



THE EFFECT OF GOVERNMENT ACCOUNTING STANDARDS ON THE QUALITY OF VILLAGE FINANCIAL STATEMENTS: EVIDENCE FROM VILLAGE GOVERNMENTS IN TALUN DISTRICT CIREBON REGENCY

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ABSTRACT

Introduction: Village financial management plays a vital role in promoting transparency, accountability, and good governance at the local level. However, various challenges related to financial accountability and reporting quality remain evident in village administrations. This study aims to examine the effect of Government Accounting Standards (Standar Akuntansi Pemerintahan/SAP) implementation on the quality of village financial statements in Talun District, Cirebon Regency.

Methods: This research employed a quantitative approach using primary data collected through questionnaires distributed to village officials directly involved in financial management. The study population consisted of 55 village officials from eleven villages in Talun District, Cirebon Regency, comprising village heads, village secretaries, financial officers, planning officers, and administrative officers. Since the entire population was included in the study, a census (total sampling) technique was employed, resulting in 55 respondents. The respondents were directly involved in village financial management and financial reporting. Data were analyzed using IBM SPSS Statistics simple linear regression analysis, while hypothesis testing was conducted using the partial t-test.

Results: The findings reveal that the implementation of Government Accounting Standards has a positive and statistically significant effect on the quality of village financial statements, as indicated by a calculated t-value of 2.355, which exceeds the critical t-value of 2.00404, and a significance value of 0.022, which is below the 0.05 threshold. These results indicate that better implementation of SAP contributes to improving the relevance, reliability, comparability, and understandability of financial reports. Therefore, strengthening the implementation of Government Accounting Standards is essential to enhance financial accountability and support good governance practices at the village level.

INTRODUCTION

Village financial management is a crucial element in ensuring good governance, as it is closely related to efforts to promote transparency, accountability, effectiveness and community participation in rural development. Since the implementation of village fund policies, village governments have been granted broader authority in managing financial resources to support development programs and improve community welfare. Therefore, village financial management must be conducted in a professional manner and in accordance with applicable regulations. Based on Minister of Home Affairs Regulation Number 20 of 2018 concerning Village Financial Management, village financial management must adhere to the principles of transparency, accountability, participation, as well as orderly and disciplined budgeting practices. This regulatory framework is complemented by the latest provisions governing village and village fund management. Government Regulation Number 16 of 2026 concerning the Implementing Regulation of Law Number 6 of 2014 concerning Villages provides the current regulatory framework for village governance, including village finances and assets. In addition, Minister of Finance Regulation Number 7 of 2026 concerning the Management of Village Funds for Fiscal Year 2026 regulates the management of Village Funds in the 2026 fiscal year, while Minister of Villages and Development of Disadvantaged Regions Regulation Number 16 of 2025 provides operational guidelines for the focus of Village Fund utilization in 2026. These regulations reinforce the importance of accountable, transparent, and well-governed village financial management.

Talun District in Cirebon Regency is one of the areas consisting of eleven villages, namely Cempaka Village, Ciperna Village, Cirebon Girang Village, Kepongpongan Village, Kerandon Village, Kecomberan Village, Sampiran Village, Wanasaba Lor Village, Wanasaba Kidul Village, Kubang Village, and Sarwadadi Village. Along with the continuous increase in village fund allocations each year, village officials in Talun District are required to possess adequate capacity in implementing Government Accounting Standards so that the resulting financial reports meet established qualitative characteristics. Inaccurate or improper application of accounting standards may lead to low-quality financial reporting, which in turn can create issues in financial accountability at the village level. In practice, village financial management still faces various challenges. Audit findings from the Audit Board of the Republic of Indonesia (BPK) of West Java indicate weaknesses in internal control systems and non-compliance with regulations in regional financial management in Cirebon Regency. In addition, in 2025, community protests occurred in Wanasaba Kidul Village, Talun District, due to allegations of village fund mismanagement and a lack of transparency in budget administration. These conditions indicate that transparency and the quality of financial reporting at the village level still need to be improved. This situation highlights the importance of consistent implementation of Government Accounting Standards to ensure that financial reports are accurate, transparent, and accountable.

Previous studies have shown that the implementation of Government Accounting Standards contributes positively to improving the quality of financial reporting. Research by Vina Arnita, Siti Rohaida (2025) found that SAP implementation has a significant positive effect on the quality of local government financial reports. Similar findings were reported by Vina Arnita, Siti Rohaida (2025) who stated that the application of government accounting standards can enhance financial reporting quality, particularly when supported by effective internal control systems. Furthermore, Arini Novandalina (2020) also revealed that the proper implementation of accounting standards positively influences the quality of public sector financial reports. However, studies specifically examining the effect of SAP implementation on village-level financial reporting quality, particularly in Talun District, Cirebon Regency, remain limited. Based on these phenomena, the urgency of the issue, and previous research findings, this study aims to analyze the effect of the implementation of Government Accounting Standards on the quality of village financial reports. The results of this study are expected to provide empirical evidence regarding the importance of SAP implementation in improving the quality of village financial reporting, as well as serving as an evaluation tool for village governments in achieving transparent, accountable financial management aligned with the principles of good governance.

LITERATURE REVIEW

There are three main points that will be discussed in this literature review, namely the basic theory, previous studies, and the hypothesis development derived from previous research findings. These three components are used

to build a strong conceptual framework for explaining the relationship between the implementation of Government Accounting Standards and the quality of village financial statements.

Agency Theory

Agency theory explains the relationship between two parties, namely the principal and the agent. According to Jensen & Meckling (1976), an agency relationship occurs when the principal delegates authority to the agent to perform certain tasks and make decisions on their behalf. In public sector governance, the community acts as the principal, while the village government acts as the agent responsible for managing public resources, including village finances. This relationship often creates information asymmetry because the agent has more access to financial information than the principal. As a result, there is a potential risk of mismanagement or lack of transparency in financial reporting. To reduce this problem, a reliable reporting system is needed. The implementation of Government Accounting Standards (SAP) is considered an important mechanism to improve transparency, accountability and the quality of financial reporting, thereby minimizing agency problems and strengthening public trust. Agency problems in public organizations can be minimized through standardized accounting practices and transparent information systems. The adoption of digital governance systems further reduces information asymmetry by improving accessibility and reliability of public financial information (Alajmi et al., 2023).

Government Accounting Standards (SAP)

Government Accounting Standards (SAP) are a set of accounting principles used in the preparation and presentation of government financial statements, as regulated in Government Regulation Number 71 of 2010. Herdiyana (2025) explained that the application of accounting bases in village government entities strengthens compliance with Government Accounting Standards and improves the reliability of financial reporting. Likewise, Irfana (2025), through a literature review concluded that consistent implementation of SAP remains one of the primary determinants of high-quality government financial reports in Indonesia. Khasanah Uswatun & Nilasari Ayunda Putri, (2023) argued that Government Accounting Standards ensure that public sector financial reports meet qualitative characteristics including relevance, reliability, comparability and understandability. Similarly, Ani Sri Murwani, (2023) confirmed that SAP implementation significantly improves financial reporting quality within public sector organizations.

These standards serve as a guideline for both central and local governments, including village administrations, to ensure that financial reports are prepared in a consistent and standardized manner. SAP aims to produce financial statements that are relevant, reliable, comparable, and understandable. According to Mahmudi (2021), the implementation of SAP is intended to improve the quality of public sector financial reporting and strengthen accountability and transparency in government financial management. In village financial management, SAP plays an important role in guiding the processes of recording, measuring, and reporting financial transactions in accordance with applicable regulations.

Quality of Financial Statements.

The quality of financial statements refers to the extent to which financial information is useful for users in making economic and administrative decisions. Tetelepta & Talakua (2025) found that effective implementation of Government Accounting Standards significantly enhances transparency and financial reporting quality within village governments through improved reporting consistency and accountability. Based on Government Regulation Number 71 of 2010, the qualitative characteristics of financial statements include relevance, reliability, comparability and understandability. Financial information is considered relevant when it is capable of influencing users' decisions and helping them evaluate past, present, and future events. Reliability means that the information is free from material error and fairly presented. Comparability allows users to compare financial reports across periods or entities, while understandability ensures that the information can be easily comprehended by users with sufficient knowledge of public sector accounting. Mardiasmo (2018) states that the quality of financial reporting is a key indicator of government accountability and transparency, where better quality reports lead to higher public trust.

The implementation of Government Accounting Standards should also be supported by digital financial management systems. Amelia et al. (2025) demonstrated that the utilization of Siskeudes improves accountability and the quality of village financial reports. Similarly, Alajmi et al., (2023) argued that digital government systems improve organizational transparency, accountability, and decision-making quality within public sector institutions.

Previous Study and Hypothesis

Amelia et al., (2025) found that the implementation of Siskeudes significantly improves village financial accountability through standardized recording and reporting procedures. Herdiyana (2025) also demonstrated that the application of accounting bases in village entities strengthens compliance with Government Accounting Standards and improves financial statement quality. Irfana (2025) concluded that Government Accounting Standards remain the primary framework for improving accountability and transparency in Indonesian public sector financial reporting. Furthermore, Tetelepta & Talakua (2025) showed that SAP implementation significantly affects transparency and the quality of village financial reports using Structural Equation Modeling. Wibisono et al., (2025) reported that village financial management combined with good village governance and knowledge management significantly improves village government performance. These findings indicate that accounting standards should be accompanied by sound governance practices to achieve high-quality financial reporting.

Several previous studies have examined the relationship between the implementation of SAP and the quality of financial statements. Vina Arnita, Siti Rohaida (2025) found that SAP implementation has a positive effect on the quality of local government financial reports, indicating that better application of accounting standards improves reporting quality. Arini Novandalina (2020) also showed that public sector accounting implementation and internal control systems have a positive influence on financial reporting quality by strengthening transparency and accountability. Furthermore, Vina Arnita, Siti Rohaida (2025) confirmed that both SAP implementation and government internal control systems significantly affect the quality of local government financial statements. Mahmudi (2021) also emphasized that transparency and accountability in public financial management contribute to improved financial reporting quality. Based on these empirical findings, it can be concluded that the implementation of Government Accounting Standards is consistently associated with better financial reporting quality.

Therefore, based on the theoretical foundation and previous empirical evidence, the hypothesis proposed in this study is that the implementation of Government Accounting Standards (SAP) has a positive effect on the quality of village financial statements.

RESEARCH METHODS

The quantitative approach is used to examine the relationship and influence between the independent variable, namely the implementation of Government Accounting Standards (SAP), and the dependent variable, which is the quality of village financial statements, through statistical data analysis. According to Sugiyono (2022), quantitative research is a method used to investigate a specific population or sample with the purpose of testing predetermined hypotheses. This study aims to analyze the effect of SAP implementation on the quality of financial reporting in village governments within Talun District, Cirebon Regency.

The research setting focuses on village government offices in Talun District, which consists of eleven villages: Cempaka, Ciperna, Cirebon Girang, Kepongpongan, Kerandon, Kecomberan, Sampiran, Wanasaba Lor, Wanasaba Kidul, Kubang, and Sarwadadi. The study is conducted within the scope of village financial management activities, particularly those related to the preparation of financial statements. The research period corresponds to the most recent fiscal reporting activities available during data collection. The type of data used in this study is primary data. Primary data are obtained directly from respondents through questionnaires distributed to village officials involved in financial management. The respondents' answers reflect their perceptions regarding the implementation of SAP and the quality of financial reporting in their respective villages.

The population of this study consisted of 55 village officials involved in financial management across eleven villages in Talun District, Cirebon Regency. The population comprised five village officials from each village, namely the village head, village secretary, financial affairs officer, planning officer and general administration officer. The sampling technique used is purposive sampling, where respondents are selected based on specific criteria relevant to

the research objectives. The sample includes village officials who are directly involved in the preparation and reporting of village financial statements, with a total of 55 respondents. Data collection techniques in this study include questionnaires, observation and documentation. Questionnaires are distributed directly to respondents using a five-point Likert scale ranging from strongly disagree to strongly agree. Observation is conducted to gain a clearer understanding of village financial management practices, while documentation is used to collect supporting data such as financial reports and administrative records. The independent variable in this study is Government Accounting Standards (SAP), while the dependent variable is the quality of financial statements. Indicators of SAP include compliance with accounting standards, use of accrual-based accounting, accuracy of transaction recording, proper presentation of financial statements, and transparency in reporting. Meanwhile, indicators of financial reporting quality include relevance, reliability, comparability and understandability.

Data analysis is conducted using IBM SPSS Statistics software. The analytical procedures simple linear regression analysis, hypothesis testing (t-test). Simple linear regression is used to examine the effect of SAP implementation on financial reporting quality, with the following model:

$$Y = a + bX + e$$

Where:

Y = Quality of Financial Statements

a = Constant

b = Regression coefficient

X = Government Accounting Standards (SAP)

e = Error term

Hypothesis testing is carried out to determine whether the independent variable significantly influences the dependent variable. If the significance value is less than 0.05, the hypothesis is accepted. Furthermore, the coefficient of determination is used to measure the extent to which SAP implementation explains the variation in the quality of village financial statements in Talun District, Cirebon Regency. Ethical considerations are maintained throughout the research process by ensuring confidentiality of respondents' identities and using the collected data solely for academic purposes. Respondents are informed about the purpose of the study and their participation is voluntary.

RESULT AND ANALYSIS

The partial t-test was used to examine the individual influence of each independent variable on the dependent variable. Hypothesis testing was conducted using a 5% significance level ($\alpha = 0.05$). With a total of 55 observations in the sample, the critical value of t was determined to be 2.00404. The outcomes of the hypothesis testing are presented in the following table:

Table 1. Partial t-Test Results

Variable	t-value	Significance	Interpretation
Public Sector Accounting	2.355	0.022	Significant Positive Effect

Dependent Variable: Financial Statement Quality

Source: Processed SPSS Version 26 Output (2026)

Hypothesis H1: Government Accounting Standards have a positive effect on the quality of financial statements. Based on Table 1, the t-test results show that the Government Accounting Standards variable has a calculated t-value of 2.355, which is higher than the critical t-value of 2.00404. In addition, the significance value is 0.022, which is lower than the 0.05 threshold. These results indicate that the Government Accounting Standards variable has a significant influence on the quality of financial statements. Therefore, the null hypothesis (H_0) is rejected and the alternative

hypothesis is accepted. It can be concluded that Government Accounting Standards significantly affect the quality of financial statements, meaning that hypothesis H1 is supported.

The Effect of Government Accounting Standards on the Quality of Financial Statement.

The Government Accounting Standards variable obtained a t-value of 2.355, which is higher than the critical t-table value of 2.00404, with a significance value of 0.022, which is lower than the 0.05 significance level. These results indicate that the implementation of Government Accounting Standards has a positive and statistically significant effect on the quality of village financial statements. Therefore, H0 is rejected and H2 is supported. This finding indicates that improvements in the implementation of Government Accounting Standards are associated with improvements in the quality of village financial reporting. This result demonstrates that the implementation of Government Accounting Standards is not merely an administrative requirement but also an important instrument for strengthening financial accountability at the village level. The application of standardized accounting principles provides village officials with a systematic framework for recording, classifying, presenting, and reporting financial transactions. Consequently, financial statements can provide information that is more relevant, reliable, comparable, and understandable to users, including village governments, local governments, communities, and other stakeholders.

The finding is consistent with previous studies by Ani Sri Murwani (2023), Khasanah Uswatun and Nilasari Ayunda Putri (2023), Herdiyana (2025), Amelia et al. (2025), Irfana (2025), Tetelepta and Talakua (2025), Wibisono et al. (2025), and Az-Zahra et al. (2023), which demonstrate the importance of implementing Government Accounting Standards in improving the quality, accountability, and transparency of public sector and village financial reporting. In particular, Az-Zahra et al. (2023) found that the implementation of Government Accounting Standards is associated with improved village financial accountability. This supports the present finding that consistent implementation of Government Accounting Standards contributes to better-quality village financial statements and strengthens accountability in village financial management. For local governments, particularly the Cirebon Regency Government, the findings provide an empirical basis for strengthening policies related to village financial governance. Local government policies should not focus solely on the distribution and utilization of village funds but also on strengthening the quality of financial reporting. This can be implemented through regular training programs, technical guidance, monitoring, and assistance for village financial officers. Local governments can also establish periodic evaluations of the implementation of accounting standards as part of the supervision of village financial management. From a public policy perspective, the findings indicate that Government Accounting Standards can function as an important policy instrument for strengthening transparency and accountability in village financial management. High-quality financial statements provide more reliable information for evaluating the effectiveness of village fund utilization and supporting evidence-based decision-making. Reliable financial information can also assist local and central governments in identifying financial management problems, evaluating development programs, determining future funding priorities, and designing more targeted village development policies.

The implementation of Government Accounting Standards therefore has implications beyond the preparation of financial statements. Better-quality financial reports can strengthen public trust because communities have access to more reliable information concerning the management and utilization of village funds. This is particularly important because village financial resources are intended to support public services, infrastructure, economic empowerment, and community welfare. When financial information is prepared according to consistent standards, stakeholders are better able to assess whether village resources have been managed efficiently, effectively, transparently, and accountably. Furthermore, the findings suggest that policies concerning village financial management should adopt an integrated approach that combines regulatory compliance, human resource capacity, supervision, and continuous evaluation. The existence of accounting standards alone is insufficient if village officials do not have adequate knowledge and technical competence to implement them. Therefore, policy development should be directed toward strengthening the institutional capacity of village governments rather than merely requiring compliance with reporting regulations.

Overall, this study contributes practical evidence that strengthening the implementation of Government Accounting Standards can improve the quality of village financial statements. For village governments, the priority should be improving the competence of financial management personnel and the consistency of accounting practices.

For local governments, the findings support stronger guidance, supervision, and evaluation mechanisms. For public policy, the results emphasize the importance of high-quality financial information as a foundation for transparent governance, evidence-based decision-making, effective village development planning, and increased public accountability.

CONCLUSION

This study aimed to examine the effect of Government Accounting Standards (SAP) on the quality of village financial statements in Talun District, Cirebon Regency. Based on the results of hypothesis testing, it was found that SAP has a positive and significant effect on the quality of financial reporting. The t-test results show that the calculated t-value is greater than the critical value, and the significance level is below 0.05, indicating that the proposed hypothesis is supported. This means that the implementation of Government Accounting Standards contributes directly to improving the quality of village financial statements. The main finding of this study confirms that the better the implementation of SAP in village financial management, the higher the quality of financial reporting produced by village governments. This result strengthens agency theory, which emphasizes the importance of reducing information asymmetry between the government as the agent and society as the principal. By applying standardized accounting principles, village governments are able to produce financial reports that are more transparent, accountable, relevant, reliable, comparable, and understandable. This condition ultimately increases public trust in village financial management and supports the realization of good governance at the village level.

Based on these findings, it can be concluded that Government Accounting Standards play an essential role in improving the quality of financial statements in village governance. Therefore, consistent and proper implementation of SAP is crucial to ensure that village financial management is conducted in accordance with applicable regulations and public expectations. In terms of suggestions, village governments are encouraged to strengthen their understanding and implementation of Government Accounting Standards through continuous training and capacity building for financial officers. In addition, improvements in internal control systems and administrative discipline are necessary to support accurate and timely financial reporting. Future researchers are suggested to expand the scope of this study by adding other variables such as internal control systems human resource competence or information technology utilization to obtain a more comprehensive understanding of factors influencing financial reporting quality in the public sector.

REFERENCES

- Az-Zahra, S. F., Nurbaiti, N., & Syafina, L. (2023). Implementation of Government Accounting Standards and Village Financial Accountability. *Journal of Financial and Accounting Research*, 9(1).
<https://doi.org/10.25134/jrka.v9i1.7635> svg
- Alajmi, M., Mohammadian, M., & Talukder, M. (2023). The determinants of smart government systems adoption by public sector organizations in Saudi Arabia. *Heliyon*, 9(10), e20394.
<https://doi.org/10.1016/j.heliyon.2023.e20394>
- Amelia, A. T., Yanti, N., & Nurwani. (2025). Village Financial Accountability through Siskeudes: A Case Study in Jambur Pulau. *AMAR (Amkop Management Accounting Review)*, 5(2), 643–656.
<https://doi.org/10.37531/amar.v5i2.3039>
- Ani Sri Murwani, R. P. A. (2023). *PENGARUH PENERAPAN STANDAR AKUNTANSI PEMERINTAHAN TERHADAP KUALITAS LAPORAN KEUANGAN SEKTOR PUBLIK*. 23(02), 1–12.
<https://doi.org/https://jurnal.stie-aas.ac.id/index.php/jap/article/view/7126>
- Arini Novandalina, F. Y. E. (2020). Pengaruh Penerapan Akuntansi Sektor Publik Dan Pengawasan Internal Terhadap Kualitass Laporan Keuangan Dinas Perhubungan Kota Semarang. *Jurnal STIE Semarang*, 12(3), 26–41. <https://doi.org/10.33747>
- Herdiyana, D. (2025). A Study on the Application of Accounting Bases in Village Government Entities. *Atestasi : Jurnal Ilmiah Akuntansi*, 8(2), 592–602. <https://doi.org/10.57178/atestasi.v8i2.1738>
- Irfana, D. (2025). Literature Review on the Implementation of Government Accounting Standards (SAP) in Indonesia. *American Journal of Economic and Management Business (AJEMB)*, 4(9), 1578–1585.
<https://doi.org/10.58631/ajemb.v4i9.263>
- Jensen, C., & Meckling, H. (1976). *THEORY OF THE FIRM : MANAGERIAL BEHAVIOR , AGENCY COSTS AND*

- OWNERSHIP STRUCTURE I . Introduction and summary In this paper WC draw on recent progress in the theory of (1) property rights , firm . In addition to tying together elements of the theory of e. 3, 305–360.*
- Khasanah Uswatun, & Nilasari Ayunda Putri. (2023). Analisis Implementasi Penerapan Standar Akuntansi Pemerintah Terhadap Kualitas Laporan Keuangan. *TRANSEKONOMIKA: Akuntansi, Bisnis dan Keuangan*, 3(1), 279–288. <https://transpublika.co.id/ojs/index.php/Transekonomika>
- Lestari Widiah Ningsih, & Lingga Yuliana. (2025). Transparansi dan Akuntabilitas Pengelolaan APBDes 2024 di Desa Sowanlor, Jepara. *MASMAN Master Manajemen*, 3(2), 84–97. <https://doi.org/10.59603/masman.v3i2.818>
- Mahmudi. (2021). Manajemen kinerja sektor publik (3rd ed.). UPP STIM YKPN.
- Paulus Gundul. (2025). Village Financial Transparency: Evaluation of the Implementation of the Village Financial System in Improving Accountability in Village Fund Management. *Journal Of Strategic Behaviour Accounting*, 1(01), 1–11. <https://doi.org/10.26740/jsba.v1i01.42080>
- Rizky Arief Fadhillah, Kamilah, & Mawaddah Irham. (2024). Akuntabilitas dan Transparansi Pengelolaan Penyaluran Bantuan Langsung Tunai Dana Desa. *AKUA: Jurnal Akuntansi dan Keuangan*, 3(1), 38–47. <https://doi.org/10.54259/akua.v3i1.2294>
- Sugiyono. (2022). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta.
- Tetelepta, J. M., & Talakua, V. A. (2025). Efektivitas Penerapan Standar Akuntansi Pemerintah tentang Transparansi Pelaporan Keuangan Desa: Pendekatan Pemodelan Persamaan Struktural. *Journal of Applied Accounting*, 4(2), 122–130. <https://doi.org/10.52158/jaa.v4i2.1481>
- Vina Arnita, Siti Rohaida, M. Z. (2025). The Application of Government Accounting Standard towards Quality Village Government Financial Statement. *Journal of Business and Economics Research (JBE)*, 6(3), 1016–1026. <https://doi.org/10.47065/jbe.v6i3.8451>
- Wibisono, N., Asnawi, N., & Ekowati, V. M. (2025). Improving Village Government Performance through Village Financial Management, Good Village Governance, and Knowledge Management. *AKRUAL: Jurnal Akuntansi*, 16(2), 164–177. <https://doi.org/10.26740/jaj.v16n2.p164-177>