Jurnal Dinamika Akuntansi dan Bisnis
Vol. 12 (2), 2025, pp 341 – 366

DOI: 10.24815/jdab.v12i2.49195

Determinants of Digital Technology Adoption in Indonesian Government: A Cross-Sectional Study of Government Accountants

Mis Fertyno Situmeang

Department of Accounting, Politeknik Negeri Ambon, Ambon, Indonesia

*Corresponding author: situmeangmis@gmail.com

Received: 13 September 2025 | **Revised**: 7 November 2025 | **Accepted**: 12 November 2025 | **Published**: 6 December 2025

ABSTRACT

This study examines the determinants of digital technology adoption in the Indonesian government. Using a stratified random sampling technique, 487 government accountants from ministries, national agencies, and subnational governments were selected as research participants. Data were analysed using PLS-SEM to assess the individual, organizational, and environmental factors influencing digital technology adoption. The findings indicate that adoption is shaped primarily by individual-level factors, with perceived usefulness and technology readiness emerging as the strongest predictors. Organizational enablers, particularly managerial support and technological infrastructure, also contribute significantly, although resource limitations remain major constraints.

Keywords:
Digital technology adoption, government accountans, institutional theory, technology acceptance model, technology readiness

Determinasi Adopsi Teknologi Digital pada Pemerintah Indonesia: Studi Cross-Sectional pada Akuntan Pemerintah

ABSTRAK
Penelitian ini menguji faktor-faktor yang menentukan adopsi teknologi digital pada pemerintah Indonesia. Dengan menggunakan teknik stratified random sampling, sebanyak 487 akuntan pemerintah dari kementerian, lembaga nasional, dan pemerintah daerah dipilih sebagai responden penelitian. Data dianalisis menggunakan PLS-SEM untuk menilai faktor-faktor individual, organisasional, dan lingkungan yang memengaruhi adopsi teknologi digital. Temuan penelitian menunjukkan bahwa adopsi terutama dibentuk oleh faktor pada tingkat individu, dengan persepsi kegunaan dan kesiapan teknologi muncul sebagai prediktor terkuat. Faktor pendukung organisasi, khususnya dukungan manajerial dan infrastruktur teknologi, juga berkontribusi secara signifikan, meskipun keterbatasan sumber daya tetap menjadi kendala utama.
.

Citation:
Situmeang, M. F. (2025). Determinants of Digital Technology Adoption in Indonesian Government: A Cross-Sectional Study of Government Accountants. *Jurnal Dinamika Akuntansi dan Bisnis, 12(2), 341-365.*

1. Introduction

The global momentum of digital transformation has profoundly altered the ways in which accounting and financial management are conceptualized and practiced. Across industries, the adoption of advanced digital technologies, including artificial intelligence (AI), blockchain, robotic process automation (RPA), cloud-based systems, and data analytics, has substantially transformed professional roles, improved organizational processes, and reinforced governance mechanisms (Dwivedi et al., 2023; Eulerich et al., 2022; Rana et al., 2022).

In the private sector, adoption is often driven by efficiency, competitiveness, and innovation imperatives, with digital tools enabling real-time decision-making, predictive analytics, and streamlined operations (Gardner & Bryson, 2021; Rizvi et al., 2024). In contrast, the digitalization of the public sector encompasses broader societal objectives that extend beyond operational optimization, namely improving service delivery, fostering transparency, and strengthening accountability in line with the principles of good governance (Janssen & van der Voort, 2020; Madkhali & Sithole, 2023).

Indonesia exemplifies the tensions and opportunities within this global shift. The government has actively pursued modernization strategies through initiatives such as e-government platforms, accrual-based accounting standards, and integrated financial management information systems. These initiatives demonstrate a commitment to embedding digital transformation within public financial management. Yet, in practice, digital adoption within Indonesian public institutions has been marked by uneven implementation, bureaucratic rigidity, and structural barriers (Prasodjo, 2025; Singgir et al., 2025). Such inconsistencies raise urgent questions regarding the determinants of digital technology adoption, particularly among government accountants who operate at the nexus of compliance, governance, and service delivery.

The transformative potential of digital technologies in accounting extends far beyond administrative convenience. AI, for example, supports anomaly detection, predictive financial analysis, and evidence-based decision-making, thereby reshaping the epistemic foundations of the profession (Katsamakas, 2024; Nouraldeen, 2023). Blockchain technologies promise immutable and transparent transaction records that enhance accountability and reduce the risks of fraud or misreporting (Afifa et al., 2023; Al-Okaily et al., 2023; Tiron-Tudor et al., 2021). The adoption of cloud-based systems has accelerated, particularly during crises such as the COVID-19 pandemic, enabling institutions to ensure continuity, resilience, and accessibility in financial reporting processes (Adjei et al., 2021; Lutfi et al., 2022; Sastararuji et al., 2022). Similarly, robotic process automation has streamlined routine audit procedures, freeing accountants to focus on analytical tasks that demand professional judgment and expertise (Eulerich et al., 2022). Collectively, these technologies underscore the promise of digital transformation to fundamentally enhance the transparency, efficiency, and responsiveness of financial governance.

However, the realization of these benefits within the public sector remains fraught with challenges. Bureaucratic structures are often rigid and compliance-driven, rendering them resistant to change and innovation (Mergel et al., 2019). Organizational hierarchies and entrenched cultural

norms further exacerbate this resistance, as experimentation and risk-taking are frequently discouraged (Faizal et al., 2022; Grosu et al., 2023). Compounding these challenges is the digital divide, which manifests in unequal access to infrastructure, training, and resources, resulting in disparities across regions and within institutions (Elfaki & Ahmed, 2024; Millán et al., 2021). In emerging economies such as Indonesia, these barriers are particularly acute, where digitalization efforts are frequently hindered by governance deficits, resource constraints, and systemic inertia (Hafel, 2023). The result is a fragmented landscape in which digital initiatives progress unevenly, leaving significant gaps between aspirational policy frameworks and the realities of everyday practice.

The academic literature reflects similar asymmetries. Research on digital adoption has predominantly concentrated on the private sector, where the outcomes of interest are performance-based, including competitiveness, profitability, and innovation capacity (Gardner & Bryson, 2021; Rizvi et al., 2024). Studies that explicitly address the adoption of digital technologies in public sector accounting remain comparatively scarce, despite the sector's critical role in safeguarding fiscal discipline and ensuring accountability in the management of public resources. Theoretical frameworks such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Diffusion of Innovation (DOI) theory have been widely deployed to examine adoption behaviors across industries (Al-Okaily et al., 2023; Asrani & Kar, 2022; Scherer et al., 2019). Yet, their application in the context of public sector accounting remains limited and under-theorized. This is particularly concerning given that adoption in public sector environments cannot be understood solely in terms of efficiency gains but must also account for compliance imperatives, institutional legitimacy, and societal trust.

Moreover, much of the extant literature has focused narrowly on adoption intentions without systematically addressing the interplay between individual-level factors, organizational readiness, and institutional pressures (Mathur et al., 2023; Wang et al., 2023). For example, demographic characteristics such as age, educational background, and professional experience have been shown to influence patterns of technology use in various domains (Guşe & Mangiuc, 2022; Nouraldeen, 2023). However, the specific effects of these demographic variables on government accountants remain underexplored. This omission is particularly problematic in bureaucratic environments where generational divides and hierarchical norms may significantly mediate openness to innovation. At the same time, institutional theory highlights the role of coercive, normative, and mimetic pressures in shaping organizational behavior, yet these dynamics remain insufficiently examined in relation to digital accounting adoption in public sector contexts (Schiavi et al., 2024). Together, these oversights suggest that existing research lacks the granularity necessary to capture the complex determinants of adoption in environments defined by compliance and accountability rather than market competition.

The significance of addressing these gaps is amplified by broader global imperatives. Digital adoption is increasingly intertwined with goals of environmental sustainability, social accountability, and economic resilience (Madkhali & Sithole, 2023). In emerging economies, the

ability to leverage digital technologies is regarded as a critical factor for participating effectively in global innovation systems and sustaining long-term growth (Elfaki & Ahmed, 2024). For Indonesia, digital modernization in public accounting represents more than a technical upgrade; it is a strategic necessity for reinforcing fiscal discipline, enhancing service quality, and strengthening citizen trust in governance structures. Yet, in the absence of rigorous empirical inquiry into the determinants of adoption, policy interventions risk remaining fragmented and ineffective.

Against this backdrop, the present study seeks to advance the discourse by addressing two critical research gaps. First, it extends the application of dominant theoretical frameworks—TAM, UTAUT, and DOI—into the underexplored domain of public sector accounting, thereby capturing the multidimensional drivers of adoption in environments shaped by compliance and governance imperatives. Second, it foregrounds the role of demographic characteristics and institutional pressures, dimensions that remain largely absent in prior research despite their potential significance in shaping adoption behaviors among government accountants. By empirically integrating these perspectives, the study not only contributes to theoretical enrichment but also provides practical insights for policymakers and practitioners tasked with designing strategies to accelerate digital transformation in public financial management.

In light of these considerations, this research is designed to investigate the determinants of digital technology adoption in accounting practice, focusing on government accountants in Indonesia through a cross-sectional study. Over the past two decades, Indonesia has undergone significant public sector accounting reforms aimed at enhancing transparency, accountability, and efficiency in financial management (Harun et al., 2015; McLeod & Harun, 2014). These reforms have been accompanied by the gradual integration of digital technologies such as e-budgeting, e-audit, and integrated financial management information systems (IFMIS), reflecting a broader shift toward digital governance (Amalia, 2023; Prabowo, 2018). However, despite these policy efforts, the implementation of digital tools across public sector accounting entities remains uneven, often constrained by limited technical capacity, inadequate infrastructure, and varying degrees of institutional readiness (Mir & Sutiyono, 2013). Thus, understanding how accountants in the public sector adopt and adapt to digital technologies becomes crucial for ensuring the sustainability of Indonesia's ongoing financial management reforms.

Furthermore, digital technology adoption in Indonesia's public sector is often shaped by regulatory compliance and government mandates rather than voluntary innovation (Harun et al., 2015; Prabowo, 2018). The introduction of digital accounting systems, for instance, frequently follows top-down directives that emphasize accountability and standardized reporting formats, aligning with broader governance reforms under the Ministry of Finance and the Supreme Audit Board. This compliance-driven adoption context raises questions about the extent to which individual, organizational, and institutional factors influence adoption behaviors and long-term engagement with technology (Amalia, 2023; McLeod & Harun, 2014). By situating the inquiry at

the intersection of these dimensions, this study seeks to generate nuanced insights into the drivers and barriers of digital adoption among government accountants.

2. Theoretical framework and hypotheses development

Theoretical foundations of digital adoption

Digital transformation in accounting has become a defining feature of contemporary governance and financial management. The rapid development of artificial intelligence (Dwivedi et al., 2023), blockchain technologies (Al-Okaily et al., 2023), robotic process automation (Eulerich et al., 2022), and cloud-based systems (Adjei et al., 2021; Sastararuji et al., 2022) has disrupted long-established accounting practices. For private organizations, adoption is often motivated by competitive advantage, efficiency, and innovation (Rizvi et al., 2024). In the public sector, however, the rationale is far more complex: accountability, legitimacy, and societal trust stand alongside efficiency as critical motivators (Tiron-Tudor et al., 2021). This difference necessitates a theoretical framework that not only captures individual perceptions of technology but also integrates organizational and institutional dynamics.

Several frameworks have been deployed to explain technology adoption. The Technology Acceptance Model (TAM) emphasizes perceived usefulness and ease of use as the main determinants of individual acceptance. While its parsimony has led to extensive use across disciplines, it has been criticized for underestimating organizational and environmental constraints (Schiavi et al., 2024). The Unified Theory of Acceptance and Use of Technology (UTAUT) extends TAM by including performance expectancy, effort expectancy, social influence, and facilitating conditions, while also accounting for demographic moderators such as age, gender, and experience (Venkatesh et al., 2003). This makes UTAUT particularly suited for contexts where user diversity and institutional expectations are significant, as in the case of government accountants (Abu Afifa et al., 2023).

The Diffusion of Innovation (DOI) theory contributes a broader societal perspective, examining how innovations spread depending on their relative advantage, compatibility, complexity, trialability, and observability(Asrani & Kar, 2022). This theory has been applied to explain uneven adoption of blockchain (Tiron-Tudor et al., 2021), cloud accounting (Lutfi et al., 2022), and digital communications (Asrani & Kar, 2022). However, DOI often fails to incorporate coercive regulations that are particularly decisive in government contexts.

Finally, Institutional Theory provides the most relevant framework for public sector studies. It emphasizes coercive pressures (laws and regulations), normative pressures (professional standards), and mimetic pressures (imitation of peers) as forces shaping organizational behavior (Dimaggio & Powell, 1983). In the realm of digital accounting, these pressures strongly influence adoption, as organizations seek to maintain legitimacy in the eyes of regulators, auditors, and the public (Schiavi et al., 2024).

Together, these frameworks highlight that no single model adequately captures the determinants of digital adoption in the public sector. TAM and UTAUT explain individual

behavior, DOI captures innovation attributes, and Institutional Theory situates adoption within broader governance structures. Integrating these perspectives makes it possible to analyze digital adoption across three dimensions: individual, organizational, and environmental. On this basis, the following sections critically develop hypotheses for this study.

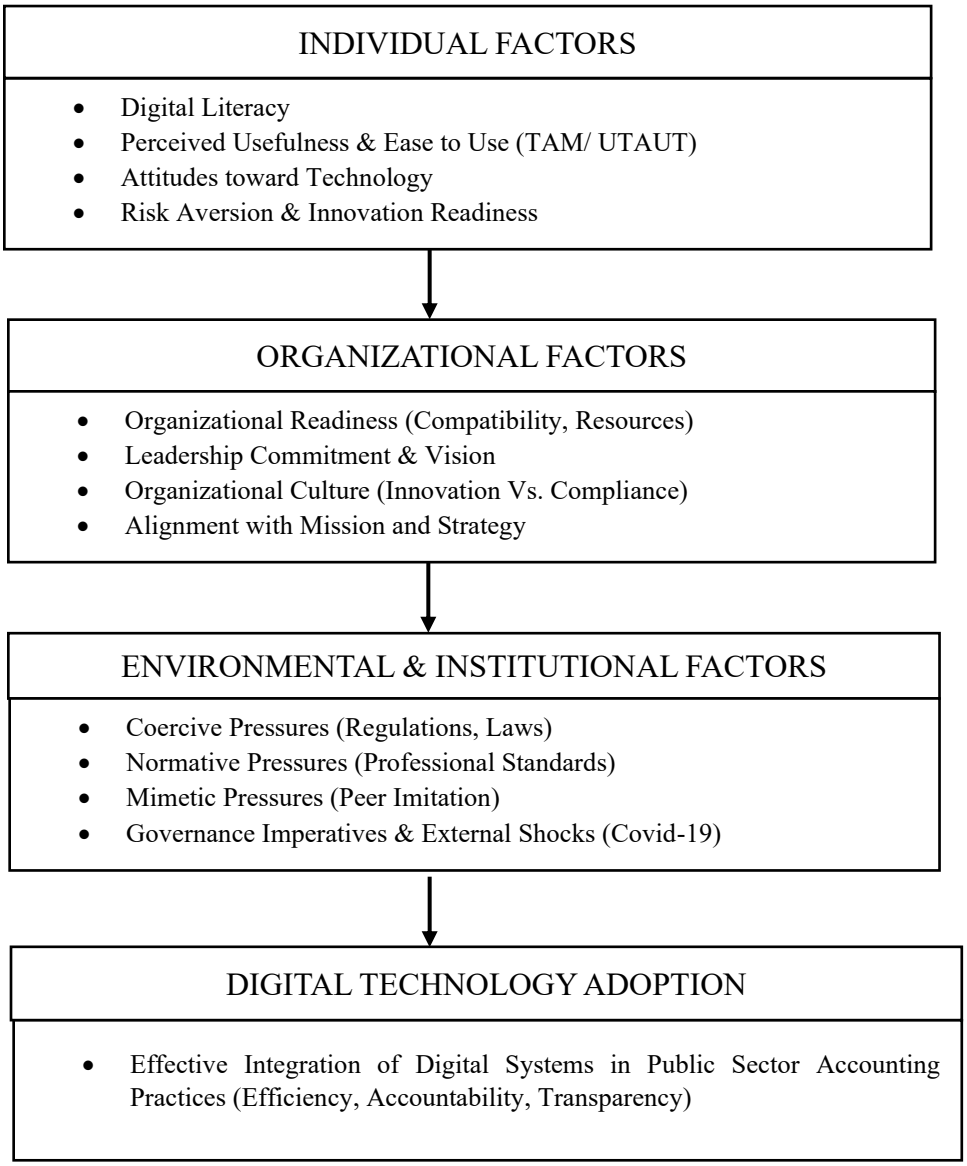

Figure 1. Theoretical Framework of Digital Technology Adoption in Public Sector Accounting

Individual determinants of digital technology adoption

At the micro level, government accountants differ in their readiness, perceptions, and capacities to adopt digital technologies. Digital literacy is one of the most decisive factors. Accountants with higher proficiency in using emerging technologies such as AI, cloud accounting, or blockchain are better able to appreciate their usefulness and integrate them into practice (Faizal

et al., 2022). Conversely, limited digital literacy fosters resistance, as professionals perceive new tools as disruptive to established routines (Grosu et al., 2023).

Demographic characteristics also matter. Younger professionals, often considered "digital natives," may display greater adaptability and openness to digital innovation, while older accountants might prefer conventional systems, perceiving new technologies as burdensome (Guşe & Mangiuc, 2022). Education levels and professional qualifications similarly influence adoption: those exposed to advanced digital tools during training are more likely to accept them as integral to modern accounting practice (Nouraldeen, 2023).

Beyond literacy and demographics, attitudinal factors are central. The TAM argues that perceived usefulness and ease of use directly shape intention to adopt. In the public sector, accountants who view digital tools as enabling efficiency, transparency, and compliance will demonstrate stronger adoption behavior. The UTAUT adds that social influence and facilitating conditions, such as peer encouragement and institutional support, further reinforce adoption intentions. Empirical studies in healthcare (Shahsavar & Choudhury, 2023) and education (Katsamakas et al., 2024) confirm that individual attitudes toward technology are decisive, even under institutional constraints.

Nevertheless, government accountants face unique risks. Risk aversion is stronger in government institutions because errors may be perceived not only as operational failures but also as breaches of compliance. This tension can suppress the willingness to experiment with untested tools. Yet research also shows that individual champions often initiate digital change within accounting organizations, proving that personal readiness can overcome structural rigidity (Tiron-Tudor et al., 2021).

Organizational determinants of digital technology adoption

While individual readiness is critical, organizational structures largely determine whether digital adoption materializes in practice. In bureaucratic settings such as the public sector, individuals operate within rigid frameworks of authority, culture, and resource allocation.

Organizational readiness is central. DOI theory emphasizes that innovations spread more effectively when they are compatible with existing systems and when sufficient resources are allocated (Asrani & Kar, 2022). Empirical studies on SMEs confirm that resource constraints—such as limited infrastructure, budgetary restrictions, and lack of technical support—directly hinder adoption (Al-Hattami & Almaqtari, 2023; Lutfi et al., 2022). Public sector organizations often face similar constraints, as budget cycles and political considerations limit long-term investment in advanced tools such as blockchain or AI.

Leadership plays an equally decisive role. Strong leadership fosters a culture of innovation, encourages experimentation, and mobilizes resources for training and implementation (Tiron-Tudor et al., 2021). Without leadership commitment, digital adoption risks being superficial, limited to compliance with formal mandates rather than genuine transformation. Leaders are also

essential in managing organizational resistance, which is common when employees fear disruption or job insecurity due to automation (Gardner & Bryson, 2021).

Organizational culture amplifies or constrains these dynamics. Cultures that emphasize compliance, risk aversion, and rigid hierarchies may resist digital tools, perceiving them as destabilizing. In contrast, cultures valuing learning and adaptability facilitate smoother transitions (Faizal et al., 2022). In many public sector institutions, hierarchical decision-making slows down innovation, making cultural change as important as technical readiness.

Evidence also points to the role of institutional alignment. When digital initiatives align with broader organizational missions—such as improving accountability, efficiency, or transparency—they are more likely to gain acceptance (Al-Okaily et al., 2023). Conversely, if digitalization is perceived as externally imposed without clear organizational benefit, adoption may remain symbolic rather than substantive.

Environmental and institutional determinants of digital technology adoption

Beyond individuals and organizations, adoption in the public sector is profoundly influenced by environmental and institutional contexts. Unlike private firms that primarily respond to market forces, public institutions are embedded in regulatory frameworks and legitimacy structures.

Institutional Theory highlights the importance of coercive, normative, and mimetic pressures. Coercive pressures are particularly strong in public accounting, where laws, regulations, and government mandates dictate accounting practices. For instance, Indonesia's adoption of accrual-based accounting and e-government platforms reflects such pressures. Normative pressures arise from professional bodies and international standards, which set expectations for digital adoption as a marker of professional legitimacy (Schiavi et al., 2024). Mimetic pressures occur as organizations imitate successful peers, creating momentum toward adoption even without immediate operational benefits.

Governance imperatives amplify these pressures. Digital technologies such as blockchain and cloud systems are promoted as tools for transparency and corruption prevention (Dwivedi et al., 2023; Tiron-Tudor et al., 2021). In this sense, adoption is not only technical but also political, as governments seek to bolster public trust through modernization.

Environmental shocks further accelerate adoption. The COVID-19 pandemic forced organizations worldwide to adopt remote digital systems rapidly (Lutfi et al., 2022; Sastararuji et al., 2022). In Indonesia, such shocks revealed both the necessity and the fragility of digital infrastructure. Similarly, global sustainability goals increasingly position digital technologies as tools for green economic growth, efficiency, and resilience (Elfaki & Ahmed, 2024; Madkhali & Sithole, 2023). These global imperatives add momentum to adoption, even when local readiness is uneven.

Yet, environmental conditions also create barriers. The digital divide, both within countries and across regions, restricts the ability of institutions to adopt advanced technologies equitably

(Millán et al., 2021). In Indonesia, disparities in connectivity and resources undermine uniform adoption, raising questions about inclusivity and effectiveness.

Synthesis and transition

This theoretical framework highlights the need for a multi-level analysis of digital technology adoption in public sector accounting. The discussion of TAM, UTAUT, DOI, and Institutional Theory underscores that adoption cannot be explained solely by individual perceptions, organizational readiness, or institutional mandates in isolation. Instead, adoption emerges from the interplay of individual, organizational, and environmental factors.

Yet, prior research has rarely integrated these levels in a systematic manner. Studies focusing on individual adoption behavior have often neglected institutional constraints; research emphasizing organizational readiness has overlooked the role of professional attitudes; and analyses of institutional pressures have rarely incorporated micro-level determinants. This fragmentation leaves a gap in understanding, particularly in developing economies such as Indonesia, where structural barriers and digital divides complicate adoption.

By positioning the study within this integrative framework, the present research makes a novel contribution. It not only advances theoretical understanding by synthesizing leading models but also provides practical insights for policymakers seeking to design effective digital transformation strategies in the public sector. To empirically test these relationships, the study proceeds with three guiding hypotheses:

H1: Individual factors significantly influence the adoption of digital technologies in Indonesian government.

H2: Organizational factors significantly shape the adoption of digital technologies in Indonesian governments.

H3: Environmental factors significantly contribute to the adoption of digital technologies in Indonesian governments.

3. Research method

Research design

This study employs a quantitative research strategy with a cross-sectional survey design to investigate the determinants of digital technology adoption in public sector accounting. The choice of a cross-sectional design is grounded in its suitability for capturing relationships among variables at a single point in time, allowing for the examination of causal associations and the identification of patterns that might not emerge through qualitative methods. Data were collected through a nationwide survey conducted between March and June 2025, a period that coincided with intensified digital transformation efforts within Indonesian public institutions. This timing provides an appropriate empirical context to assess adoption behavior, particularly as public sector entities faced growing demands to enhance efficiency, transparency, and accountability through digital means.

The cross-sectional survey approach offers both efficiency and analytical clarity, making it well-suited for examining adoption behavior across a large and heterogeneous population (Shahsavar & Choudhury, 2023). Although longitudinal designs could provide deeper insights into the evolution of adoption over time, the cross-sectional method was considered more pragmatic for this study's objectives and timeframe. It captures a timely snapshot of adoption practices during a critical transformation phase while maintaining methodological rigor and contextual relevance—an alignment consistent with calls in accounting and information systems research for balanced empirical approaches (Dwivedi et al., 2023).

Population and sampling

The population of this study comprises government accountants employed in government institutions across Indonesia, including ministries, national agencies, and subnational governments at the provincial, regency, and municipal levels. These professionals were selected because they are directly responsible for financial reporting, auditing, and the management of public resources, functions that are central to the implementation and use of digital accounting technologies.

To ensure representativeness, the study adopted a stratified random sampling technique stratified by administrative level (central, provincial, and local) and institutional type. This approach minimizes sampling bias and enhances external validity by ensuring proportional representation from different tiers of government. The survey was administered between March and June 2025, coinciding with a period of intensified digital transformation initiatives in the Indonesian public sector.

The minimum sample size was calculated using Cochran's formula, applying a 95% confidence level and a 5% margin of error, which resulted in a requirement of 384 respondents. To account for possible non-response and incomplete submissions, the target sample size was increased to 487 respondents, consistent with methodological recommendations for Structural Equation Modeling (SEM) studies that require large and diverse samples for reliable estimation (Al-Okaily, 2024). Eligibility criteria required participants to have a minimum of two years of professional experience in public sector accounting and active involvement in the use or implementation of digital accounting systems. These criteria ensured that the responses reflected practical experience and informed perspectives, thereby strengthening the study's construct validity and empirical robustness.

Variables and operational definitions

This study investigates the determinants of digital technology adoption in public sector accounting practice by organizing the variables into three analytical levels—individual, organizational, and environmental. The dependent variable represents the extent to which digital tools such as cloud systems, blockchain, and artificial intelligence are integrated into accounting operations. The independent variables draw from established theoretical models, including the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology

(UTAUT), Diffusion of Innovation (DOI), and Institutional Theory, ensuring conceptual depth and multidimensional coverage. Importantly, certain constructs from the original UTAUT model—specifically social influence and facilitating conditions—were excluded from the individual-level analysis to avoid conceptual overlap, as they are more appropriately situated within organizational and institutional contexts. All variables were measured using five-point Likert scales, adapted from validated instruments to fit Indonesia's public sector context while maintaining consistency with established global measures.

Instruments and data collection

Data collection employed a structured questionnaire, developed from previously validated instruments and refined through expert review to ensure contextual appropriateness for Indonesia's public sector environment. The instrument comprised four main sections: (1) respondent profile, (2) individual perceptions of digital technologies, (3) organizational and environmental conditions, and (4) adoption outcomes. The survey was administered using a mixed-mode approach—online distribution via Google Forms to maximize national reach and in-person administration within selected ministries, agencies, and regional offices to include respondents with limited internet access.

Data collection was carried out over a three-month period, from March to June 2025, with structured follow-up reminders and institutional coordination to enhance participation. Of the 487 questionnaires distributed, 412 valid responses were received, representing an effective response rate of 84.6% after excluding incomplete or inconsistent entries. This high response rate strengthens the reliability and representativeness of the dataset across Indonesia's public institutions. Content validity was ensured through review by a panel of academic and professional experts, while construct validity was subsequently confirmed using confirmatory factor analysis (CFA) following the procedures outlined by Fernando et al. (2018).

Data analysis

The analytical strategy relies on Partial Least Squares Structural Equation Modelling (PLS-SEM), implemented via SmartPLS 4.0. PLS-SEM was chosen for its ability to handle complex models with reflective and formative constructs, as well as its robustness when data depart from normality (Janssen & van der Voort, 2020). The analysis proceeded in two stages:

1. Measurement model evaluation: convergent validity, discriminant validity, and construct reliability were assessed through average variance extracted (AVE), Fornell–Larcker criteria, and Cronbach's alpha, respectively.
2. Structural model evaluation: hypotheses were tested by examining path coefficients, R^2 values, and significance levels obtained through bootstrapping procedures.

Table 1. Variables and operational definitions

Level	Variable	Definition / conceptual Basis	Measurement and source	Notes on inclusion / exclusion
Dependent variable	Digital Technology Adoption in Accounting Practice	The degree to which digital tools (e.g., cloud systems, blockchain, artificial intelligence) are utilized and integrated into accounting activities within public institutions. Reflects both the extent and effectiveness of digital use.	Measured using a five-point Likert scale assessing frequency and integration level of digital systems. Adapted from (Afifa et al., 2023; Lutfi et al., 2022)	—
Individual level	Perceived Usefulness (PU)	The extent to which an individual believes that using digital technology enhances job performance and efficiency in accounting tasks (TAM, Davis, 1989).	Likert scale items adapted from prior TAM studies.	Included as a core TAM construct.
	Perceived Ease of Use (PEOU)	The degree to which an individual believes that digital technology is easy to understand and operate (TAM, Davis, 1989).	Likert scale items adapted from prior TAM studies.	Included as a core TAM construct.
	Technology Readiness (TR)	The individual's willingness and confidence to embrace and use new technologies, reflecting optimism, innovativeness, and comfort with digital tools.	Adapted from (Parasuraman, 2000) using a five-point Likert scale.	Included to capture psychological readiness.
	Demographic Attributes	Characteristics including age, education level, and professional experience, which may influence digital adoption behavior.	Self-reported categorical data.	Included as control variables.
	Excluded UTAUT Variables: Social Influence (SI) and Facilitating Conditions (FC)	In the original UTAUT framework, SI refers to perceived social pressure to use technology, and FC relates to organizational and technical support availability.	-	Excluded because both constructs conceptually align with organizational and institutional factors rather than individual perceptions.
Organizational level	Management Support	The degree of encouragement, strategic direction, and resources provided by top management to support digital technology use.	Five-point Likert scale adapted from Tiron-Tudor (2021).	Included as a structural determinant.
	Technological Infrastructure	Availability and adequacy of digital systems, networks, and tools within the organization to support accounting digitalization.	Adapted from DOI-based measures (Tiron-Tudor, 2021).	Included as a key enabling factor.

	Organizational Culture	The shared norms and values that support innovation, learning, and openness to technology within public institutions.	Measured through items adapted from organizational change literature.	Included as a cultural determinant.
	Resource Availability	The extent to which financial, human, and technical resources are available to support technology implementation.	Measured via Likert items adapted from prior organizational adoption studies.	Included for structural completeness.
Environmental / Institutional level	Government Regulation	Policies, standards, and mandates established by the government to guide digital transformation in public sector accounting.	Measured using Likert-scale items reflecting perceived regulatory influence.	Included as a coercive institutional force.
	External Institutional Pressure	The extent of normative and mimetic pressures from peer institutions, auditors, and professional associations to adopt digital systems.	Adapted from Institutional Theory measures (Schiavi, 2024).	Included as a normative/mimetic factor.
	Vendor Support	The level of technical assistance, maintenance, and training provided by external technology vendors.	Likert-scale measurement adapted from prior IS adoption studies.	Included as an external enabling factor.

Descriptive statistics were used to profile respondents and provide an overview of adoption levels. Diagnostic tests included the Kolmogorov–Smirnov test for normality and variance inflation factors (VIF) for multicollinearity. Underlying assumptions—linearity, independence of observations, and homoscedasticity—were verified prior to hypothesis testing.

Ethical considerations

Ethical rigor was prioritized throughout the study. Approval was secured from the institutional review board, and all participants provided informed consent prior to participation. Confidentiality was safeguarded through anonymization of responses, and respondents retained the right to withdraw at any stage without consequence. Data were encrypted and stored securely, in line with international data protection standards (Nouraldeen, 2023). These measures ensure that the study aligns not only with academic integrity but also with the ethical imperatives of research involving public officials.

4. Results and discussion

Results

Respondent Characteristics

The study collected data from 487 government accountants employed across ministries, provincial governments, and local governments in Indonesia (Table 2). This distribution reflects the stratified random sampling design, ensuring that the sample adequately represents the targeted population of accountants operating at different levels of government.

Specifically, the respondents comprised:

- 156 accountants (32.0%) from central government institutions,
- 168 accountants (34.5%) from provincial governments, and
- 163 accountants (33.5%) from regency/municipal governments.

Table 2. Demographic characteristics of respondents

Characteristic	Category	Frequency	Percentage (%)
Age	25–35 years	189	38.8
	36–45 years	156	32.0
	46–55 years	108	22.2
	>55 years	34	7.0
Education	Bachelor's in Accounting	298	61.2
	Master's in Accounting	156	32.0
	Master's non-Accounting	23	4.7
	Doctoral Degree	10	2.1
Work Experience	2–5 years	134	27.5
	6–10 years	167	34.3
	11–20 years	142	29.2
	>20 years	44	9.0
Institution Type	Ministries/Agencies	156	32.0
	Provincial Government	168	34.5
	Local Government	163	33.5

Most respondents fall within the productive age range of 25–45 years (70.8%), suggesting a relatively high degree of digital affinity. Educational attainment is dominated by Bachelor's (61.2%) and Master's degrees in accounting (32.0%), reflecting sufficient academic preparation to engage with digital technologies. Work experience is well distributed, with 63.5% having 6–20 years of tenure, thereby combining technical maturity with adaptability. Institutional representation is balanced across administrative levels, providing a solid foundation for generalizing the findings.

Descriptive statistics of research variables

Descriptive analysis offers an overview of respondents' perceptions (Table 3). The dependent variable, digital technology adoption, records a mean score of 3.42 (SD = 0.78) on a five-point scale, indicating a moderate level of adoption.

Table 3. Descriptive statistics of research variables

Variable	Mean	SD	Min	Max
Individual factors				
Perceived usefulness	3.68	0.82	1.0	5.0
Perceived ease of use	3.24	0.91	1.0	5.0
Technology readiness	3.51	0.76	1.0	5.0
Organizational factors				
Management support	3.12	0.95	1.0	5.0
Technological infrastructure	2.98	0.88	1.0	5.0
Organizational culture	3.35	0.84	1.0	5.0
Resource availability	2.87	0.92	1.0	5.0
Environmental factors				
Government regulation	3.78	0.79	1.0	5.0
External pressure	3.29	0.86	1.0	5.0
Vendor support	3.15	0.89	1.0	5.0
Dependent variable				
Digital technology adoption	3.42	0.78	1.0	5.0

Government regulation achieved the highest score (M = 3.78), underscoring the coercive pressures emphasized by institutional theory. Conversely, resource availability scored the lowest (M = 2.87), revealing the primary operational barrier to implementation. The relatively high scores on perceived usefulness (M = 3.68) and technology readiness (M = 3.51) provide initial support for H1, suggesting that individual-level factors play a decisive role.

Measurement model evaluation

Convergent validity testing showed all outer loadings above 0.7 (Table 4). Average Variance Extracted (AVE) values exceeded 0.5, and Composite Reliability (CR) ranged from 0.876 to 0.928, confirming the constructs' validity and internal consistency.

Table 4. Convergent validity test results

Construct	Indicators	Outer loading	AVE	CR
Perceived usefulness	PU1–PU4	0.798–0.856	0.689	0.915
Perceived ease of use	PE1–PE4	0.789–0.835	0.663	0.887
Technology readiness	TR1–TR4	0.753–0.834	0.641	0.876
Management support	MS1–MS4	0.801–0.896	0.724	0.928
Digital adoption	ATD1–ATD4	0.813–0.856	0.695	0.901

All constructs satisfied the thresholds for reliability and validity. Cronbach's Alpha values ranged from 0.798 to 0.891, further confirming measurement stability. These results ensure that the instrument is robust for testing the study's hypotheses (H1–H3).

Structural Model Evaluation

Collinearity testing showed all VIF values below 3.0, ruling out multicollinearity concerns (Table 5). The model produced an R^2 value of 0.672, meaning that 67.2% of the variance in digital technology adoption is explained by individual, organizational, and environmental factors—a substantial level according to Cohen's criteria.

Table 5. Hypothesis testing results

Hypothesis	Path	β	t	p	Decision
H1	Individual → Adoption	0.284	4.567	0.000	Accepted
H2	Organizational → Adoption	0.245	4.123	0.000	Accepted
H3	Environmental → Adoption	0.212	3.678	0.000	Accepted

- H1: Accepted. Individual factors exert the strongest effect, led by perceived usefulness ($\beta = 0.284$, $p < 0.001$). This reinforces TAM and UTAUT propositions.
- H2: Accepted. Organizational factors, particularly management support ($\beta = 0.245$, $p < 0.001$), are critical in translating individual readiness into actual adoption.
- H3: Accepted. Environmental factors significantly shape adoption, with government regulation as the primary driver, consistent with institutional theory.

Final Structural Model

The final model highlights digital adoption as a multidimensional phenomenon:

1. Individual factors dominate, particularly perceived usefulness, but their effect is magnified by organizational conditions.
2. Organizational factors, such as management support and infrastructure, act as enablers or barriers depending on their adequacy.
3. Environmental factors, especially government regulation, provide coercive direction but require organizational capacity and individual readiness to be effective.

Predictive relevance was confirmed with $Q^2 = 0.487$, while model fit was acceptable (SRMR = 0.063).

Discussion

The empirical findings of this study reveal that the adoption of digital technologies in public sector accounting is driven simultaneously by individual, organizational, and environmental factors. All three hypotheses (H1–H3) were supported, with individual-level determinants exerting the strongest influence, followed by organizational and environmental dimensions. This outcome not only validates the integrative conceptual model underpinning the research but also offers critical insights into the unique dynamics of technology adoption in the Indonesian public sector.

Individual Determinants

The results confirm that individual factors constitute the most influential predictors of digital adoption among accountants. Specifically, perceived usefulness ($\beta = 0.284$, $p < 0.001$) emerged as the strongest path coefficient, indicating that accountants are more likely to adopt digital tools when they believe such technologies enhance efficiency, compliance, and transparency. This finding is consistent with the Technology Acceptance Model (TAM), which identifies perceived usefulness as the central determinant of behavioral intention (Scherer et al., 2019; Venkatesh et al., 2003). Similarly, the Unified Theory of Acceptance and Use of Technology (UTAUT) highlights performance and effort expectancy as essential predictors of technology adoption (Abu Afifa et al., 2023).

These results corroborate prior research showing that digital adoption is largely driven by individual readiness and perceived performance gains. For instance, Al-Hattami & Almaqtari (2023) found that accountants' continuance intentions toward digital accounting systems were strongly influenced by perceived usefulness and technology self-efficacy. Likewise, Sastararuji et al. (2022) and Adjei et al. (2021) demonstrated that individual confidence and perceived benefits significantly outweigh institutional or regulatory pressures in driving digital adoption among SMEs and accounting professionals.

The relatively high mean scores for perceived usefulness (3.68) and technology readiness (3.51) further reflect accountants' openness toward digital transformation. This is consistent with earlier studies showing that younger and digitally literate professionals tend to exhibit greater adaptability to technological change (Faizal et al., 2022; Guşe & Mangiuc, 2022; Nouraldeen, 2023). Such findings are also reinforced by Elfaki & Ahmed (2024) and Rizvi et al., (2024), who argued that human capital readiness and innovation orientation are key drivers of digital adoption in emerging economies. Given that most respondents in this study were within the productive age bracket of 25–45 years, their familiarity with technology likely amplified their readiness to engage with digital tools.

However, this study also reveals a persistent tension between digital optimism and institutional risk aversion. As Grosu et al. (2023) and Dwivedi et al. (2023) observed, perceived usefulness can be undermined by concerns over data integrity, audit reliability, and compliance failures. Within public institutions, such risk-averse behavior may suppress innovative intent even when individual readiness is high (Dimaggio & Powell, 1983; Schiavi et al., 2024). Consequently,

while individual-level determinants remain the dominant predictors of adoption, sustained digital transformation ultimately requires reinforcement through supportive organizational structures and institutional frameworks (Madkhali & Sithole, 2023).

Organizational Determinants

The second hypothesis (H2) was also validated, indicating that organizational factors exert a significant influence on digital adoption ($\beta = 0.245$, $p < 0.001$). Among these, management support emerged as a particularly critical determinant. This finding reinforces prior research emphasizing leadership commitment as essential for mobilizing resources, driving cultural change, and legitimizing technological experimentation (Tiron-Tudor et al., 2021). Without strong managerial advocacy, digital adoption often remains symbolic—focused on compliance rather than transformation.

These results align with previous studies underscoring the centrality of leadership in successful digital transformation. For instance, Al-Hattami & Almaqtari (2023) found that managerial support and strategic orientation toward technology were the main determinants of the continuance intention of digital accounting systems in SMEs. Similarly, Al-Okaily et al. (2023) confirmed that visionary leadership plays a crucial role in enabling digital accounting transformation in the banking sector. Adjei et al. (2021)further demonstrated that the adoption of cloud computing in Ghana depends not only on technological readiness but also on institutional legitimacy and policy support. These convergent findings suggest that management commitment serves as both a motivational and legitimizing force in the organizational adoption of digital technologies.

However, the descriptive statistics in this study reveal a structural weakness within public organizations. Resource availability obtained the lowest mean score (2.87), followed closely by technological infrastructure (2.98). This mirrors the challenges reported by Lutfi et al. (2022), who noted that budgetary constraints and rigid procurement cycles impede technology investment, particularly in advanced solutions such as AI and blockchain. Similarly, Afifa et al. (2023) and Al-Okaily et al. (2023) argued that, in emerging economies, the conceptual support for digital transformation often outpaces the availability of tangible resources necessary for implementation. Therefore, even where managerial commitment exists, its effectiveness may be undermined by structural and financial limitations.

Organizational culture also surfaced as a nuanced determinant. With a mean score of 3.35, the findings indicate moderate support for digital innovation, yet entrenched hierarchies and compliance-driven routines continue to restrict change (Faizal et al., 2022). This aligns with Mergel et al. (2019), who observed that bureaucratic public-sector environments tend to prioritize stability and accountability over experimentation and risk-taking. From an institutional perspective, such resistance reflects the isomorphic pressures described by Dimaggio & Powell (1983), wherein organizations conform to established norms at the expense of innovation. Schiavi

et al. (2024) similarly noted that institutional rigidity within accounting systems can impede the digital transformation process, even when individual and managerial readiness is present.

Taken together, these findings extend prior research by demonstrating that while managerial support remains a powerful driver, successful digital adoption in public organizations depends on the alignment between leadership commitment, resource adequacy, and adaptive organizational culture. Consistent with Madkhali & Sithole (2023) and Elfaki & Ahmed (2024), sustainable digital transformation requires not only supportive management but also an institutional ecosystem that fosters innovation, learning, and cross-functional collaboration.

Environmental Determinants

The third hypothesis (H3) received empirical support, albeit with a comparatively smaller effect size ($\beta = 0.212$, $p < 0.001$). Among the environmental variables, government regulation emerged as the most salient factor ($M = 3.78$), consistently recognized by respondents as a strong external driver of digital adoption. This finding aligns with Institutional Theory, which emphasizes that organizational behavior is shaped by coercive pressures arising from laws, mandates, and policy frameworks (Dimaggio & Powell, 1983). In the Indonesian context, the government's regulatory initiatives—particularly the enforcement of accrual-based accounting standards and the development of e-government platforms—have created a compelling institutional environment for digital transformation (Janssen & van der Voort, 2020).

This result resonates with findings from Adjei et al. (2021), who observed that cloud computing adoption in Ghana was largely influenced by institutional mandates and policy support rather than by voluntary technological enthusiasm. Similarly, Afifa et al. (2023) and Al-Okaily et al. (2023) found that blockchain and digital accounting adoption in emerging economies are predominantly shaped by top-down regulatory frameworks, often reflecting compliance motivations rather than proactive innovation. Eulerich et al. (2022) and Rana et al. (2022) Further noted that in regulated industries such as accounting and auditing, digital adoption tends to follow coercive institutional patterns where compliance imperatives outweigh strategic creativity. These studies collectively affirm that while regulatory pressure is an essential catalyst, it often induces formal rather than transformative adoption.

However, reliance on regulation alone risks creating a compliance-oriented trajectory of digital adoption, where organizations focus on satisfying formal mandates rather than achieving substantive technological transformation. The relatively lower mean scores of normative and mimetic pressures in this study corroborate this interpretation. Such imbalances between coercive and normative forces are consistent with Schiavi et al. (2024), who argued that institutional pressures in the public sector are often asymmetrical—coercive mechanisms dominate, while professional norms and peer emulation remain underdeveloped. Similarly, Faizal et al. (2022) emphasized that without strong professional standards and shared digital competencies, regulatory enforcement alone cannot sustain meaningful digital integration within accounting systems.

In addition, environmental inequality remains a critical challenge. While regulatory directives apply uniformly across institutions, the capacity for implementation varies significantly across regions, reflecting disparities in infrastructure, digital literacy, and resource endowment. This structural divide echoes Millán et al. (2021), who found that digital adoption in European enterprises was unevenly distributed, with smaller and less-resourced entities lagging behind despite similar policy exposure. Likewise, Elfaki & Ahmed (2024) highlighted that in Asia-Pacific contexts, digital transformation outcomes are uneven due to variations in local technological ecosystems and innovation capacity. Such disparities suggest that coercive institutional pressures must be complemented by capacity-building programs and technological investments to ensure that digital transformation is inclusive and sustainable.

Furthermore, emerging studies highlight the growing role of global technological diffusion in reinforcing environmental determinants. For instance, Dwivedi et al. (2023) and Rizvi et al. (2024) emphasized that digital adoption is increasingly shaped by cross-border innovation trends, global policy diffusion, and collaborative learning across sectors. These global environmental dynamics can act as mimetic forces that gradually balance coercive regulation with shared innovation norms—an evolution that may enhance long-term sustainability in digital governance.

Integrative insights

Taken together, the findings substantiate the proposition that digital adoption in public sector accounting is multidimensional. Individual readiness represents the most immediate determinant, but it cannot be disentangled from the enabling role of organizational resources and the legitimizing force of environmental pressures. The model's explanatory power ($R^2 = 0.672$) confirms the relevance of integrating TAM, UTAUT, DOI, and Institutional Theory in a single analytical framework.

The interaction among these factors also reveals important synergies. Individual accountants who perceive digital technologies as useful are more likely to adopt them when supported by proactive management and adequate infrastructure. Conversely, even positive perceptions cannot overcome systemic constraints where organizational support and resources are lacking. Similarly, government regulations provide a powerful impetus but may result in shallow adoption unless reinforced by individual acceptance and organizational readiness.

These results echo calls in the literature for holistic approaches to digital transformation in public governance (Janssen & van der Voort, 2020; Madkhali & Sithole, 2023). The interplay of individual, organizational, and institutional dimensions suggests that piecemeal interventions—whether regulatory mandates, leadership initiatives, or training programs—are insufficient in isolation. Instead, comprehensive strategies are required, integrating top-down regulatory direction with bottom-up capacity building and cultural change.

Implications and critical reflections

From a policy perspective, the findings highlight that regulatory frameworks in Indonesia are relatively advanced and provide strong directional impetus for adoption. However, regulatory success is contingent upon overcoming persistent resource and infrastructure deficits within public institutions. Without tangible investment in digital infrastructure and training, regulatory mandates risk reinforcing compliance-driven adoption rather than fostering meaningful transformation.

For organizational leaders, the results underscore the critical importance of visible and sustained managerial support. Leaders must not only endorse digital initiatives but also allocate resources, incentivize innovation, and model openness to technological change. Absent such leadership, individual enthusiasm may dissipate in the face of structural resistance.

Finally, for practitioners, the findings reaffirm the salience of individual perceptions and readiness. Training programs, professional development, and digital literacy initiatives remain essential for equipping accountants with the skills and confidence required to navigate emerging technologies.

5. Conclusion

This study critically examined the determinants of digital technology adoption in public sector accounting in Indonesia, integrating insights from TAM, UTAUT, DOI, and Institutional Theory. The findings demonstrate that adoption is a multidimensional phenomenon, shaped simultaneously by individual, organizational, and environmental factors, with individual determinants exerting the strongest effect. Perceived usefulness and technology readiness emerged as the most decisive drivers, confirming the importance of cognitive and attitudinal factors highlighted in technology acceptance literature. Organizational dimensions, particularly management support and infrastructure, acted as crucial enablers, though persistent resource constraints represented a significant barrier to implementation. Environmental factors, especially government regulation, were found to provide strong coercive impetus but also revealed the risk of compliance-oriented adoption in the absence of adequate individual and organizational readiness. Together, these findings advance both theory and practice by showing that digital adoption in the public sector cannot be understood through a single lens but requires a holistic model that integrates individual agency, organizational capacity, and institutional pressures. In the Indonesian context, where modernization is both a political and technical necessity, the results underscore that achieving meaningful transformation depends not merely on regulatory frameworks but on strengthening the interplay between personal competence, managerial leadership, and institutional support.

Despite its contributions, this research is not without limitations. First, its cross-sectional design provides a snapshot of adoption practices at a particular moment in time, preventing the capture of temporal dynamics such as evolving perceptions, changing organizational priorities, or shifts in regulatory emphasis. Longitudinal studies would be necessary to reveal how adoption trajectories unfold and how sustained engagement with digital systems might alter attitudes and

behaviors over time. Second, the reliance on self-reported survey data may introduce bias, as respondents might overstate their readiness or underreport organizational challenges due to social desirability or perceived institutional expectations. While validity and reliability tests mitigated such concerns, qualitative methods such as interviews or ethnographic observations could provide richer insights into the lived experiences of public accountants. Third, although the sample of 487 respondents was statistically robust and geographically diverse, it remains limited to Indonesia; cultural, political, and infrastructural conditions may differ significantly across countries. Consequently, generalizability beyond this context should be approached with caution. Lastly, the research model, while comprehensive, did not incorporate potentially relevant external variables such as digital literacy training programs, inter-agency collaboration, or citizen-driven demands for transparency, all of which may further enrich understanding of adoption behavior in the public sector.

Building on these findings and limitations, several critical directions are suggested. For policy makers, the results indicate that regulatory mandates, though effective in creating strong coercive pressure, must be complemented by targeted investments in infrastructure and human resource capacity. Without these, adoption risks becoming a mere formality rather than a transformative process. Tailored policies that reduce the digital divide across regions, particularly between central and local governments, would ensure that modernization efforts are inclusive and sustainable. For organizational leaders, proactive managerial support must go beyond rhetorical endorsement to include budget allocation, technical assistance, and cultural change initiatives that legitimize experimentation and reduce resistance. Leadership training aimed at fostering innovation-oriented cultures in public institutions could accelerate the institutionalization of digital practices. For practitioners, continuous professional development and digital literacy programs should be prioritized, equipping accountants with not only technical skills but also the confidence to navigate risks associated with technological change. Finally, for future research, extending the current model through longitudinal and mixed-methods designs would yield deeper insights into the dynamics of adoption. Comparative studies across countries could also illuminate the role of contextual variables, while integrating perspectives from citizens and stakeholders would broaden the analysis of accountability and transparency outcomes. Ultimately, moving beyond compliance toward meaningful digital transformation in public accounting requires integrated strategies that balance regulatory imperatives with organizational readiness and individual empowerment, ensuring that digital technologies enhance—not merely replace—governance processes.

References

Abu Afifa, M. M., Vo Van, H., & Le Hoang Van, T. (2023). Blockchain adoption in accounting by an extended UTAUT model: empirical evidence from an emerging economy. *Journal of Financial Reporting and Accounting*, *21*(1), 5–44. https://doi.org/10.1108/JFRA-12-2021-0434

Adjei, J. K., Adams, S., & Mamattah, L. (2021). Cloud computing adoption in Ghana; accounting

for institutional factors. *Technology in Society*, *65*. https://doi.org/10.1016/j.techsoc.2021.101583

Afifa, M. M. A., Vo Van, H., & Le Hoang Van, T. (2023). Blockchain adoption in accounting by an extended UTAUT model: empirical evidence from an emerging economy. *Journal of Financial Reporting and Accounting*, *21*(1), 5–44. https://doi.org/10.1108/JFRA-12-2021-0434

Al-Hattami, H. M., & Almaqtari, F. A. (2023). What determines digital accounting systems' continuance intention? An empirical investigation in SMEs. *Humanities and Social Sciences Communications*, *10*(1). https://doi.org/10.1057/s41599-023-02332-3

Al-Okaily, M., Al-Majali, D., Al-Okaily, A., & Majali, T. (2023). Blockchain technology and its applications in digital accounting systems: insights from Jordanian context. *Journal of Financial Reporting and Accounting*. https://doi.org/10.1108/JFRA-05-2023-0277

Amalia, M. M. (2023). Enhancing Accountability and Transparency in the Public Sector: A Comprehensive Review of Public Sector Accounting Practices. *The ES Accounting And Finance*, *1*(03), 160–168. https://doi.org/10.58812/esaf.v1i03.105

Asrani, C., & Kar, A. K. (2022). Diffusion and adoption of digital communications services in India. *Information Technology for Development*, *28*(3), 488–510. https://doi.org/10.1080/02681102.2022.2046536

Dimaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. In *Source* (Vol. 48, Issue 2). American Sociological Review.

Dwivedi, Y. K., Sharma, A., Rana, N. P., Giannakis, M., Goel, P., & Dutot, V. (2023). Evolution of artificial intelligence research in Technological Forecasting and Social Change: Research topics, trends, and future directions. *Technological Forecasting and Social Change*, *192*. https://doi.org/10.1016/j.techfore.2023.122579

Elfaki, K. E., & Ahmed, E. M. (2024). Digital technology adoption and globalization innovation implications on Asian Pacific green sustainable economic growth. *Journal of Open Innovation: Technology, Market, and Complexity*, *10*(1). https://doi.org/10.1016/j.joitmc.2024.100221

Eulerich, M., Pawlowski, J., Waddoups, N. J., & Wood, D. A. (2022). A Framework for Using Robotic Process Automation for Audit Tasks*. *Contemporary Accounting Research*, *39*(1), 691–720. https://doi.org/10.1111/1911-3846.12723

Faizal, S. M., Jaffar, N., & Mohd nor, A. S. (2022). Integrate the adoption and readiness of digital technologies amongst accounting professionals towards the fourth industrial revolution. *Cogent Business and Management*, *9*(1). https://doi.org/10.1080/23311975.2022.2122160

Gardner, E. C., & Bryson, J. R. (2021). The dark side of the industrialisation of accountancy: innovation, commoditization, colonization and competitiveness. *Industry and Innovation*, *28*(1), 42–57. https://doi.org/10.1080/13662716.2020.1738915

Grosu, V., Cosmulese, C. G., Socoliuc, M., Ciubotariu, M. S., & Mihaila, S. (2023). Testing

accountants' perceptions of the digitization of the profession and profiling the future professional. *Technological Forecasting and Social Change*, *193*. https://doi.org/10.1016/j.techfore.2023.122630

Guşe, G. R., & Mangiuc, M. D. (2022). Digital Transformation in Romanian Accounting Practice and Education: Impact and Perspectives. *Amfiteatru Economic*, *24*(59), 252–267. https://doi.org/10.24818/EA/2022/59/252

Hafel, M. (2023). Digital Transformation in Politics and Governance in Indonesia: Opportunities and Challenges in the Era of Technological Disruption. *Society*, *11*(2), 742–757. https://doi.org/10.33019/society.v11i2.577

Harun, H., Van-Peursem, K., & Eggleton, I. R. C. (2015). Indonesian public sector accounting reforms: Dialogic aspirations a step too far? *Accounting, Auditing and Accountability Journal*, *28*(5), 706–738. https://doi.org/10.1108/AAAJ-12-2012-1182

Janssen, M., & van der Voort, H. (2020). Agile and adaptive governance in crisis response: Lessons from the COVID-19 pandemic. *International Journal of Information Management*, *55*. https://doi.org/10.1016/j.ijinfomgt.2020.102180

Katsamakas, E. et all. (2024). Artificial intelligence and the transformation of higher education institutions. *Scientific Data*, *1*(2), 1–12.

Katsamakas, E., Pavlov, O. V, Saklad, R., Katsamakas, E., Pavlov, O. V, & Saklad, R. (2024). *Artificial intelligence and the transformation of higher education institutions*.

Lutfi, A., Alkelani, S. N., Al-Khasawneh, M. A., Alshira'h, A. F., Alshirah, M. H., Almaiah, M. A., Alrawad, M., Alsyouf, A., Saad, M., & Ibrahim, N. (2022). Influence of Digital Accounting System Usage on SMEs Performance: The Moderating Effect of COVID-19. *Sustainability (Switzerland)*, *14*(22). https://doi.org/10.3390/su142215048

Madkhali, A., & Sithole, S. T. M. (2023). Exploring the role of information technology in supporting sustainability efforts in Saudi Arabia. *Sustainability (Switzerland)*, *15*(16), 1–20. https://doi.org/10.3390/su151612375

Mathur, M., Kapoor, T., & Swami, S. (2023). Readiness for organizational change: the effects of individual and organizational factors. *Journal of Advances in Management Research*, *20*(4), 730–757. https://doi.org/10.1108/JAMR-02-2023-0032

McLeod, R. H., & Harun, H. (2014). Public Sector Accounting Reform at Local Government Level in Indonesia. *Financial Accountability and Management*, *30*(2), 238–258. https://doi.org/10.1111/faam.12035

Mergel, I., Edelmann, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, *36*(4). https://doi.org/10.1016/j.giq.2019.06.002

Millán, J. M., Lyalkov, S., Burke, A., Millán, A., & van Stel, A. (2021). 'Digital divide' among European entrepreneurs: Which types benefit most from ICT implementation? *Journal of Business Research*, *125*, 533–547. https://doi.org/10.1016/j.jbusres.2019.10.034

Nouraldeen, R. M. (2023). The impact of technology readiness and use perceptions on students'

adoption of artificial intelligence: the moderating role of gender. *Development and Learning in Organizations*, *37*(3), 7–10. https://doi.org/10.1108/DLO-07-2022-0133

Parasuraman, A. (2000). Technology Readiness Index (Tri): A Multiple-Item Scale to Measure Readiness to Embrace New Technologies. *Journal of Service Research*, *2*(4), 307–320. https://doi.org/10.1177/109467050024001

Prabowo, T. J. W. (2018). Reforms in public sector accounting and budgeting in Indonesia (2003-2015): Confusions in implementation. *Journal of Public Budgeting, Accounting and Financial Management*, *30*(1), 2–21. https://doi.org/10.1108/JPBAFM-03-2018-002

Prasodjo, T. (2025). Rethinking Bureaucracy in the Digital Era: A Qualitative Review of Public Sector Transformation in Indonesia. *Golden Ratio of Social Science and Education*, *5*(2), 290–301. https://doi.org/10.52970/grsse.v5i2.1425

Rana, N. P., Dwivedi, Y. K., & Hughes, D. L. (2022). Analysis of challenges for blockchain adoption within the Indian public sector: an interpretive structural modelling approach. *Information Technology and People*, *35*(2), 548–576. https://doi.org/10.1108/ITP-07-2020-0460

Rizvi, S. K. A., Rahat, B., Naqvi, B., & Umar, M. (2024). Revolutionizing finance: The synergy of fintech, digital adoption, and innovation. *Technological Forecasting and Social Change*, *200*. https://doi.org/10.1016/j.techfore.2023.123112

Sastararuji, D., Hoonsopon, D., Pitchayadol, P., & Chiwamit, P. (2022). Cloud accounting adoption in Thai SMEs amid the COVID-19 pandemic: an explanatory case study. *Journal of Innovation and Entrepreneurship*, *11*(1). https://doi.org/10.1186/s13731-022-00234-3

Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers and Education*, *128*, 13–35. https://doi.org/10.1016/j.compedu.2018.09.009

Schiavi, G. S., Behr, A., & Marcolin, C. B. (2024). Institutional theory in accounting information systems research: Shedding light on digital transformation and institutional change. *International Journal of Accounting Information Systems*, *52*(June 2023), 100662. https://doi.org/10.1016/j.accinf.2023.100662

Shahsavar, Y., & Choudhury, A. (2023). User Intentions to Use ChatGPT for Self-Diagnosis and Health-Related Purposes: Cross-sectional Survey Study. *JMIR Human Factors*, *10*, 1–12. https://doi.org/10.2196/47564

Singgir, N. Y., Dian Ferriswara, Ika Devy Pramudiana, & Sri Kamariyah. (2025). Implementasi Kebijakan di Indonesia: Tinjauan Sistematis Tren dan Praktik Terbaru dalam Administrasi Publik dan Tata Kelola. *Kajian Administrasi Publik Dan Ilmu Komunikasi*, *2*(3), 120–149. https://doi.org/10.62383/kajian.v2i3.574

Tiron-Tudor, A., Deliu, D., Farcane, N., & Dontu, A. (2021). Managing change with and through blockchain in accountancy organizations: a systematic literature review. In *Journal of Organizational Change Management* (Vol. 34, Issue 2, pp. 477–506). Emerald Group

Holdings Ltd. https://doi.org/10.1108/JOCM-10-2020-0302

Venkatesh, V., Smith, R. H., Morris, M. G., Davis, G. B., Davis, F. D., & Walton, S. M. (2003). User acceptance of information technology: toward a unified view. *MIS Quarterly*, *27*(3), 425–478.

Wang, T., Olivier, D. F., & Chen, P. (2023). Creating individual and organizational readiness for change: conceptualization of system readiness for change in school education. *International Journal of Leadership in Education*, *26*(6), 1037–1061. https://doi.org/10.1080/13603124.2020.1818131