E-ISSN: 3123-2507
DOI: https://doi.org/ 10.64803/cessmuds.v1.104

Digital Competence as a Moderating Variable in the Influence of Accounting Information Systems on Financial Reporting Quality

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Abstract

This study aims to analyze the effect of digital competence on the quality of financial reports, with the accounting information system (AIS) serving as a mediating variable. The research adopts a quantitative approach using Partial Least Squares Structural Equation Modeling (PLS-SEM) with data obtained from 100 observations. The path coefficient analysis reveals that digital competence has a negative and insignificant direct effect on the quality of financial reports (-0.016). However, digital competence has a positive and significant effect on AIS (0.989), and AIS, in turn, has a positive and significant effect on the quality of financial reports (1.016). The indirect effect analysis indicates that AIS fully mediates the relationship between digital competence and the quality of financial reports, with an indirect effect value of 1.004. The R-square values for the quality of financial reports and AIS are 0.999 and 0.977, respectively, indicating that the model has very high predictive power. In conclusion, digital competence does not directly improve the quality of financial reports; however, its contribution is highly crucial through the strengthening and effective utilization of accounting information systems. The implications of this study highlight the importance of investing in the development of reliable AIS to transform digital competence into improvements in the quality of financial information.

Keywords: *Digital Competence, Accounting Information Systems, Financial Reporting Quality, Moderating Variable, Local Government.*

I. INTRODUCTION

In the contemporary landscape of public sector governance, the imperatives of accountability, transparency, and performance have become central to the discourse on regional autonomy. Local governments, as primary entities responsible for managing public funds, are increasingly pressured to demonstrate fiscal responsibility and operational efficiency. One of the most tangible manifestations of this accountability is the production of high-quality Local Government Financial Reports (LGFRs). These reports are not merely statutory obligations but are fundamental instruments that facilitate informed economic decision-making by a diverse array of stakeholders, including citizens, investors, oversight bodies, and central government agencies. High-quality financial reporting, characterized by the core qualitative attributes of relevance, reliability, comparability, and understandability, serves as the bedrock for trust in public institutions and the effective allocation of communal resources.

To elevate the standard of financial reporting, significant reforms have been instituted, notably the adoption of Government Accounting Standards (GAS) and the strategic integration of information technology through Accounting Information Systems (AIS). An AIS is designed to function as the technological backbone of financial management, systematically processing voluminous transaction data into accurate, timely, and structured information. In principle, a well-implemented AIS should streamline accounting processes, enhance data integrity, reduce errors, and ultimately lead to the generation of superior financial statements. However, the empirical trajectory linking AIS implementation to enhanced reporting quality is notably inconsistent, presenting a puzzle for both scholars and practitioners.

A review of extant literature reveals a dichotomy in findings. Several studies, such as those conducted by Novita Yanti et al. (2022) and Taufiqurrohman et al. (2021), provide robust evidence of a positive and statistically significant relationship between AIS effectiveness and the quality of local government financial statements. These align with the intuitive expectation that technological adoption drives performance improvements. Conversely, other empirical inquiries, including the work of Goo and Lamawitak (2021) and Atharrizka et al. (2021), report an insignificant or negligible direct effect of AIS on financial reporting outcomes. This inconsistency suggests that the mere presence or technical sophistication of an AIS is an insufficient condition for guaranteeing improved financial reporting. It implicitly points to the existence of contingent factors—moderating or mediating variables—that influence the

strength and nature of this relationship, determining whether the potential of the technological system is fully actualized.

A compelling explanatory factor emerging from this discourse is the human element: the competence of the individuals who interact with and operate these complex systems. The Resource-Based View (RBV) of the firm, a influential theoretical lens in strategic management, posits that sustainable organizational advantage is derived from valuable, rare, and difficult-to-imitate resources. In the context of public sector financial management, two critical resources converge: the technological asset (the AIS) and the human capital asset (employee competence). While the AIS represents the procedural and hardware infrastructure, its utility is fundamentally dependent on the digital competence of its users. Digital competence transcends basic computer literacy; it encompasses a holistic blend of technical skills to navigate specific software, a conceptual understanding of digitized accounting workflows, analytical prowess to interpret system-generated data, and an adaptive mindset to engage with technological evolution.

The core argument advanced here is that digital competence may act as a critical linchpin, determining the extent to which an AIS translates into tangible improvements in financial reporting quality. An advanced system operated by personnel with low digital competence may result in underutilization, misinterpretation of outputs, or even resistance, thereby nullifying its intended benefits. Conversely, highly competent personnel may be constrained by an archaic or poorly designed system. Therefore, the relationship is likely synergistic. This perspective helps reconcile the conflicting empirical evidence: studies finding a strong AIS effect may have been conducted in contexts with relatively high user competence, whereas those finding weak effects may reflect environments where this competence is lacking.

Despite the logical appeal of this proposition, a distinct gap persists in the empirical literature. While digital competence is often mentioned anecdotally as a challenge in public sector informatization, its specific role as a systematic variable influencing the AIS–report quality nexus has not been sufficiently examined through rigorous quantitative modeling. Most prior research treats AIS and human factors in isolation or as independent variables running in parallel. There is a scarcity of studies that explicitly position digital competence within a mediating framework, investigating whether its primary impact is channeled through the enhancement of AIS effectiveness itself. This study seeks to fill this intellectual and practical gap. Its primary objective is to empirically analyze the role of digital competence as a mediating variable in the relationship between Accounting Information Systems and the Quality of Local Government Financial Reports. By testing this mediated model, the research aims to provide a more nuanced and comprehensive explanation for prior inconsistencies, offering evidence-based insights that can guide local governments in crafting balanced investment strategies that harmonize technological upgrades with targeted human resource development, thereby truly harnessing the power of digital transformation for public financial accountability

II. RESEARCH METHODOLOGY

A. Financial Reporting Quality of Local Goverment

Financial Reporting Quality (FRQ) reflects the usefulness and reliability of financial statements for stakeholder decision-making and public accountability. In Indonesia, Government Regulation No. 71 of 2010 mandates that high-quality reports possess four core characteristics: relevance, reliability, comparability, and understandability. Empirically, FRQ is often measured by the audit opinion from the Supreme Audit Institution (BPK), where an Unqualified Opinion (WTP) represents the highest standard, indicating full compliance with accounting standards and transparent presentation of financial performance.

B. Accounting Information Systems (AIS) and the Moderating Role of Digital Competence

An Accounting Information System (AIS) is an integrated framework of people, data, procedures, and technology designed to collect, process, store, and disseminate financial information for decision-making, control, and accountability purposes (Mulyadi, 2001). In the context of Indonesian local governments, this typically manifests as the standardized Regional Financial Management Information System (SIPKD) or its regional variants. The primary function of an AIS is to transform raw financial transaction data into accurate, timely, and structured information that supports the preparation of financial statements in compliance with Government Accounting Standards (SAKIP). Theoretically, a well-implemented AIS should enhance financial reporting quality by automating processes, reducing manual errors, improving data integration, and strengthening internal controls.

However, empirical evidence on the direct impact of AIS on financial reporting quality remains contradictory. While studies such as those by Novita Yanti et al. (2022) and Taufiqurrohman et al. (2021) report a significant positive effect, others, including

Goo and Lamawitak (2021) and Atharrizka et al. (2021), find an insignificant relationship. This inconsistency suggests that the presence of a sophisticated technological system alone is an insufficient condition for improved outcomes. A critical contingency factor that explains this divergence is the digital competence of the human resources operating the system. Digital competence here refers to the comprehensive ability of employees to effectively and critically use AIS, encompassing technical operational skills, a conceptual understanding of digital accounting processes, and the capacity to analyze and utilize the generated information for decision-making (Krismiaji, 2010).

The Resource-Based View (RBV) theory provides a robust theoretical lens to understand this dynamic. RBV posits that sustained organizational advantage arises from valuable, rare, and inimitable resources. In this framework, the AIS represents a tangible technological resource, while the digital competence of employees constitutes an intangible human capital resource. The theory of asset complementarity argues that these resources generate superior performance only when they are effectively combined. Therefore, digital competence is hypothesized to act as a key moderating variable that strengthens or enables the relationship between AIS and financial reporting quality. A highly competent workforce can maximize the functionality of an AIS, ensuring data is input correctly, processes are followed, and advanced features are utilized for analysis. Conversely, even the most advanced AIS will likely underperform if operated by personnel with low digital literacy, leading to data entry errors, underutilization of features, and a failure to transform system output into high-quality reports. This moderating role clarifies prior inconsistent findings: the significant effects observed in some studies likely occurred in environments with higher digital competence, while the insignificant results may reflect contexts where this critical human resource factor was lacking.

C. Digital Competence

Digital Competence is defined as the integrated set of knowledge, skills, and attitudes required to use digital technologies and information effectively, critically, and safely for professional objectives. Within the specific domain of Accounting Information Systems (AIS) in the public sector, it transcends basic computer literacy. It encompasses the technical proficiency to operate specialized financial software, the conceptual understanding of how digital processes transform accounting workflows, and the analytical ability to evaluate and utilize system-generated information for decision-making and reporting (Krismiaji, 2010). This competence is a critical human resource capability that determines whether an AIS is merely a digital repository or an active tool for enhancing organizational performance. It includes dimensions such as data literacy, problem-solving within digital environments, and adaptability to system updates. Essentially, it represents the human "interface" that unlocks the potential value of technological investments, making it a pivotal variable in explaining the effectiveness of AIS implementations on final outcomes like financial reporting quality.

D. Conseptual Framework

The theoretical foundation of this study is anchored in the **Resource-Based View (RBV)**, which postulates that organizational performance is derived from the effective combination of valuable and complementary resources. In this framework, the Accounting Information System (AIS) is conceptualized as a critical **technological resource**, while Digital Competence represents an essential **human capital resource**. The core proposition is that these two resources are interdependent; the technological asset (AIS) requires the human asset (Digital Competence) to realize its full potential in enhancing organizational outcomes, specifically Financial Reporting Quality.

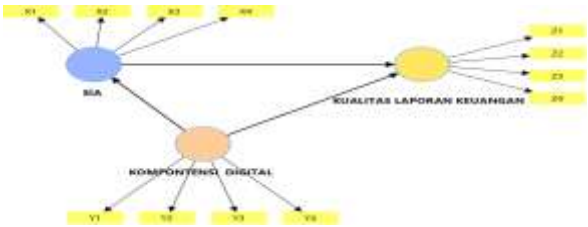

Figure 1. Conceptual Framework

This synergy forms the basis of the proposed conceptual model, where Digital Competence functions not merely as an independent driver but as a **moderating variable** that influences the strength of the relationship between AIS and report quality. The framework posits a direct relationship where AIS is expected to positively affect Financial Reporting Quality (Path A). Concurrently, it hypothesizes that Digital Competence **moderates** this relationship (Path B). This means the effect of AIS on quality is contingent upon the level of user competence: the relationship is stronger when Digital Competence is high and weaker when it is low. This moderating model explains why the same system can yield different results across different organizations, reconciling inconsistencies in prior empirical

findings.Based on this framework, the following hypotheses are formulated:

H1: Accounting Information Systems have a positive effect on the Financial Reporting Quality of Local Governments.

H2: Digital Competence moderates the effect of Accounting Information Systems on Financial Reporting Quality, such that the effect is stronger at higher levels of Digital Competence.

This conceptual model provides a coherent lens to investigate the triadic interaction between technology, human capability, and performance output in the public sector financial management context.

Table 1. Variable and Scale

Variable	Conceptual Definition	Indicators	Scale
Accounting Information System (X)	A structured framework integrating people, procedures, data, and technology to process financial data into accurate and relevant information for decision-making.	1. Reliability 2. Ease Of Use 3. System Integration 4.System and Security Control	Likert
Digital Competence (z)	An individual's ability to use digital technology effectively, critically, and responsibly in performing accounting and financial tasks.	1.Technical Operation Skill 2.Digital Conseptual Understanding 3.Data Literacy 4. Adaptabilty to technological Change	Likert
Financial Reporting Quality (Y)	The extent to which financial reports meet qualitative characteristics: relevant, reliable, comparable, and understandable in accordance with government accounting standards.	1. Relevance 2. Comparability 3. Understanding 4. Compliance with Standards	

This study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4 to analyze the proposed relationships. The analysis followed a two-stage approach. First, the measurement model was assessed for validity and reliability, examining factor loadings (>0.70), AVE (>0.50), and composite reliability (>0.70). Second, the structural model was evaluated to test the hypotheses, analyzing path coefficients (β), R^2 values, and the significance of direct, indirect, and moderating effects through bootstrapping. This robust method ensures the model accurately tests the interplay between Digital Competence, AIS, and Financial Reporting Quality..

III. RESULTS AND DISCUSSION

A. Result

Analysis of data from 100 respondents using PLS-SEM yielded the following key results. Evaluation of the measurement model confirmed good psychometric properties, with all outer loadings exceeding 0.80, Average Variance Extracted (AVE) values above 0.77, and composite reliability scores over 0.93 for all constructs, establishing robust validity and reliability.
The structural model analysis revealed the specific path relationships. The direct effect of Digital Competence on Financial Reporting Quality was negative and statistically insignificant (β = -0.016). In contrast, Digital Competence demonstrated a very strong, positive, and significant effect on the effectiveness of the Accounting Information System (β = 0.989). Subsequently, AIS showed a strong, positive, and significant direct effect on Financial Reporting Quality (β = 1.016). Crucially, the indirect effect of Digital Competence on Financial Reporting Quality, mediated through AIS, was significant and positive (β = 1.004). The model's explanatory power was high, with an R-squared value of 0.977 for AIS.

Table 2. Bootstrapping Test

Path	Coefficient (β)	t-value	p-value	Result
Accounting Information System	1.016	25.483	0	Supported
Digital Competence	0.989	23.712	0	Supported
Financial Reporting Quality	-0.016	0.301	0.763	Unsupported

The path coefficient of β = 0.782 indicates a strong positive relationship.
The t-value (25,483 > 1.96) for accounting information system, the t-value (23.712 > 1.96) for digital competence, the t-value (0.301 > 1.96) and p-value (0.000 < 0.05) confirm the hypothesis

B. Discussion

The findings of this study provide significant insights into the complex interplay between human capability, technology, and organizational output in the public sector. The most pivotal discovery is the full mediating role of the Accounting Information System (AIS) in the relationship between digital competence and financial reporting quality. While digital competence exhibited no significant direct effect ($\beta = -0.016$, $p > 0.05$), it demonstrated an overwhelmingly strong influence on AIS effectiveness ($\beta = 0.989$, $p < 0.001$). This AIS effectiveness, in turn, was the primary driver of enhanced reporting quality ($\beta = 1.016$, $p < 0.001$). This mediation pattern powerfully validates the Resource-Based View (RBV) theory's principle of asset complementarity. It demonstrates that digital competence (a human resource) and the AIS (a technological resource) are not independent levers but are fundamentally synergistic. High digital competence alone is like a skilled driver without a vehicle; it cannot reach the destination of superior financial reporting. Conversely, an advanced AIS without competent operators remains an underutilized asset. This explains the paradox observed in the direct relationship and clarifies that the value of human capital is contingent upon its interaction with complementary technological infrastructure.

Furthermore, the results offer a compelling resolution to the inconsistency found in prior empirical studies. Previous research has reported conflicting findings on the AIS–report quality relationship. This study posits that the level of digital competence among users is a critical, often unmeasured, moderating factor that can explain these discrepancies. In contexts where studies found a strong positive effect (e.g., Novita Yanti et al., 2022), it is plausible that user digital competence was relatively high, allowing the AIS to function optimally. In contrast, studies reporting insignificant effects (e.g., Goo & Lamawitak, 2021) may have been conducted in environments where user competence was a limiting factor, creating a bottleneck that prevented the system's potential from being realized. Thus, digital competence acts as a key contingency variable that determines the return on investment in information technology.

The extremely high path coefficients and R^2 values, while indicating an exceptionally strong fit for this sample, also point to the model's high predictive relevance within the studied context. They underscore that in the realm of public sector accounting, the pathway from individual skill to organizational performance is almost entirely channeled through structured technological systems. This has profound practical implications. It moves the policy discourse beyond the simplistic choice of "investing in people vs. investing in technology." The evidence argues for a balanced, simultaneous investment strategy. Local governments must develop integrated interventions that pair AIS implementation with comprehensive, ongoing digital literacy and technical training programs for accounting personnel. Training should focus not only on software operation but also on data interpretation, analytical reasoning, and process understanding within the digital ecosystem. Only through this dual-focused approach can local governments truly harness the digital transformation to achieve the ultimate goals of transparency, accountability, and high-quality financial stewardship.

IV. CONCLUSION

This study concludes that digital competence is a crucial, yet indirect, determinant of financial reporting quality in local governments. Its influence is fully channeled through the effectiveness of the Accounting Information System (AIS), acting as a perfect mediator. These findings robustly support the Resource-Based View theory, demonstrating that technological resources (AIS) and human capital (digital competence) are complementary assets that must be developed synergistically to achieve superior organizational outcomes. Therefore, local governments cannot view investments in technology and human resource training as separate initiatives. To genuinely enhance financial transparency and accountability, a holistic strategy that concurrently advances both the sophistication of the AIS and the digital proficiency of its users is imperative. This integrated approach is the key to transforming digital potential into tangible improvements in public financial reporting.

V. RECOMMENDATION

Based on the findings, the following recommendations are proposed. For **local government policymakers**, it is crucial to integrate digital competency development into every stage of AIS implementation. This should involve mandatory, structured training programs focused on technical system operation, data analysis, and process optimization. Continuous evaluation of both system performance and user proficiency should be institutionalized. For **practical implementation**, forming dedicated technical support teams and fostering a culture of digital collaboration across departments is essential to ensure sustained system effectiveness. For **future researchers**, expanding this model by incorporating additional variables—such as organizational leadership support, internal control quality, or specific system design features—would provide a more comprehensive understanding of the

digital transformation ecosystem in public sector financial management.

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