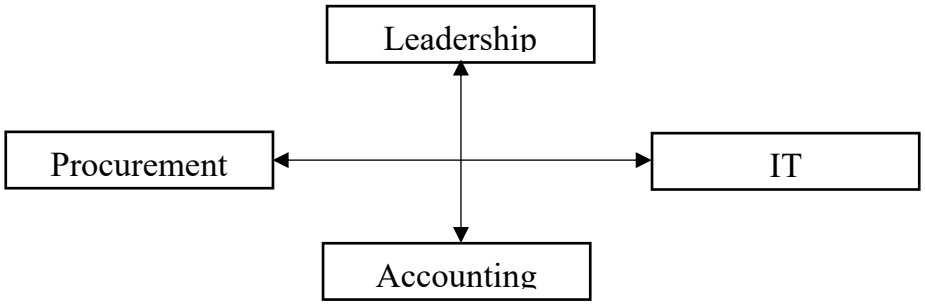

Figure 5.3. Governance Misalignment Diamond

(Author's illustration based on OECD, 2024; Agostino, D et al., 2022)

The model illustrates misalignment among leadership, procurement, IT, and accounting. Operating in silos, these domains lack coordinated oversight, reducing the likelihood that VPSAS 31 requirements can be fully implemented.

Lack of impairment and performance monitoring.

Many HIS platforms have become incompatible with newer systems; ERP modules remain unused; and cloud-based applications lack performance metrics. Yet none undergo impairment review. State Audit reports confirm that obsolete or unused software continues to be reported at full carrying amounts (SAO, 2022), indicating the absence of an operational mechanism for identifying service potential decline.

Absence of digital asset registers.

Unlike fixed assets, intangible assets are not consistently tracked through centralized registers. Missing inventories result in system duplication, documentation gaps, and an inability to monitor lifecycle events. Similar challenges have been documented in Malaysia and Kenya (Heiling, 2025), suggesting that incomplete registries are a recurring constraint in developing countries' digital governance systems.

Vendor lock-in.

Vendor dependency is pervasive. When maintenance contracts lapse or proprietary code is inaccessible, entities cannot upgrade, migrate, or integrate systems. Functionality declines but accounting valuations remain unchanged. International literature identifies vendor lock-in as a critical threat to digital sovereignty and asset sustainability (Noella et al., 2023; OECD, 2024).

Illustrative example.

A 23-billion-VND ERP system at a provincial department contained several modules that were never activated due to vendor disputes and shifting policy priorities. Despite clear impairment indicators, no write-down was recognized, reflecting the structural barriers to applying VPSAS 31.

Summary.

Management weaknesses arise from five interconnected factors: inadequate lifecycle governance, fragmented responsibilities, missing impairment mechanisms, the absence of asset registers, and persistent vendor lock-in. Together, these constraints form the management dimension of the Hybrid Gap Model, highlighting that compliance with VPSAS 31 depends not only on accounting standards but on broader governance arrangements that structure how digital assets are procured, operated, and monitored.

6. DISCUSSION

The findings show that Vietnam's implementation of VPSAS 31 is shaped by a structural misalignment between the principles-based nature of the standard and the documentation-driven requirements of Circular 24. Similar tensions appear in other developing countries adopting IPSAS, where administrative traditions and governance constraints limit the operationalization of substance-based criteria (Christiaens, J et al., 2010; Noha Alessa, 2024). Vietnam's rapid digitalization further amplifies these longstanding structural frictions.

Recognition: Principles vs. Documentation Logic

Recognition challenges arise because VPSAS 31 relies on professional judgment regarding identifiability, control, and service potential, whereas Circular 24 emphasizes compliance with invoices and acceptance records. As a result, entities base recognition decisions on documentation availability rather than conceptual assessment. Bundled ICT procurement obscures cost structures, preventing the separation of research, development, and maintenance—an issue widely observed internationally (Agostino, D et al., 2022; European Court of Auditors, 2022). This leads to systematic under-recognition of internally generated software and cloud-based systems, confirming that without supportive procurement and documentation systems, VPSAS 31 cannot be effectively applied.

Valuation: Cost Invisibility and Administrative Constraints

Valuation inconsistencies stem from both institutional and conceptual limitations. In bundled contracts, the inability to disaggregate costs results in arbitrary capitalization or full expensing. Administrative amortization schedules under Circular 24 often fail to reflect technological lifecycles, a challenge also seen in OECD countries (OECD, 2024). The near absence of impairment testing—despite functional decline, vendor lock-in, and partial system use—indicates that entities lack mechanisms to evaluate service potential over time. Consistent with Christiaens, J et al., (2010), the results show that intangible assets demand continuous monitoring, which is largely absent in Vietnam.

Management: Governance Determines Accounting Outcomes

The study finds that recognition and valuation problems are symptoms of deeper governance fragmentation. IT, procurement, accounting, and leadership operate in silos, each holding partial responsibilities without lifecycle oversight. This structural isolation produces incomplete documentation, unclear cost accountability, and a lack of performance monitoring, aligning with international evidence that governance capacity, rather than accounting rules alone, determines IPSAS implementation success (Harun et al., 2012; Noella et al., 2023). Weak lifecycle governance, missing asset registers, and vendor lock-in further accelerate the degradation of digital systems while accounting values remain unchanged.

Hybrid Gap Model: Explaining Systemic Misalignment

The Hybrid Gap Model synthesizes these findings by identifying three reinforcing gaps:

- **Conceptual Gap** — divergence between VPSAS 31's substance-based criteria and Circular 24's form-based requirements.
- **Operational Gap** — arising from bundled procurement, incomplete documentation, rigid amortization, and limited impairment mechanisms.
- **Governance Gap** — stemming from siloed responsibilities, absent lifecycle monitoring, and vendor dependence.

These gaps interact to produce implementation barriers that cannot be resolved through accounting reform alone. The model extends IPSAS literature by demonstrating that digital transformation introduces new institutional dynamics—procurement practices, IT architectures, and documentation ecosystems—that directly shape accounting outcomes.

Implications for Vietnam's Digital Government Agenda

Accurate recognition, valuation, and management of intangible assets are foundational to Vietnam's digital government strategy. Inaccurate recognition limits strategic planning; weak valuation distorts the digital capital base; fragmented governance accelerates system obsolescence and deepens vendor dependency. These findings reinforce OECD (2024), which argues that digital government and public financial management reforms must evolve in tandem to ensure coherence and long-term sustainability.

7. POLICY IMPLICATIONS

The findings indicate that strengthening VPSAS 31 implementation requires a coordinated response across regulatory, institutional, and operational dimensions. Because intangible assets are embedded in digital systems and procurement processes, effective reform must extend beyond accounting rules to encompass digital governance and capacity building. The following policy implications address the main barriers identified in the Hybrid Gap Model and support Vietnam's broader digital government agenda.

7.1. Regulatory Harmonization Between VPSAS 31 and Circular 24

A key priority is aligning the principles-based requirements of VPSAS 31 with the procedural requirements of Circular 24. The coexistence of these frameworks generates conceptual–operational discrepancies that lead to inconsistent recognition, valuation, and management.

The Ministry of Finance should:

- Issue supplemental guidance detailing how R&D distinctions, control assessment, and cost segregation should be applied in administrative contexts.
- Introduce interpretive notes or technical bulletins illustrating common ICT procurement scenarios and their accounting treatments.
- Develop impairment guidelines tailored to digital assets, drawing on international practices that identify technological obsolescence, interoperability failures, and vendor lock-in as key indicators (European Court of Auditors, 2022).
- Clearer regulatory articulation would reduce ambiguity, enhance compliance, and support more consistent financial reporting.

7.2. Strengthening Institutional Governance and Coordination

Fragmented responsibilities across IT, procurement, accounting, and leadership functions are a central barrier to effective intangible asset management. Addressing this governance gap requires organizational reforms that facilitate cross-functional collaboration.

Key actions include:

- Establishing digital asset governance committees at ministerial and provincial levels that integrate IT, procurement, accounting, and internal audit.
- Embedding accounting considerations into procurement planning, ensuring contracts include cost breakdowns, source-code access terms, and lifecycle documentation requirements.
- Mandating joint review mechanisms for system acceptance and periodic evaluations to ensure alignment between technical performance and accounting treatment.

These measures reflect international recommendations emphasizing integrated decision-making for digital systems (OECD, 2024; Noella et al., 2023).

7.3. Improving Operational Tools for Recognition and Valuation

The study highlights several operational deficiencies—particularly in cost tracking, documentation, and measurement—that undermine compliance with VPSAS 31

Key solutions include:

- Developing standardized cost breakdown templates for ICT procurement, enabling entities to identify capitalizable and non-capitalizable components.
- Requiring segregated invoicing for software development, customization, maintenance, and training.
- Implementing time-tracking systems for internal software development teams to support capitalization of qualifying development costs.
- Creating checklists and decision trees that help practitioners determine whether assets meet VPSAS 31 recognition criteria.

Such tools would address valuation inconsistencies and increase the reliability of historical cost measurement.

7.4. Establishing Lifecycle-Based Digital Asset Management

Effective management of intangible assets requires monitoring beyond acquisition. Public entities should adopt lifecycle-based systems consistent with VPSAS 31 principles.

Recommended actions:

- Implement digital asset registers that capture version histories, configuration changes, updates, vendor information, and maintenance cycles.
- Apply regular performance reviews to identify impairment indicators such as declining usage, redundancy, or incompatibility.
- Introduce impairment assessment protocols that enable timely write-downs and improve the accuracy of financial statements.

These practices would reduce information asymmetry, support budgeting and planning, and improve stewardship of digital public infrastructure.

7.5. Reducing Vendor Lock-In and Enhancing Digital Sovereignty

Vendor dependence represents a major risk to digital sustainability and accounting accuracy. To mitigate this, policymakers should:

- Encourage procurement based on open standards, interoperability, and modular architecture to increase flexibility
- Require source-code escrow arrangements for mission-critical systems.
- Promote competitive procurement practices that avoid exclusive reliance on a single vendor.
- Strengthen contract management capacity so entities can negotiate clauses supporting long-term control and adaptability.

These measures align with OECD guidance on building resilient digital ecosystems and reducing long-term operational risks (OECD, 2024).

7.6. Capacity Building for Accounting and IT Personnel

Implementing VPSAS 31 requires new skills across multiple professional domains. Training should focus on:

- Distinguishing R&D phases in digital projects,
- Assessing control in cloud environments,
- Interpreting procurement contracts for accounting purposes,
- Identifying impairment indicators for software assets,
- Coordinating IT and accounting responsibilities throughout the asset lifecycle.

Joint training programs that bring together accounting officers, IT specialists, procurement staff, and internal auditors would foster a shared understanding of intangible asset governance.

7.7. Whole-of-Government Approach

VPSAS 31 implementation should be seen as part of a broader digital government reform. Aligning accounting rules, procurement systems, IT governance, and human resource development is necessary to strengthen public sector performance. A coordinated national roadmap—combining regulatory updates, institutional restructuring, digital capacity building, and investment in documentation systems—would support sustainable progress.

8. CONCLUSION

This study examined the implementation of VPSAS 31 in Vietnam's public service accounting system, focusing on how intangible assets are recognized, valued, and managed within the broader context of rapid digital transformation. The analysis demonstrates that while Vietnam has made significant regulatory progress through the adoption of VPSAS and the issuance of Circular

24/2024/TT-BTC, practical application remains constrained by longstanding administrative traditions, fragmented governance arrangements, and limited technical and accounting capacities.

The findings reveal systematic challenges in all three pillars of intangible asset accounting. Recognition is hindered by the difficulty of applying conceptual criteria—identifiability, control, and service potential—in a documentation-driven environment. Bundled ICT procurement and insufficient cost segregation prevent entities from distinguishing between research, development, and maintenance activities, leading to both under-recognition and over-capitalization. Valuation is distorted by rigid amortization rules, lack of impairment mechanisms, and incomplete development documentation. These problems mirror international observations that valuation of digital assets requires granular cost visibility and continuous monitoring—capabilities that are not yet fully present in Vietnam. Management challenges arise from fragmented responsibilities across IT, procurement, and accounting units, weak lifecycle governance, absence of digital asset registers, and pervasive vendor lock-in. Collectively, these issues reduce transparency, impair stewardship of digital public infrastructure, and limit the usefulness of financial information for decision-making.

Synthesizing these insights, the study proposes the Hybrid Gap Model, which explains why implementation inconsistencies persist despite clear regulatory reforms. The model identifies three interacting gaps:

- A conceptual gap between the principles-based nature of VPSAS 31 and the form-based procedures of Circular 24;
- An operational gap arising from procurement structures, documentation constraints, and administrative rules;
- A governance gap reflecting fragmented responsibilities and weak digital asset stewardship.

By integrating accounting and digital governance perspectives, the Hybrid Gap Model extends existing IPSAS implementation research, highlighting that digital transformation fundamentally reshapes the conditions under which intangible assets are created, managed, and accounted for. The model also underscores that compliance with VPSAS 31 cannot be achieved through accounting reforms alone; it requires synchronized change in procurement design, IT governance, lifecycle documentation, institutional coordination, and professional capacity.

Practically, the study provides a foundation for regulatory and organizational reforms aimed at improving the visibility, reliability, and sustainability of intangible assets in Vietnam's public sector. Harmonizing VPSAS 31 with Circular 24, standardizing cost breakdowns in ICT procurement, establishing lifecycle-based digital asset registers, and strengthening cross-functional coordination are essential steps toward enhancing compliance and improving digital public service delivery.

As Vietnam advances its national digital government strategy, intangible assets will continue to expand in scale and strategic importance. Future research should examine how emerging technologies—cloud-native architectures, AI-enabled platforms, integrated national databases, and cross-agency digital ecosystems—affect the recognition, valuation, and management of intangible assets. Comparative studies across provinces, sectors, or countries could also deepen understanding of how governance structures shape VPSAS implementation. Such research would support Vietnam's long-term efforts to modernize public financial management and build a more transparent, resilient, and digitally empowered public sector.

Limitations

Despite its contributions, this study has several limitations that should be acknowledged. First, the research relies primarily on qualitative analysis of regulatory documents, institutional reports, and illustrative cases drawn from Vietnam's public service units. While this approach provides deep contextual insight into the implementation of VPSAS 31, it does not allow for systematic measurement of compliance levels across all sectors or regions. Second, the absence of a unified national database on intangible assets—an issue highlighted in the findings—restricts the availability of consistent and comparable empirical data. As a result, some inferences concerning recognition, valuation, and management practices may be indicative rather than comprehensive.

Third, the study focuses on Vietnam as a single-country case within a developing economy context. Although many challenges mirror those reported internationally, the findings may not be fully generalizable to jurisdictions with different administrative traditions, procurement systems, or digital governance structures. Fourth, the Hybrid Gap Model, while analytically useful, is based on interpretive synthesis rather than statistical validation. Its applicability in other settings will require empirical testing and refinement.

Finally, the study examines intangible asset accounting at a specific moment in Vietnam's transition toward VPSAS implementation and broader digital government reform. As regulations evolve, organizational capacities improve, and digital ecosystems mature, some of the challenges identified may shift in significance. These limitations underscore the need for further empirical, comparative, and longitudinal research, which is elaborated in the subsequent section on future research directions.

Future Research

Building on the findings and limitations of this study, several avenues for future research emerge. First, further empirical investigation is needed to examine how other Vietnamese Public Sector Accounting Standards (VPSAS)—such as VPSAS 17 (Property, Plant, and Equipment), VPSAS 12 (Inventories), and VPSAS 33 (First-Time Adoption)—interact with the administrative procedures established by Circular 24/2024/TT-BTC. Since many of these standards contain principles that diverge from historical cost–based administrative practices, comparative analysis could reveal whether the Hybrid Gap Model identified for VPSAS 31 also applies across other standards and sectors.

Second, future research should assess the feasibility and actual level of VPSAS adoption across public service units using mixed methods or large-scale quantitative surveys. The absence of national-level data on intangible assets and the variability in IT maturity across entities currently constrain systematic evaluation. Developing standardized assessment tools or maturity indices—similar to OECD digital government benchmarks—could help measure implementation progress, identify capacity gaps, and support evidence-based policymaking.

Third, deeper investigation into intangible asset accounting is warranted, especially concerning internally generated software, cloud-based solutions, digital databases, and AI-enabled service platforms. These categories challenge traditional notions of control, measurement, and service potential and require theoretical refinements to existing IPSAS/VPSAS frameworks. Longitudinal studies tracking the lifecycle performance and financial reporting of major HIS, ERP, or LMS systems would further illuminate how digital assets evolve and decline over time.

Fourth, cross-country comparative research could strengthen the generalizability of the Hybrid Gap Model. Comparing Vietnam's experience with that of Indonesia, Malaysia, Kenya, Chile, or Eastern European countries adopting IPSAS could reveal how differences in procurement systems, administrative cultures, and digital capabilities shape intangible asset reporting. Such comparisons would help refine the conceptual model and contribute to global public sector accounting literature.

Finally, future research should explore how emerging technologies—including cloud-native architectures, API-based interoperability frameworks, blockchain-enabled audit trails, and AI-driven public services—reshape the conceptual boundaries of intangible assets in the public sector. These technologies challenge conventional recognition and valuation perspectives and may require extensions of VPSAS 31 or the development of new accounting guidance. Understanding these dynamics will be essential as Vietnam advances its digital government strategy and deepens its transition toward accrual-based financial reporting.

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