

Maturity Level and Competence of Village Apparatus in Readiness to Implement Digital Accounting Information Systems

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Abstract: This study investigates the relationship between the maturity level of village fund management and the competence of village officials in determining the readiness to implement a Digital Accounting Information System (SIAD). Unlike previous studies that separately analyzed either organizational maturity or human resource competence, this research integrates both constructs into a single explanatory framework, highlighting their direct and indirect effects through community trust as a mediating variable. Using an quantitative design, data were collected through questionnaires distributed to 111 village officials in Buton Regency, Southeast Sulawesi. Data were analyzed using Structural Equation Modeling based on Partial Least Squares (PLS). The findings reveal that the maturity level of village fund management has a significant effect on SIAD implementation readiness, both directly and indirectly through community trust. Conversely, the competence of village officials does not directly affect readiness but significantly contributes to strengthening public trust. These results indicate that the readiness of village governments to adopt SIAD is primarily determined by the maturity of governance structures, which must be supported by human resource capacity building and reinforced by public trust. The study contributes to the growing body of literature on digital governance by proposing an integrated empirical model for assessing digital accounting system readiness at the village level in developing countries.

Keywords: Maturity Level, Village Official Competence, Digital Accounting

Abstrak: Studi ini mengkaji hubungan antara tingkat kematangan pengelolaan dana desa dan kompetensi perangkat desa dalam menentukan kesiapan penerapan Sistem Informasi Akuntansi Digital (SIAD). Berbeda dengan studi-studi sebelumnya yang menganalisis secara terpisah kematangan organisasi atau kompetensi sumber daya manusia, penelitian ini mengintegrasikan kedua konstruk tersebut ke dalam satu kerangka penjelasan, yang menyoroti pengaruh langsung dan tidak langsungnya melalui kepercayaan masyarakat sebagai variabel mediasi. Dengan menggunakan desain kuantitatif, data dikumpulkan melalui kuesioner yang disebarkan kepada 111 aparat desa di Kabupaten Buton, Sulawesi Tenggara. Data dianalisis menggunakan Structural Equation Modeling (SEM) berbasis Partial Least Squares (PLS).

Temuan penelitian menunjukkan bahwa tingkat kematangan pengelolaan dana desa berpengaruh signifikan terhadap kesiapan implementasi SIAD, baik secara langsung maupun tidak langsung melalui kepercayaan masyarakat. Sebaliknya, kompetensi aparatur desa tidak secara langsung memengaruhi kesiapan, tetapi berkontribusi signifikan terhadap penguatan kepercayaan publik. Hasil ini menunjukkan bahwa kesiapan pemerintah desa untuk mengadopsi SIAD terutama ditentukan oleh kematangan struktur tata kelola, yang harus didukung oleh peningkatan kapasitas sumber daya manusia dan diperkuat oleh kepercayaan publik. Studi ini berkontribusi pada perkembangan literatur tentang tata kelola digital dengan mengusulkan model empiris terintegrasi untuk menilai kesiapan sistem akuntansi digital di tingkat desa di negara-negara berkembang.

Kata Kunci: Maturity Level, Kompetensi Aparatur Desa, Akuntansi Digital

INTRODUCTION

The Fourth Industrial Revolution has brought digital disruption that fundamentally transforms governance systems around the world. In Indonesia, this transformation holds strategic importance, particularly at the village government level, where the allocation of village funds has reached an average of IDR 1.28 billion per village per year, with a total national budget exceeding IDR 70 trillion (Kementerian Desa, 2023). This significant allocation is accompanied by an increasing demand for transparency and accountability from a digitally literate rural community. According to BPS (2023), 78% of rural residents are smartphone users who expect real-time, accessible, and transparent information on how village funds are managed. (BPS, 2023; Kurniawan & Setiawan, 2023; Pratiwi & Santoso, 2023; Virginia & Ramli, 2022).

To respond to this demand, the implementation of a Digital Accounting Information System (SIAD) emerges as a transformative strategy to strengthen accountability and efficiency in village financial management. SIAD is not merely a digital recording tool but a decision-support system that transforms transactional data into meaningful financial insights (Oktapania et al., 2024). Its existence allows village governments to monitor the inflow and outflow of funds quickly and accurately, thus forming a solid foundation for data-based decision-making and promoting good governance. Contemporary SIAD not only functions as a digital recording tool but has evolved into an integrated system with predictive analysis capabilities for strategic decision-making (Sari & Syafina, 2022). Previous studies have confirmed that implementing digital accounting systems can reduce discretionary misuse by up to 47% and improve process efficiency by 62% (Dewi & Widarjo, 2024; Nasution & Firman, 2023; Oktapania et al., 2024).

However, the transition toward digital governance at the village level faces significant challenges. National data show that 68% of villages remain at a low maturity level (Level 1–2), and only 23% of village officials have adequate digital literacy (BPS, 2023; Kementerian Desa, 2023). (Abdallah et al., 2024) reveals that accountability in village fund management still faces various classic problems, such as low transparency, corruption, and limited community participation. Limited internet infrastructure, especially in remote areas, and a lack of accounting knowledge among village officials further hinder effective digital transformation (Kominfo, 2023). The quality of financial reporting remains suboptimal, eroding public trust in local governance . as well as a low conceptual understanding of accounting systems in the majority of villages, especially in underdeveloped and frontier regions (Leo et al., 2022; Srihastuti et al., 2021).

The readiness of villages in Indonesia to adopt SIAD is also highly diverse and unequal. This gap is essentially determined by two key factors: the maturity level of village fund management (Nandhany et al., 2020) and the competency of village officials in operating technology (Maharani & Susanto, 2021a; Subhi & Yuhertiana, 2021a). Maturity level reflects the degree to which planning, implementation, and reporting processes meet established governance standards, emphasizing transparency and accountability (Utomo, Sudrajat, & Dewi, 2022). Meanwhile, official competency is the main lever that ensures technology can be adopted optimally, a factor long recognized as a determinant of financial reporting quality both at the regional level (Susanti & Andayani, 2017; Wijayanti, 2017) and in the implementation of accounting standards (Subhi & Yuhertiana, 2021a)

Various previous studies have indeed examined the readiness to adopt information systems (Sari & Syafina, 2022), accounting systems (Dewi & Widarjo, 2024; Oktapania et al., 2024), and factors such as human resource competency (Susanti & Andayani, 2017; Wijayanti, 2017). However, most still focus on the district/city government level (Sari & Syafina, 2022) or non-village organizations (Aswira, 2022), and test these variables separately. The maturity level of village financial management is a fundamental prerequisite for digitalization readiness. Various studies have developed adaptive maturity level models for the Indonesian village government context, with five measurable maturity levels (Handayani & Putra, 2023; Nandhany et al., 2020). Comparative studies show that the maturity level of local financial

management is the strongest predictor of successful government accounting system digitalization (Utomo, Sudrajat, & Dewi, 2022; World Bank, 2023).

There is a significant research gap because not many studies highlight (1) the specific readiness of village governments to adopt SIAD by combining the concepts of maturity level and human resource competency; (2) Combining quantitative analysis of two fundamental factors, namely the maturity level of financial management (as a reflection of the process) and the competency of human resources/officials (as the driver of technology) in one integrated research model; and (3) Specializing in the village context with non-standardized accounting systems and limited infrastructure, which is the condition of the majority of villages in Indonesia.

Based on this urgency and research gap, this study becomes important to conduct. Therefore, this study aims to fill these research gaps by developing and empirically testing an integrated model that links the maturity level of village fund management and the competence of village officials to the readiness for SIAD implementation, mediated by community trust. The findings of this study are expected to contribute theoretically by enriching the literature on digital governance readiness, and practically by providing strategic recommendations for policymakers and village governments to strengthen human resource capacity and public trust in the digitalization of financial management.

METHOD

This research is designed with an explanatory quantitative approach aimed at testing cause-and-effect relationships and explaining the empirical influence of independent variables on the dependent variable. Specifically, this research focuses on analyzing the influence of the maturity level of village fund management and the competency of village officials on the readiness to implement a Digital Accounting Information System (SIAD) at the village government level, considering the mediating role of public trust as an intervening variable. The research emphasis is not only on describing field conditions but on testing hypotheses through quantitative statistical models to determine the magnitude of each variable's influence.

Research Location and Population

The study was conducted in several villages within Buton Regency, Southeast Sulawesi, Indonesia. The research population consisted of 747 village officials who are directly involved

in village financial management. This includes the Village Head, Village Secretary, Treasurer, and other officials responsible for planning, budgeting, and reporting of village finances.

Sampling Technique

Due to geographical and logistical considerations, purposive sampling was used to determine respondents who met specific criteria — namely, individuals with active involvement and decision-making roles in village financial management. Based on the Slovin formula, with a 10% margin of error, the minimum required sample size was 88 respondents. A total of 111 valid responses were collected, exceeding the minimum threshold and ensuring data adequacy for further statistical analysis.

$$n = \frac{N}{1 + N(e^2)}$$

Description:

n = Number of samples required

N = Population size

e = Tolerable margin of error, usually 0.05 (5%) or 0.1 (10%)

With a population (N) of 747 people and a margin of error (e) of 10%, the following is obtained:

$$n = \frac{747}{1 + 747(0,1^2)} = 88$$

The minimum sample size required is 88 respondents. The actual number of respondents in this study, 111, exceeds the minimum required number and is therefore considered suitable for further analysis.

Data Collection

The research data sources are a combination of primary and secondary data. Primary data is obtained directly from the research location through surveys using structured closed questionnaires with a Likert scale, designed to measure respondents' perceptions of all variables. Meanwhile, secondary data is collected from supporting documents such as village financial reports, village regulations, village profiles, as well as literature studies and related scientific articles to deepen the analysis context.

Data Analysis Technique

The data analysis stages begin with descriptive statistical analysis to provide a general overview of respondent characteristics and the distribution of answers for each variable. Next, the research instrument is tested for quality through validity and reliability tests to ensure the accuracy and consistency of the measurement tool. Finally, to test hypothesis, path analysis is used with the Sobel test to determine the significance of the indirect influence. The research framework and hypothesis are presented in Figure 1.

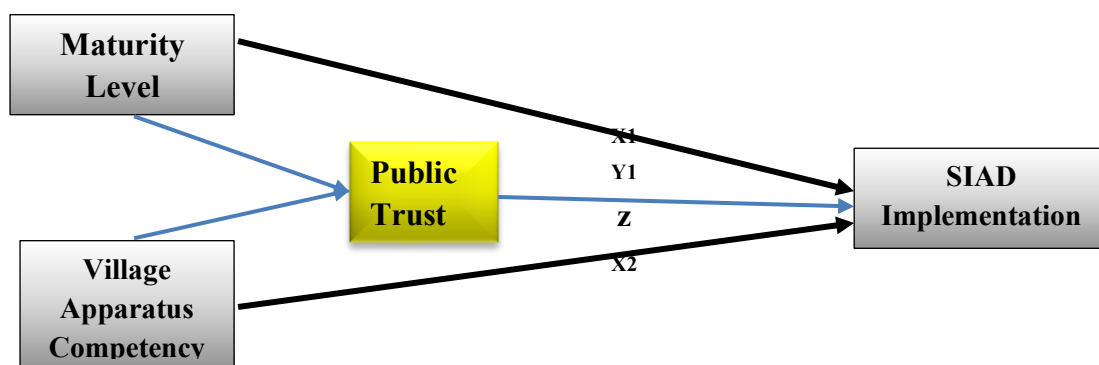


Figure 1. Research framework and hypothesis

RESULTS AND DISCUSSION

Respondent Characteristics

Table 1. Respondent Characteristics

Characteristics	Category	People	Percentage (%)
Gender	Male	80	73 %
	Female	30	27 %
Age	< 30 Years	21	19 %
	31 – 40 Years	53	48 %
	41 – 50 Years	26	23 %
	> 50 Years	11	10 %
Highest Education	SMA/SMK	47	42 %
	D3/D4/S1	59	53 %
	S2	2	2 %
	Other	3	3 %
Position in the Village	Head of Village	7	6 %
	Village secretary	46	42%
	head of Division (Kaur/Kasi)	41	37%
	village staff	17	15%
Length of work	< 5 Years	30	27%
	5 – 10 Years	50	45%
	> 10 Years	31	28%

Source : Data processed by researchers, 2025

Measurement Model Evaluation (Outer Model)

The following image shows the model output from the SmartPLS software, which has undergone an estimation process using the PLS algorithm and bootstrapping. The loading factor and path coefficient values can be seen in the following image.

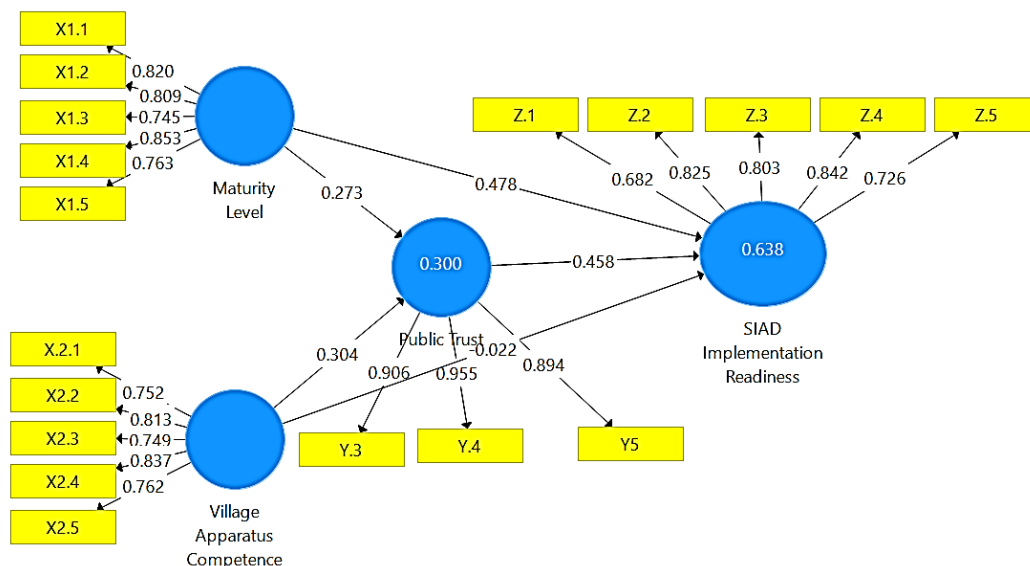


Figure 2. Convergent Validity Test

Convergent validity was measured using loading factor values and Average Variance Extracted (AVE). Initial measurement results showed several indicators did not meet the loading factor criteria of >0.70 . Problematic indicators were then gradually removed to improve model quality. The final evaluation results are as follows:

Table 1. Results of Convergent Validity Evaluation (Loading Factor & AVE)

Latent Variables	Indicator	Initial Loading	Final Loading	Information	AVE End	Information
Public Trust	Y.1	0.604	-	Deleted	0.689	Valid (> 0.5)
	Y.2	0.545	-	Deleted		
	Y.3	0.906	0.887	Valid		
	Y.4	0.955	0.940	Valid		
	Y.5	0.894	0.855	Valid		
SIAD Implementation Readiness	Z.1	0.689	0.683	Marginal (Maintained)	0.605	Valid (> 0.5)
	Z.2	0.828	0.826	Valid		
	Z.3	0.803	0.801	Valid		
	Z.4	0.834	0.838	Valid		
	Z.5	0.720	0.722	Valid		
Village Apparatus Competency	X1.1	0.816	0.818	Valid	0.614	Valid (> 0.5)
	X1.2	0.813	0.810	Valid		
	X1.3	0.748	0.749	Valid		

Maturity Level	X1.4	0.851	0.851	Valid	0.639	Valid (> 0.5)
	X1.5	0.764	0.763	Valid		
	X2.1	0.756	0.752	Valid		
	X2.2	0.814	0.811	Valid		
	X2.3	0.759	0.761	Valid		
	X2.4	0.841	0.844	Valid		
	X2.5	0.748	0.749	Valid		

Source : Data processed by researchers, 2025

Indicators Y.1 and Y.2 in the Public Trust variable had initial loading factors below 0.70 (0.604 and 0.545, respectively). Both indicators were gradually removed from the model because they statistically weakened convergent validity. After removal, the loading factor values of the remaining indicators and the AVE values of the latent variables increased significantly and met all criteria. Indicator Z.1 in the SIAD Implementation Readiness variable had a loading factor of 0.683, slightly below 0.70, but was retained because the variable's AVE value had met the requirements (> 0.50) and its removal could actually reduce the overall quality of the model.

Reliability test

Reliability is measured using Composite Reliability and Cronbach's Alpha values. The criteria are met if the value is > 0.70.

Table 2. Reliability Evaluation Results

Latent Variables	Cronbach's Alpha	Composite Reliability	Information
Public Trust	0.838	0.896	Reliabel
SIAD Implementation Readines	0.835	0.884	Reliabel
Village Apparatus Competency	0.844	0.888	Reliabel
Maturity Level	0.858	0.898	Reliabel

Source : Data processed by researchers, 2025

Based on the table above, it can be concluded that all latent variables have very good internal consistency and are declared reliable.

Structural Model Evaluation (Inner Model)

Structural model evaluation was conducted to test the hypothesized relationships between latent variables. The test used path coefficients and p-values obtained from a bootstrapping procedure with 5,000 subsamples. If p-values < 0.05 then the hypothesis is accepted or significant and if the p-values > 0.05 then the hypothesis is rejected or insignificant.

Tabel 3. Hypothesis Testing Results

Hypothesis	Path Coefficient	T-Statistics	P-Values	Information
H1: Public Trust → SIAD Implementation Readines	0.458	7.342	0.000	Accepted (Significant)

H2: Village Apparatus Competency → Public Trust	0.304	3.082	0.002	Accepted (Significant)
H3: Village Apparatus Competency → SIAD Implementation Readiness	-0.022	0.370	0.711	Rejected (Not Significant)
H4: Maturity Level → Public Trust	0.273	2.648	0.008	Accepted (Significant)
H5: Maturity Level → SIAD Implementation Readiness	0.478	4.347	0.000	Accepted (Significant)

Source : Data processed by researchers, 2025

The results of this study generally support prior research such as (Utomo, Sudrajat, & Fajar Gustiawaty Dewi, 2022), which found that a higher maturity level of financial management enhances readiness for digital system implementation. However, this study extends previous findings by showing that maturity not only has a direct impact but also influences readiness indirectly through community trust, a mediating relationship not previously tested. Unlike (Maharani & Susanto, 2021) and (Subhi & Yuhertiana, 2021), who reported a direct effect of village official competence on system implementation, this study finds that competence affects readiness indirectly through community trust. This indicates that in the village context, technical skills must be complemented by social trust to ensure digital adoption success. In summary, this study contributes a new integrative model by linking governance maturity, competence, and trust, providing a more comprehensive explanation of digital readiness at the village government level—an area less explored in earlier research.

CONCLUSION

Based on the analysis, it can be concluded that Community Trust is proven to be a strong and significant predictor of SIAD Implementation Readiness. This finding is consistent with the theory that trust is the primary foundation for community acceptance of change or new innovation. Village Official Competence does not directly influence implementation readiness, but it has a significant influence on building Community Trust. This indicates that the role of village officials is more of an enabler, creating conducive conditions through building trust, acting as a direct driver. Maturity Level has a dual influence: both directly on implementation readiness and indirectly through the mediation of trust. This suggests that mature village governance (good governance) is the most critical driver of technology adoption readiness.

Limitations and Suggestions for Further Research: The elimination of indicators Y.1 and Y.2 leaves three indicators to measure Community Trust. For further research, new, more robust and specific indicators for this construct are needed to strengthen its validity. Limitations

and Suggestions for Further Research: The removal of indicators Y.1 and Y.2 leaves three indicators to measure Public Trust. Further research requires new, more robust and specific indicators for this construct to strengthen its validity. Future research could expand this framework by incorporating additional contextual variables such as leadership style, organizational culture, or policy support to provide a more holistic understanding of digital readiness.

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