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Development of accounting information system quality in local government:
mediating role of accounting competency

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ABSTRACT

BACKGROUND AND OBJECTIVES: Several investigations were previously conducted on the crucial role of Accounting Information System in enhancing organizational performance and accountability. However, there is a limited amount of knowledge regarding the factors that influence the quality of Accounting information system, especially when considering their application in local government settings in developing countries. Therefore, this study aimed to investigate the factors determining Accounting information system quality in local government of Indonesia, including availability and functions of network, hardware, and software. The mediating role of accounting competency was also explored using resource orchestration theory.

METHODS: This study adopted a questionnaire survey method and conducted statistical hypothesis testing using Structural Equation Modelling-Partial Least Square (SEM-PLS) method. The data were obtained from local government organization staff in Yogyakarta Special Region, selected based on involvement in using software.

FINDINGS: The results showed that availability and functions of network and software, as well as accounting competency, were positively correlated with accounting information system quality, with p-values of 0.000, 0.023, and 0.000, respectively. Meanwhile, availability and functions of hardware did not show a significant correlation, as evidenced by p-value of 0.375. Accounting competency significantly mediated the relationship between availability and functions of network, software, and Accounting information system quality, with p-values of 0.032 and 0.001, respectively. Moreover, Adj. R2 was 0.467 (medium level), and the SRMR value assessed the model fit at 0.079 (good model fit).

CONCLUSION: This study contributed a novel framework related to the determinants of improving Accounting information system quality in local government setting and addressed the debate surrounding the role of accounting competency in the system development. Moreover, there were emphases on the significant mediating role of accounting competency as a prerequisite for other determinants (availability and functions of network, hardware, and software) to promote better Accounting information system quality.

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INTRODUCTION

E-government era is responsible for influencing Accounting Information System (AIS) development in local government of developing countries such as Indonesia (Chung, 2017). There has been a consistent emphasis on new technology investments, particularly hardware and software, to support AIS development (Utama, 2020). For instance, data sourced from the Indonesian Ministry of Communication and Information Technology showed that from 2019 to 2022, the budget allocated for IT investment to support E-government initiatives reached 75 trillion Rupiahs. Starting at approximately 7 trillion rupiahs in 2019, the investment increased to 10 trillion rupiahs in 2020 and surged to 25 trillion rupiahs in 2022 (Kominfo, 2022). Despite the substantial investments in E-government, including AIS, government accountability and performance continue to face widespread criticism. According to Ombudsman (2022), local government received 150 complaints in January-June 2022, of which 82 reports (54%) pertained to issues with public services. In the context of E-government, the low level of government accountability can be related to the inadequate AIS quality (Al-Hattami *et al.*, 2021). AIS plays a crucial role in providing relevant and up-to-date information concerning local government performance targets. It enables swift and well-informed decision-making to address performance and accountability challenges in local government (Nurhayati *et al.*, 2023). AIS development in Indonesia is occasionally viewed as misguided by government officials. According to observations, many leaders in Indonesian local government institutions who overly prioritize AIS advancements believe that a well-established system is sufficient to ensure accountability in local government organization without the need for employees with accounting competency. For instance, individuals without an accounting background can record transactions and automatically generate financial reports after receiving training on AIS software (Sofyani *et al.*, 2023). However, accountability in this context is limited to financial reporting. Local government should be held accountable not only for reporting but also for the efficiency and productivity of budget utilization (Jann and Læg Reid, 2015). In the absence of accounting competence staff, AIS can provide vast amounts of basic information at a rapid

pace, but it may not deliver the relevant, accurate, and valuable data needed for effective decision-making. As a result, the resolution of performance and accountability issues can be hindered. The filtering, processing, and interpretation of available information to formulate accurate and timely decisions requires individuals who have a holistic understanding of information technology and accounting system (Asadi *et al.*, 2021). In conclusion, accounting competency is essentially an orchestrator in creating AIS quality. Studies focusing on the determinants of AIS quality remain limited (Nurhayati *et al.*, 2023), specifically in the context of local government. Thoa and Nhi (2022) found that availability and functions of network, hardware, and software, as components of AIS architecture, had a significant impact on the quality of financial accounting information in the public sector of Vietnam. Fitriati *et al.* (2020) argued that the quality of accounting information is indeed, determined by AIS quality. Therefore, to produce high-quality financial accounting information, AIS architecture should first prioritize quality. To address the empirical gap, this study examined the architecture as a determinant of AIS quality, with a specific focus on the mediating variable of accounting competency. The mediating role of accounting competency aims to address the pros and cons mentioned above, regarding the important accounting competency in AIS development. This is related to the perspective of resource orchestration theory, suggesting that to achieve excellence, management should be competent in orchestrating the internal resources of organization (Sirmon *et al.*, 2011). The mobilization of resources in an integrated and harmonious manner is also crucial (Asiaei *et al.*, 2021). Based on the perspective to develop the theoretical framework, the role of the orchestration can be attributed to accounting competency, which represents the necessary knowledge for orchestrating hardware, software, and network resources to enhance AIS quality. Specifically, the information generated by AIS software may not always be compatible, relevant, or complete. Addressing such issues requires the development and adjustment of AIS, a process that benefits from input from competent staff, particularly those with expertise in accounting field. In this context, staff serve as agents orchestrating AIS architecture. The current study has been carried out

in Local Governments in Yogyakarta Special Region, Indonesia, in 2022. This study offered various contributions, firstly, it practically addressed the debate surrounding the role of accountants in the advancement of AIS in the public sector. Secondly, novel insights were provided regarding the role of accounting competency as a mediating factor in AIS development, particularly within the context of local government. Thirdly, resource orchestration theory was applied in relation to public sector accounting, tenets previously and widely addressed in the context of corporate strategic management for achieving competitive advantage.

Theoretical Foundation

The theoretical framework of this study was underpinned by the theory of resource orchestration proposed by Sirmon et al. (2011). Resource orchestration comprises all aspects of asset management and the strategic coordination of resource allocation to generate benefits for organization (Sirmon et al., 2007). This framework is influenced by three key factors, firstly, organization should have a clear vision of how to be structured to identify and capitalize on opportunities. Secondly, enhancing competencies is essential for the effective management of existing resources and improvement of organizational performance. Thirdly, effective and efficient coordination of these

resources is crucial (Sirmon et al., 2011). These key elements are outlined in Fig. 1.

Resource orchestration theory specifically focuses on the responsibility of individuals in structuring, bundling, and leveraging resources in organization efficiently. One of the key challenges in resource orchestration is synchronizing process (Helfat (2007). Achieving harmony in generating stakeholder value requires balancing various elements in this process. Based on the theory perspective, individuals with accounting competency play a crucial role in enhancing organizational ability and improving the effectiveness, efficiency, and integration of resources in developing AIS. To enhance the process of achieving organizational performance, the use of information and communication technology, combined with competent individuals, is essential (Sofyani et al., 2023). Based on these insights, accounting competency functions as a mediator (orchestrator) of the relationship between other determinants and AIS quality (Fig. 2).

Hardware, Software, Network, and AIS Quality

A high-quality AIS is essential for creating quality financial accounting information (Thoa and Nhi, 2022). The system is constructed by applying hardware and software components, which enhance the ability to efficiently gather, process, and store data. Furthermore, communication network system,

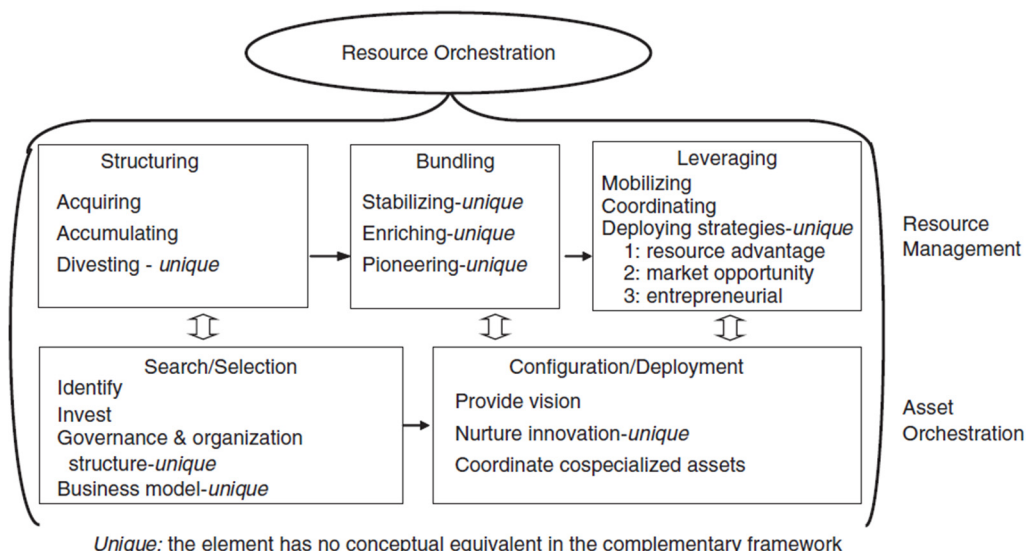


Fig 1: Resource Orchestration Theory (Sirmon et al., 2011)

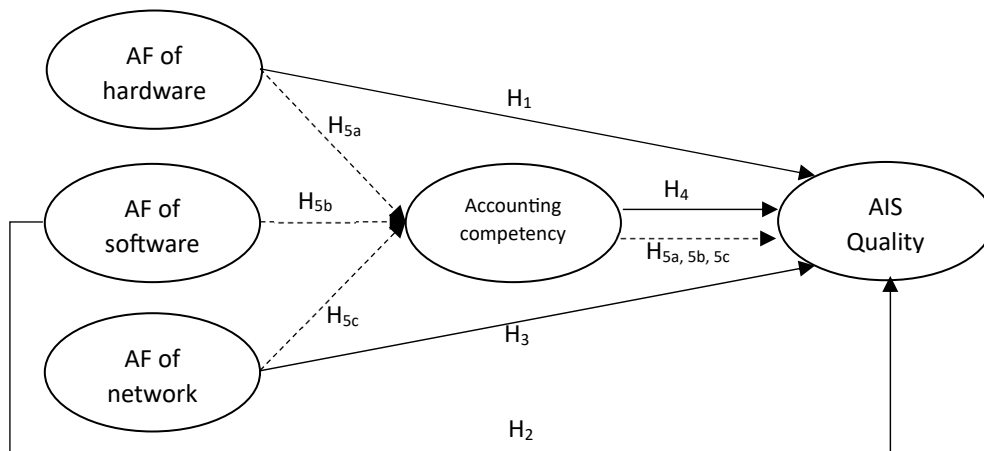


Fig 2: The theoretical framework

such as the Internet, facilitates data exchange and connects information across various departments in organization (Qasaimeh *et al.*, 2022). It can promote increased interaction and active participation of individuals and departments in various organizational management activities, including decision-making and coordination (Wu *et al.*, 2022). The system also facilitates access to information and public services for relevant users (Taipale, 2013). Since AIS in Indonesian local government operates on a website-based (online) platform, the presence of a well-functioning network is crucial. The following hypotheses were formulated based on the discussion above:

H1: Availability and functions of hardware positively influence AIS quality.

H2: Availability and functions of software positively influence AIS quality.

H3: Availability and functions of network positively influence AIS quality.

Accounting competency and AIS quality

Accounting competency refers to the competence, knowledge, and skills required to fulfill accounting tasks (Nurhayati *et al.*, 2023). According to orchestration theory (Sirmon *et al.*, 2011), internal resources can only provide added value to organization when there are individuals capable of harmoniously integrating the resources (Asiaei *et al.*, 2021), based on organizational

management. However, this crucial aspect has not received adequate exploration, leading to a common misconception where the roles of certain actors in organization are sometimes ignored or underestimated. In the context of AIS development, the significance of accounting competence is rarely addressed. This issue gains particular relevance in the public sector, where some perceive the roles as no longer essential due to the advanced era of e-government (Sofyani *et al.*, 2023). However, the perspective has raised debate, as several studies continue to investigate the crucial role of accountants in the digitalization age of business processes (Coman *et al.*, 2022). Adopting the perspective of resource orchestration theory, the role of competent accountants in developing AIS is crucial. This study contended that effective utilization of Information Technology/Information System (IT/IS) equipment, such as hardware, software, and network in AIS development, significantly relies on the involvement of accountants. Nurhayati *et al.* (2023) showed that the knowledge of system users significantly influenced AIS quality in institutions. Mujiono (2021) also suggested that the functional role of accountants in the digital era was expanding, not only in financial reporting system proficiency but also in strategic business analysis using business intelligence for decision-making. With the involvement of accountants, hardware, software, and network can be orchestrated harmoniously and integrated to achieve desired objectives

Table 1: The Operationalized definition of variables

Variable	Indicator	Source
Availability and Functions of Hardware	1. Availability of hardware facilities (AFH1);	Thoa and Nhi (2022)
	2. Hardware facilities that function properly (AFH2);	
	3. Hardware specifications have been updated to facilitate accounting system operations (AFH3).	
Availability and Functions of Software	1. Availability of accounting software operations (AFS1);	Thoa and Nhi (2022)
	2. Functions of accounting software operations (AFS2);	
	3. Availability of accounting system operations (AFS3);	
	4. Functions of accounting system operations (AFS4).	
Availability and Functions of Network	1. The communication network facilitates coordination between units (AFN1);	Thoa and Nhi (2022)
	2. The communication network enables accounting system operation (AFN2);	
	3. Offices rarely experience communication network interruptions (AFN3).	
Accounting Competency	1. Accounting-related staff understand financial administration procedures (AC1);	Thoa and Nhi (2022)
	2. Accounting-related staff make financial reports that prevent mistakes (AC2);	
	3. Accounting-related staff at the office understand the used AIS well (AC3).	
AIS Quality	1. AIS contributes to the integrity of the financial reporting process following applicable regulations (AISQ1);	Kwarteng and Aveh (2018)
	2. AIS can mention local government assets (AISQ2);	
	3. AIS can shorten data collection time (AISQ3);	
	4. AIS improves the quality of financial reports (AISQ4);	
	5. AIS simplifies local government transaction process (AISQ5);	
	6. AIS accelerates the process of preparing financial statements (AISQ6);	
	7. AIS can address human weaknesses in data processing (AISQ7).	

(Sirmon *et al.*, 2011), such as enhancing AIS quality. Accountants aim to determine how software should be developed, what hardware is required, and how IT/IS should be designed. Situations where AIS does not correlate with specific accounting standards or regulations and fail to mitigate risk can also be identified (Zybery and Rova, 2014). The following hypotheses were formulated based on the discussions above:

H4 : Accounting competency positively influences AIS quality.

H5a : Accounting competency mediates the relationship between availability and functions of hardware and AIS quality.

H5b : Accounting competency mediates the relationship between availability and functions of network and AIS quality.

H5c : Accounting competency mediates the relationship between availability and functions of software and AIS quality.

MATERIALS AND METHODS

This study conducted a questionnaire survey and hypothesis testing at Local Government

Organization (LGO) in Yogyakarta, Indonesia. A purposive sampling method was adopted, with staff utilizing AIS software selected as the sampling unit (respondents). A study permit validation letter was obtained from the competent authority before the questionnaires were distributed to respondents. The study experts personally distributed and collected the questionnaires during visits to respondent offices, ensuring a relatively high response rate and adherence to specified criteria. Consultation and validation with five relevant experts, and a pilot study were conducted prior to data collection. Both analyses confirmed that the questionnaire indicators of all variables validly and reliably measured the variables under investigation (Hair *et al.*, 2022). This study incorporated five variables, namely availability and functions of network, hardware and software (independent variables), accounting competency (mediating variable), and AIS quality (dependent variable). The operationalization of all variables is presented in Table 1. The central focus of discussion is AIS quality, which is operationally defined in line with Kwarteng and Aveh (2018), as the system ability to manage data and generate information that is

Table 2: Characteristics of Respondents

Information	Description	Total	Percentage (%)
Level of Education	Diploma	45	32
	Undergraduate	65	46
	Postgraduate	4	3
	No Answer	26	19
Gender	Female	93	66
	Male	47	34
Time Using AIS software	1-5 Years	11	8
	6-10 Years	29	21
	11-15 Years	45	32
	16-20 Years	30	21
	21-25 Years	19	14
	>25 Years	3	2
	No Answer	3	2
	Total	140	100

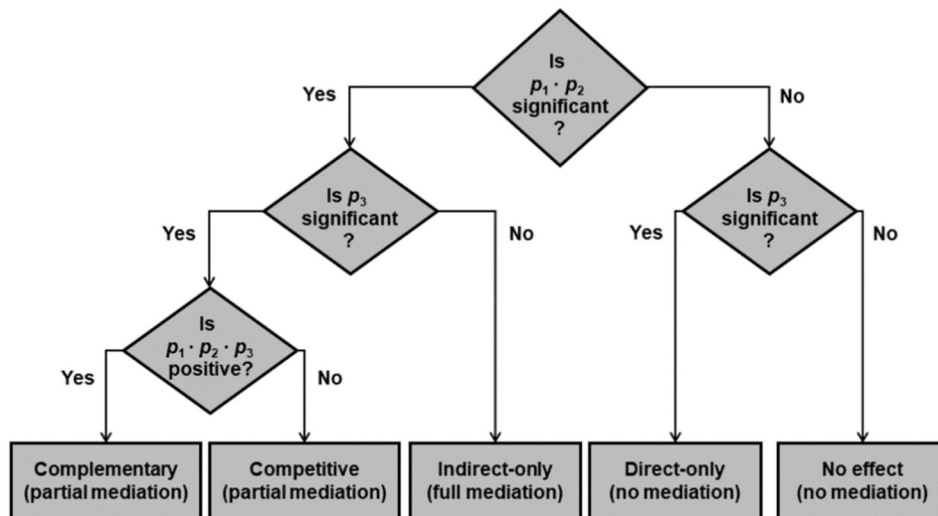


Fig 3: Mediation Assessment (Zhao et al., 2010)

useful, economical, reliable, timely, and flexible. All variables were measured on a Likert scale ranging from 1 to 5, with 1 showing “strongly disagree” and 5 signifying “strongly agree.” This scale adheres to the standard measurement method commonly used in Indonesia, allowing respondents to easily comprehend the questionnaires and provide accurate responses.

This study adopted Partial Least Square (PLS) method, and the number of respondents was determined based on the recommendation of Memon et al. (2020). The minimum sample size was typically obtained by multiplying the maximum

number of indicator links pointing to latent variables in the model by 10. Regarding AIS quality, a latent variable with the highest number of indicators (seven), the minimum sample size should be 70 (10 x 7). A total of 200 questionnaires were distributed, out of which 20 were not returned, and 40 were filled out by relevant respondents. As a result, 140 usable questionnaires were obtained, exceeding the minimum sample recommended (Hair et al., 2022). Table 2 shows the characteristics of respondents.

The collected data were analyzed using SPSS application (Mehdinavaz Aghdam and Rosta, 2023) to generate outputs such as Common Method Bias

(CMB) and descriptive statistics. Subsequently, PLS was adopted to assess the validity and reliability of measurements as well as the relationship among variables (Hair *et al.*, 2022). This study adopted the latest relevant literature to assess mediation models compatible with PLS and examine the mediating role of accounting competency, as proposed by Zhao *et al.* (2010) and endorsed by Hair *et al.* (2022) (Fig. 3).

RESULTS AND DISCUSSION

Bias Detection

Harman single-factor test was conducted as an initial step before examining data to identify the presence of CMB, which was crucial for self-reported survey data. Podsakoff *et al.* (2003) claimed that CMB could be problematic when a single latent component accounts for most of the explained variance or when the score exceeds 50%. The results of the Common Method Variance (CMV) test, particularly the unrotated factor analysis, showed that the first component only explained 36% of the

variation. This showed that CMV did not significantly influence the current results.

Measurement Model Assessment

In PLS analysis, the measurement model was assessed to evaluate the validity and reliability of the construct. This was necessary to determine how well the measurement correlated with the underlying concepts (Sekaran and Bougie, 2019). As a general guideline, a loading and cross-loading threshold of 0.5 was applied (Hair *et al.*, 2022). In the initial assessment, certain indicators showed lower loadings, specifically IFN3 and AFS4. This adversely affected the Cronbach Alpha, Composite Reliability, and Average Variance Extracted (AVE) scores, and led to the removal of the indicators (Hair *et al.*, 2022). In the subsequent evaluation, all remaining items had satisfactory loading and AVE scores (Table 3), theoretically showing the existing indicators effectively measured the intended constructs, namely convergent validity (Hair *et al.*, 2022).

Table 3: Loadings and AVE Scores

Construct	Indicator	Loading	AVE*
Availability and Functions of Hardware	AFH1	0.904	0.728
	AFH2	0.867	
	AFH3	0.785	
Availability and Functions of Software	AFS1	0.716	0.718
	AFS2	0.926	
	AFS3	0.886	
Availability and Functions of Network	AFN1	0.962	0.921
	AFN2	0.958	
Accounting Competency	AC1	0.849	0.752
	AC2	0.877	
	AC3	0.876	
AIS Quality	AISQ1	0.791	0.627
	AISQ2	0.785	
	AISQ3	0.722	
	AISQ4	0.768	
	AISQ5	0.866	
	AISQ6	0.862	
	AISQ7	0.736	

*AVE = Average Variance Extracted

Table 4: Discriminant validity test result using result Fornell-Larcker method

Construct	1	2	3	4	5
AIS Quality	0.792				
Availability and Functions of Hardware	0.446	0.853			
Availability and Functions of Network	0.564	0.594	0.960		
Availability and Functions of Software	0.552	0.575	0.546	0.848	
Accounting Competency	0.619	0.454	0.531	0.609	0.867

Table 5: The Results of Construct Reliability Test

Construct	Cronbach's Alpha	Composite Reliability	Initial (final) indicator
Availability and Functions of Hardware	0.815	0.889	3 (3)
Availability and Functions of Software	0.809	0.883	4 (3)
Availability and Functions of Network	0.914	0.959	3 (2)
Accounting Competency	0.835	0.901	3 (3)
AIS Quality	0.900	0.921	7 (7)

Table 6: The Results of Structural Model Assessment

Association	β	SD	t	Supported?
Direct Effect				
AFH → AIS Quality (H ₁)	0.023	0.072	0.318	No
AFS → AIS Quality (H ₂)	0.165	0.083	2.001*	Yes
AFN → AIS Quality (H ₃)	0.263	0.071	3.714**	Yes
Accounting Competency → AIS Quality (H ₄)	0.371	0.101	3.681**	Yes
Indirect Effect (Accounting Competency as Mediator)				
AFH → Accounting Competency → AIS Quality (H _{5a})	0.014	0.026	0.529	No
AFS → Accounting Competency → AIS Quality (H _{5b})	0.164	0.053	3.081**	Yes
AFN → Accounting Competency → AIS Quality (H _{5c})	0.099	0.053	1.856*	Yes
Adj. R ² = 0.467 (medium level); SRMR = 0.079 (good model fit)				

Note: ANH = Availability and Functions of Hardware; AFN= Availability and Functions of Network; AFS = Availability and Functions of Software; * P < 0.05; ** P < 0.01

Discriminant validity was carried out by examining the correlations between the measurements of potentially overlapping constructs. Based on Table 4, the correlation scores between internal constructs (root of AVE) were higher than for other external constructs (Gefen and Straub, 2005). This showed that discriminant validity was successfully established (Hair et al., 2022).

Inter-item consistency was assessed using Cronbach alpha and composite reliability ratings (Table 5). The assessment results showed that each alpha score exceeded the recommended threshold of 0.6, as specified by Chin et al. (2003). According to Fornell and Larcker (1981), composite reliability levels of 0.70 or higher were considered acceptable. Therefore, the scores obtained in the current study were considered reliable.

The study instruments and data were deemed valid, reliable, and suitable for use in the structural model assessment and the testing of hypotheses, since the measurement model assessment standards were met (Hair et al., 2021).

Structural Model Assessment

Table 6 presents the results of the structural model test, showing the relationships between variables, and the acceptance of H₂, H₃, and H₄.

Availability and functions of software and network, as well as accounting competency were the primary keys to promoting AIS quality. The results of the indirect effect test showed that both H_{5b} and H_{5c} were supported, implying the mediating role of accounting competency in the relationship between the variables. According to Zhao et al. (2010), this type of mediation is characterized as complementary. The adjusted R² for the study model was moderate, specifically 0.467, showing that exogenous factors could explain 46.7% of endogenous variables, while the remaining variance was explained by external variables (Chin, 1998). PLS analysis was not aimed at assessing model fit, even though the results were presented. Moreover, SRMR value, which was less than 0.10, signified the model was “fit” (Henseler et al., 2014).

PLS prediction was conducted to assess the predictive performance of the proposed model (Table 7). This evaluation was carried out by comparing the Root Mean Square Error (RMSE) with the Mean Absolute Error (MAE) in PLS and linear regression models (LM). The predictive power is considered strong when RMSE and MAE values in PLS are lower than those in LM (Shmueli et al., 2016). This statement was evidenced in the analysis results in Table 7, showing the model had a moderate level

Table 7: The results of PLS Predict test

Indicator	PLS		LM	
	RMSE	MAE	RMSE	MAE
AISQ1	0.514	0.418	0.503	0.414
AISQ2	0.554	0.416	0.579	0.438
AISQ3	0.549	0.416	0.575	0.417
AISQ4	0.505	0.408	0.525	0.405
AISQ5	0.471	0.353	0.497	0.369
AISQ6	0.522	0.399	0.559	0.418
AISQ7	0.586	0.411	0.572	0.414
CA1	0.504	0.341	0.515	0.341
CA2	0.549	0.349	0.540	0.327
CA3	0.518	0.330	0.494	0.350

Table 8: The Results of Nonlinear Effect Test

Correlation	β	SD	t	P
Quadratic Effect 1 (AFH) → AIS Quality	0.056	0.060	1.208	0.114
Quadratic Effect 2 (AFS) → AIS Quality	0.046	0.026	0.999	0.159
Quadratic Effect 3 (AFN) → AIS Quality	-0.044	-0.039	0.879	0.190
Quadratic Effect 4 (AC) → AIS Quality	-0.001	0.020	0.018	0.493

Note: ANH = Availability and Functions of Hardware; AFN= Availability and Functions of Network; AFS = Availability and Functions of Software; AC = Accounting competency

of predictive power (Shmueli et al., 2019).

Robustness Check

The viability of various projects was analyzed based on previous studies to validate empirical method and results (Deb et al., 2022). Based on the recommendations of Hair et al. (2019), additional methods were introduced to assess the robustness of PLS results, focusing on the resilience of both the structural and measurement models. The methods included Confirmatory Tetrad Analysis (CTA) to empirically confirm measurement model definitions, whether reflective or formative. Sarstedt et al. (2020) suggested that nonlinear effects of the structural model should be investigated. CTA was adopted to test the robustness of the measurement model (Vickers, 2017). A formative model is presumed when the confidence interval of the model tetrad does not include zero (Hair et al., 2019). However, this study provided empirical evidence for the reflective mode of the construct measurement model, as CTA results showed that the confidence intervals included zero. This necessitated the analysis of data using a reflective method. A quadratic analytic method was also adopted for the nonlinear test (Samimi and Nouri, 2023). The results showed that all exogenous factors had insignificant P values (Table

8), showing a linear relationship between external and endogenous factors, as well as the robustness of the study model (Hair et al., 2019).

Discussions

In the context of E-government development in emerging economic countries, investigations on the determinants of AIS quality remain limited. Moreover, debates have risen regarding the relevance of accounting competency when AIS software is developed in local government organization. To address the gaps, this study extended the conceptual framework proposed by Thoa and Nhi (2022) concerning AIS architecture and the relationship with AIS quality. A theoretical framework was also introduced, positioning accounting competency as a mediating or orchestrating factor, in line with the principles of resource orchestration theory (Sirmon et al., 2011). This study presents a novel model for determining AIS quality in local government. AIS quality in the context of local government refers to the ability to swiftly, comprehensively, and accurately prepare financial reports in compliance with regulations, while simultaneously mitigating errors and enhancing the report quality (Kwarteng and Aveh, 2018). This current study showed that the AIS quality was influenced by availability and

functions of software and network components, as well as accounting competency. This was supported by [Thoa and Ni, \(2022\)](#), showing the significant technical contributions of software and network to the production of high-quality financial information, which facilitated better decision-making. There was more emphasis on the importance of knowledge and competency required to manage information technology-based system, as these attributes were dynamic and influenced by the extent of exposure to the system, skills, and training ([Han et al., 2023](#)). The results showed that availability and functions of hardware did not determine AIS quality. This observation was quite reasonable, as hardware-related aspects in local government organization of Indonesia were generally well-equipped, with government agencies having adequately upgraded computers, printers, and other essential hardware ([Kominfo, 2022](#)). Issues related to hardware did not affect quality through accounting competency, as these typically fell under the purview of IT/IS technicians. Accounting competency played a crucial role of a mediator in AIS quality, in accordance with [Mujiono \(2021\)](#), [Daff \(2021\)](#), and [Han et al., \(2023\)](#), indicating the continued need for individuals with accounting competencies in the era of accounting digitalization. Network and software serve as essential tools for supporting accounting system. It is crucial to orchestrate them to obtain added value, specifically improve AIS quality ([Sirmon et al., 2011](#)). Current accountants are expected to possess the acumen and skills to process data, identify errors, analyze information, and provide meaningful contextual decisions ([Mujiono, 2021](#)). It is essential to be sensitive to AIS compatibility that may lag as business processes evolve with new transaction types ([Jackson et al., 2022](#)). Therefore, determining how new types of financial transactions should be handled through AIS software necessitates judgment from accountants.

Practical and theoretical implications

The implications of this study are twofold. Practically, software and network issues are considered a top priority for local government in developing countries aiming to improve AIS quality. Software and network issues often create challenges in remote areas, such as Papua, Nusa Tenggara, and Kalimantan. These areas occasionally experience

disruptions in AIS software functions due to network problems. Based on the online operation of software for local government, interruptions in network connectivity can disrupt recording, reporting, data integration, and information production processes. Therefore, it is essential to expand network infrastructure to underdeveloped areas through collaboration with state-owned telecommunications company. The need for accounting competency remains essential in the pursuit of AIS quality. [Daff \(2021\)](#) argued that graduates should possess a strong foundation in accounting, understanding how transactions flow through accounting process to evaluate data accuracy. This is crucial because information generated by AIS can be inaccurate due to errors in data input and financial reporting. Errors from software caused by virus or malware and the emergence of new types of transactions not previously covered by software, can render software incompatible and compromise quality. Staff with accounting competency play a crucial role in identifying these deficiencies and promptly updating software version in coordination with IS/IT department personnel. This proactive method ensures the maintenance of AIS quality ([Han et al., 2023](#)), consequently upholding the quality of financial reports ([Thoa and Ni, 2022](#)). Theoretically, this study filled a gap in the conceptual framework proposed by [Thoa and Nhi \(2022\)](#), which focused on the direct effects of some determinants such as software availability, hardware, and network functionality on AIS quality. These determinants essentially constitute AIS architecture, which influences the AIS quality ([Fitriati et al., 2020](#)). Therefore, the primary objective was to investigate the role of these determinants on AIS quality rather than the quality of accounting information, while also introducing the novel concept of accounting competency as a mediating factor. From a theoretical perspective, this study confirmed the theory of resource orchestration in the context of public sector. The underlining premise was that, to achieve a competitive advantage, organization needed to acknowledge the actors capable of orchestrating internal resources ([Sirmon et al., 2011](#)). Regarding AIS development in the public sector, accounting personnel play a crucial orchestrating role, as configurations and adjustments will be constantly required when accounting system is integrated with

IT/IS. Therefore, accounting staff help in selecting, acquiring, accumulating, and releasing architecture resources, ensuring that AIS requirements conform with organizational governance. Configuration, mobilization, coordination, and implementation of the architecture are also facilitated in accordance with organizational strategy and objectives. This orchestration optimizes the production of AIS quality, generating high-quality accounting information for strategic and innovative decision-making, particularly for government accountability.

CONCLUSION

In conclusion, this study investigated the key determinants of AIS quality, focusing on the role of hardware, software, and network availability and functions, with accounting competency as a mediator. Mediation test was carried out to address the importance of accounting competency in the context of evolving AIS, particularly in the public sector of developing countries. The responses from users in local government of Yogyakarta showed that availability and functions of network and software, as well as accounting competency, were significant factors associated with AIS quality. However, there was no significant impact on hardware availability and functions. The results showed the significant role of accounting competency as a mediator in the relationship between AIS quality and its two critical determinants, namely network and software. Moreover, accounting competency played a crucial role, since software and network support primarily served as tools. Human involvement (Brainware) for orchestration is essential for the development of AIS quality. This study introduced a novel framework for the design of AIS quality determinants, while empirically testing the tenets of resource orchestration theory, commonly discussed in the private sector, to elucidate how sustainable competitive advantages could be achieved. The theoretical discourse was also extended to the public sector literature with the introduction of resource orchestration theory. This study had several limitations, firstly, it was exclusively conducted in local government organization of Yogyakarta, limiting the scope of the results. Further studies in diverse regions were recommended to validate and extend the current results. Secondly, in-depth investigations were not conducted on the

nuanced contributions of accounting competency to AIS quality. This limitation was inherent to the quantitative method adopted. Therefore, future studies were recommended to explore this aspect more comprehensively using qualitative method. With the importance of accounting competency in AIS quality, it was crucial that Higher Education Institutions considered incorporating relevant competencies into curriculum for AIS development in the public sector.

AUTHOR CONTRIBUTIONS

H. Sofyani, conducted and managed all aspects of this study, including the proposal preparation, grant application, study execution, manuscript drafting, and submission to an academic journal.

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CONFLICT OF INTEREST

The author declares no potential conflict of interest regarding the publication of this work. This study adhered to ethical principles, including the prevention of plagiarism, obtaining informed consent, addressing misconduct, avoiding data fabrication or falsification, preventing double publication, and avoiding redundancy.

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ABBREVIATIONS

<i>Adj R²</i>	Adjusted Coefficient of determination
AC	Accounting Competency
AFH	Availability and Functions of the Hardware
AFH	Availability and Functions of the Software
AFN	Availability and Functions of the Network
AIS	Accounting Information System
AISQ	AIS Quality
AVE	Average Variance Extracted
CMB	Common Method Bias
CMV	Common Method Variance
LGOs	Local Government Organizations
LM	Linear Regression Model
MAE	Mean Absolute Error
<i>p-value</i>	Probability value
PLS	Partial Least Square
RMSE	Root Mean Square Error
SD	Standard Deviation
SRMR	Root Mean Square Residual
β	Coefficient

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