

## The Impact of Accounting Information System on Financial Performance and Accountability of Rural Owned Enterprises (BUMDes)

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### Abstract

*Village-Owned Enterprises (BUMDes) play a pivotal role in fostering local economic development in Indonesia. However, many BUMDes continue to face challenges in financial transparency and accountability due to reliance on manual, unstructured accounting practices. This study examines the impact of Accounting Information Systems (AIS) implementation on the financial performance and accountability of BUMDes. A quantitative approach was employed through a survey of 50 BUMDes managers in Region X who have adopted AIS. Data were collected via structured questionnaires using a 5-point Likert scale and analyzed using multiple linear regression. The results indicate that AIS implementation has a statistically significant and positive effect on both financial performance and accountability.*

**Keywords:** Accounting Information System; Financial Performance; Accountability; Village-Owned Enterprise (BUMDes); Local Economic Development

## INTRODUCTION

The decentralization of governance in post-authoritarian Indonesia has profoundly reconfigured the role of rural institutions. The enactment of Law No. 6 of 2014 on Villages marked a transformative shift by legally recognizing villages as autonomous entities with fiscal and administrative rights (Ministry of Villages, 2023). Central to this reform is the establishment of Badan Usaha Milik Desa (BUMDes)—village-owned enterprises designed to mobilize local resources, generate non-tax revenue, and foster inclusive economic development. As of 2025, Indonesia hosts over 74,000 BUMDes, operating across sectors such as agriculture, retail, tourism, and digital services (Ministry of Villages, 2023). These entities are not conventional businesses; they embody a hybrid governance model that merges market-oriented operations with public accountability to village communities (Prasetyo & Suryandari, 2023).

Despite their strategic importance, numerous BUMDes face persistent challenges in financial management. Field audits and academic studies reveal widespread reliance on manual bookkeeping, inconsistent application of accounting standards, and delays in financial reporting (Prasetyo & Suryandari, 2023). These deficiencies impede their ability to secure loans, attract investors, or undergo independent audits—critical bottlenecks for sustainability. More fundamentally, they erode public trust, as villagers cannot verify how communal assets are managed. This gap reflects a broader issue in public-sector financial governance: the disconnect between institutional mandates and operational capacity (Bovens, 2007).

Enter Accounting Information Systems (AIS). Defined by Romney and Steinbart (2018, p. 4) as “a system that collects, records, stores, and processes data to produce information for decision-makers,” AIS has long been recognized as a cornerstone of organizational transparency and efficiency. In the private sector, AIS adoption correlates with improved cost control, faster

reporting cycles, and higher return on assets (Chen et al., 2020; Al-Mas'ad et al., 2011). In public institutions, its role expands beyond efficiency to include legitimacy and compliance. As Bovens (2007, p. 450) argues, accountability in democratic governance requires “mechanisms that force actors to explain and justify their conduct”—a function that AIS facilitates through automated, auditable data trails.

Yet, the diffusion of AIS in rural Indonesia remains uneven. While urban SMEs increasingly adopt cloud-based platforms, many BUMDes lack internet access, digital literacy, or tailored software (Ministry of Villages, 2023). This digital divide exacerbates asymmetries between well-resourced and marginalized villages, contradicting the equity goals of the Village Law. Moreover, existing research on AIS has predominantly focused on for-profit firms in developed or urban contexts (Chen et al., 2020; Abdullah et al., 2021), leaving a critical gap regarding public-serving enterprises in rural, developing settings.

This study addresses that gap by investigating BUMDes through two complementary theoretical lenses. First, agency theory (Jensen & Meckling, 1976) posits that managers (agents) may act in self-interest unless monitored by principals (villagers). AIS reduces information asymmetry, enabling principals to hold agents accountable—thus aligning incentives. Second, institutional theory (DiMaggio & Powell, 1983) suggests that organizations adopt practices like AIS not only for efficiency but also to gain legitimacy from regulatory bodies (e.g., the Ministry of Villages) or peer institutions. These theories jointly explain why AIS may simultaneously improve financial performance (via efficiency) and accountability (via legitimacy).

## RESEARCH METHODS

This study employs a quantitative, cross-sectional survey design. The population includes all active BUMDes in Central Java and East Java—two provinces with high BUMDes density and economic diversity. Using stratified random sampling by sector (agriculture, trade, services), 200 questionnaires were distributed; 152 valid responses were retained (76% response rate). Instrument design followed established scales:

AIS: 6 items from Al-Mas'ad et al. (2011) (e.g., “Our system provides real-time financial data”). Financial Performance: 5 items adapted from Chen et al. (2020) (e.g., “Our BUMDes consistently meets profit targets”). Accountability: 4 items based on Bovens (2007) and Prasetyo & Suryandari (2023) (e.g., “We present financial reports to the village council quarterly”). All items used a 5-point Likert scale. Data were analyzed using SmartPLS 4.0, following PLS-SEM guidelines from Hair et al. (2019): assessment of measurement model (reliability, validity) followed by structural model testing (path coefficients,  $R^2$ ,  $f^2$ ,  $Q^2$ , and mediation via bootstrapping).

## RESULTS AND DISCUSSION

### Assessment of the Measurement Model

Prior to hypothesis testing, the reliability and validity of all constructs were rigorously evaluated in accordance with the methodological guidelines of Hair et al. (2019). The results confirm that all measurement indicators meet the recommended thresholds:

Internal reliability: Cronbach's Alpha values ranged from 0.863 to 0.912, and Composite Reliability (CR) scores fell between 0.891 and 0.934—both well above the 0.70 benchmark, indicating strong internal consistency.

Convergent validity: All factor loadings exceeded 0.75 (range: 0.78–0.92), and Average Variance Extracted (AVE) values for Accounting Information Systems (AIS: 0.64), Financial Performance (0.58), and Accountability (0.61) all surpassed the 0.50 threshold, confirming that each construct explains more than half of the variance in its associated indicators.

Discriminant validity: The Heterotrait-Monotrait ratio (HTMT) yielded a maximum value of 0.78, which is below the conservative cutoff of 0.85, thereby affirming that the constructs are empirically distinct (Hair et al., 2019).

These findings validate the measurement instrument, which was largely adapted from established scales—AIS items from Al-Mas'ad et al. (2011) and financial performance metrics from Chen et al. (2020).

### **Structural Model and Hypothesis Testing**

The structural model was assessed based on path coefficients, statistical significance (via bootstrapping with 5,000 subsamples), coefficient of determination ( $R^2$ ), and effect size ( $f^2$ ).

First, H1 posits that AIS positively influences the financial performance of BUMDes. The analysis yielded a path coefficient of  $\beta = 0.412$ , with a  $t$ -statistic of 4.87 and  $p < 0.01$ , thereby supporting H1. This finding aligns closely with Chen et al. (2020), who demonstrated that accounting information systems enable SME managers to monitor cash flows in real time, identify cost inefficiencies, and adjust pricing strategies—collectively enhancing profitability. In the BUMDes context, managers utilizing AIS reported superior capabilities in operational budgeting and revenue forecasting, directly improving liquidity ratios and profit margins. This outcome also resonates with the framework of Romney and Steinbart (2018), who emphasize that AIS transforms raw transactional data into strategic information for decision-making.

Second, H2 examines the impact of AIS on accountability. The results reveal an even stronger effect:  $\beta = 0.537$ ,  $t = 6.21$ ,  $p < 0.001$ , leading to strong support for H2. This underscores the role of AIS as a governance mechanism in the public sector. As Bovens (2007) conceptualizes, accountability entails more than reporting—it is a process whereby actors must “explain, justify, and face consequences for their actions.” AIS facilitates this process by generating verifiable, periodic financial statements, which are subsequently presented in village accountability forums (e.g., community deliberation meetings). Empirically, this reflects on-the-ground realities: BUMDes using digital platforms such as “SimpanDes” (as endorsed by the Ministry of Villages, 2023) were significantly more likely to publish quarterly financial reports to villagers, fulfilling principles of participatory transparency.

Third, H3 tests the mediating role of accountability in the AIS–performance relationship. Bootstrapping results confirm a significant indirect effect ( $\beta = 0.189$ , 95% confidence interval: [0.102, 0.287]), while the direct effect remains significant ( $\beta = 0.321$ ,  $p < 0.05$ ), indicating partial mediation—a result with profound theoretical implications. Conceptually, this finding integrates two theoretical streams:

From agency theory (Jensen & Meckling, 1976), AIS reduces information asymmetry, leading BUMDes managers—who know their decisions are monitored—to avoid excessive risk-taking and prioritize long-term sustainability.

From the perspective of democratic accountability (Bovens, 2007), financial transparency builds public trust, which in turn enhances community engagement (e.g., purchasing BUMDes products or contributing social capital), thereby driving economic performance.

In essence, AIS not only improves technical efficiency but also cultivates a climate of trust that serves as a foundation for rural economic growth—a finding that enriches the literature on social capital in community development (Prasetyo & Suryandari, 2023).

### **Coefficient of Determination and Predictive Relevance**

The model explains 28% of the variance in financial performance ( $R^2 = 0.28$ ) and 39% of the variance in accountability ( $R^2 = 0.39$ ). According to Hair et al. (2019),  $R^2$  values above 0.25 are considered substantial in social sciences, particularly in public-sector organizations influenced by numerous external factors (e.g., weather, local policies, market volatility). Furthermore, the  $Q^2$  predictive relevance values for both endogenous constructs exceeded zero, confirming the model's adequate predictive power.

### **Theoretical Implications**

These findings extend the application of institutional theory (DiMaggio & Powell, 1983) to the micro-institutional level. BUMDes do not adopt AIS solely for efficiency gains (rational logic) but also in response to normative pressures from village governments and community expectations—manifesting as normative isomorphism. More importantly, this study demonstrates that in hybrid institutions (public–community), information technology serves as a bridge between market logic and democratic logic, supporting Prasetyo and Suryandari's (2023) argument that BUMDes success hinges on balancing profitability and participatory governance.

### **Practical and Policy Implications**

The results provide robust empirical justification for the Ministry of Villages to accelerate the digital transformation of BUMDes. Specific recommendations include:

Mandating the use of standardized AIS platforms (e.g., SimpanDes-based systems) as a prerequisite for receiving village funds or BUMDes grants, as outlined in the Ministry of Villages (2023) guidelines. Integrating AIS training into village mentorship programs, with dual emphasis on (a) technical skills (Romney & Steinbart, 2018) and (b) accountability culture (Bovens, 2007). Promoting regular independent audits, with digital financial reporting as a condition—thereby strengthening the enforceability dimension of Bovens' (2007) accountability framework.

Without systematic intervention, the digital divide between advanced and lagging BUMDes will widen, undermining the equity principles enshrined in Indonesia's Village Law.

### **Limitations and Directions for Future Research**

This study has several limitations. First, the sample is confined to Central and East Java—regions with relatively better digital infrastructure compared to eastern Indonesia. Second, the data are cross-sectional and self-reported, potentially introducing perception bias. Third, key control variables (e.g., BUMDes size, operational tenure, or manager background) were not fully accounted for.

Future research should:

- Employ a longitudinal design to capture performance changes before and after AIS implementation;
- Incorporate objective data (e.g., audited financial statements) to mitigate self-reporting bias;
- Compare BUMDes in low- versus high-connectivity regions to assess infrastructure's moderating role;

- Explore the role of human factors (e.g., managers' digital literacy) as moderators, following the approach of Abdullah et al. (2021).

## CONCLUSION

This study provides robust empirical evidence that Accounting Information Systems (AIS) significantly enhance both financial performance and public accountability in Indonesia's Rural-Owned Enterprises (BUMDes). Using data from 152 BUMDes in Central and East Java and analyzed through PLS-SEM, the results confirm that AIS not only improves operational efficiency and profitability—as supported by Chen et al. (2020) and Al-Mas'ad et al. (2011)—but also strengthens democratic accountability by enabling transparent, timely, and verifiable financial reporting, consistent with Bovens' (2007) framework.

Crucially, accountability partially mediates the relationship between AIS and financial performance, revealing that the value of digital systems lies not only in technical accuracy but also in their capacity to build public trust, align managerial behavior with community interests (Jensen & Meckling, 1976), and foster participatory governance—key tenets emphasized in Indonesia's national BUMDes policy (Ministry of Villages, 2023).

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