The Effect of Village Information System Utilisation and Human Resource Capacity on Village Financial Management Accountability

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Abstract

This study aims to conceptually examine the influence of the utilisation of the Village Information System (SID) and human resource capacity on the accountability of village financial management. Increased village fund allocations require transparent and accountable governance, but the implementation of information technology and the readiness of village officials still face various challenges. This study uses a library research approach with content analysis techniques on scientific literature, regulations, and relevant previous research results. This study is theoretical in nature and does not involve statistical data processing. The results of this study are expected to produce a framework that explains the functional relationship between the utilisation of SID and HR capacity in realising village financial accountability. The utilisation of SID is considered effective if it is supported by adequate human resource capacity as technical implementers. This study is expected to provide a theoretical basis for developing hypotheses in subsequent empirical research and to serve as a reference for village governments in formulating policies to strengthen the transparency and accountability of village financial management based on information technology.

Keywords: Village Information System; Human Resource Capacity; Accountability; Village Finance; Literature Review.

I.   INTRODUCTION

The phenomenon of strengthening village independence through the allocation of large village funds requires a more professional and transparent accountability system. The central government has mandated full transparency in financial management to prevent maladministration and abuse of authority. Accountability is now an absolute standard for village governments in legitimising public trust in the management of public resources (Sihombing, R. D. 2023). The use of technology through the Village Information System (SID) is a strategic step towards modernising administration and financial reporting. The implementation of this digital system is designed to minimise human error and accelerate data accessibility for stakeholders. The existence of an integrated system is theoretically a major catalyst in creating efficiency that supports the realisation of accountable financial reports (Anshari, K., et.al, 2025).

Human resource capacity is a crucial determinant in the successful adoption of

information technology at the village level. Village officials, as technical implementers, are required to have adequate competence to be able to operate the system and understand the applicable financial regulations. The gap between the availability of technology and the intellectual capabilities of its managers is often a major obstacle in achieving the expected standards of accountability (Sakdiah, A., et al, 2022).

This study focuses on examining the relationship between technological aspects and human factors through an in-depth literature review. It is crucial to analyse the combination of these two variables conceptually in order to understand the extent of their influence on the quality of financial management. This study is expected to map the theoretical position of SID utilisation and human resource capacity as pillars of accountability in village administration (Mikhael, J., et.al, 2024).

II. LITERATURE REVIEW

The Technology Acceptance Model (TAM) is one of the most widely used theoretical models to explain the acceptance and use of information technology in an organisational context. According to (King, W. R., & He, J. 2006) this model was introduced by (Davis, 1989) as an extension of the Theory of Reasoned Action (TRA), emphasising that technology acceptance is determined by two main constructs, namely perceived usefulness and perceived ease of use. Perceived usefulness is defined as the degree of an individual's belief that using an information system will improve their job performance, while perceived ease of use refers to the degree of belief that the system can be used with relatively little effort.
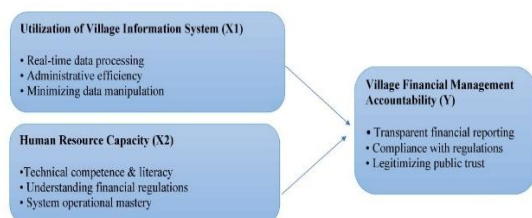

Figure 1. Conceptual Framework

Within the conceptual framework of government accounting, accounting information systems serve as the primary mechanism for providing relevant, reliable, and accountable financial information regarding the financial position and performance of public sector entities (Romney & Steinbart, 2018). The integration of the Technology Acceptance Model (TAM) explains that perceived usefulness and perceived ease of use significantly influence the intensity of accounting information system utilisation (Davis, 1989). A higher level of system utilisation subsequently affects the quality of financial recording, processing, and reporting, thereby determining the overall quality of government financial information (DeLone & McLean, 2003).

Thus, the success of a government accounting information system is reflected in its ability to produce quality financial information through optimal system utilisation, thereby supporting the realisation of transparency and accountability in public financial management. (Darma, J., & Sagala, G. H. (2020).

(Jalma, H., et.al, 2019) states that SID utilisation activities are carried out in order to support the improvement of public service digitalisation and village governance through the utilisation of the OpenSID platform-based Village Information System, beginning with training for village officials to improve their integrated administrative and financial data management capabilities.

The utilisation of village information systems is positioned as a variable that represents the digitisation of governance. SID serves as a tool to accelerate data processing, minimise input errors, and facilitate the publication of financial reports in real time. The optimal use of the system will theoretically narrow the gap for financial data manipulation (Supraja, G. 2025).

Digital-based systems, such as the Village Financial System (Siskeudes) and Village Management Information System (Simdes) applications, are important instruments in promoting the modernisation of village governance. The implementation of these systems allows village financial and administrative information to be stored in a structured and integrated manner, making it easier for village officials to access it in accordance with their authority. This ease of access not only speeds up workflows but also supports more accurate decision-making because the data is available in real time and is consistent. In addition, digital systems facilitate the presentation of financial information in real time, which in turn strengthens transparency to internal and external stakeholders (Farizi, Aisy, Arifin 2025).

The data recording process in a digital-based system is carried out through a standardised and automated input mechanism, so that the potential for human error can be significantly reduced compared to manual recording. Automatic validation, account locking, and transaction audit trails embedded in the Siskeudes and Simdes applications play a role in improving the accuracy and reliability of village financial reports. With this system, every financial transaction is recorded chronologically and can be traced back, facilitating the monitoring and auditing process (Angelina, et al., 2025).

Conceptually, the use of the Village Information System (SID), which includes Siskeudes and Simdes, is positioned as a variable that represents the digitisation of village governance. SID serves as a tool to accelerate data processing,

minimise input errors, and facilitate the systematic and real-time preparation and publication of village financial reports. Theoretically, optimal use of the system is believed to be able to narrow the gap for financial data manipulation, as the entire recording and reporting process is well documented and auditable. Thus, SID not only serves as an administrative tool, but also as an internal control mechanism that strengthens the principles of transparency, accountability, and effectiveness in village financial management. (Sihotang, et.al, 2025).

2.1. Human Resource Capacity

Referring to the capabilities, expertise, and knowledge of village officials in carrying out their main duties and functions. This variable is a determining factor because no matter how sophisticated the information system is, its effectiveness still depends on the competence of the people operating it. Qualified human resources ensure that the data input into the system is valid and accountable (Ningrum, E. W. 2020). Village officials with good human resource quality tend to be able to understand work procedures, system logic, and regulations that underlie village financial management. These competencies enable village officials to input data correctly, consistently, and in accordance with applicable regulations, thereby minimising the risk of recording errors and data discrepancies. In addition, competent human resources are also more adaptive to technological and policy changes, enabling them to optimally utilise the features of the information system to support transparency and accountability. (Munawaroh, Q. A. 2024).

Thus, the quality of village officials' human resources plays an important role in ensuring that the data entered into the village information system has accountable validity and reliability. This accurate and reliable data then becomes the basis for preparing quality village financial reports, supporting the oversight process, and strengthening public trust in the performance of village administration. Therefore, strengthening human resource capacity through training and mentoring is a key prerequisite for realising effective and digital-based village governance. (Julkarnain, M., et.al, 2025).

2.2 Accountability in Village Financial Management

Accountability in village financial management is a dependent variable that is the ultimate goal. Accountability is measured through the ability of the village government to account for financial planning, implementation, and reporting in accordance with applicable regulations. Conceptually, Y will be maximally achieved if the technological instruments (X1) and the competence of the implementers (X2) are at a harmonious level (Nabella Ariantika, & Saring Suhendro. (2025).

III.   METODOLOGY

This study adopts a qualitative research approach using descriptive analysis methods through an in-depth literature review. Data were collected from reputable scientific journals, textbooks, and relevant regulations related to village financial management (Tisdell, E. et.al, 2025). The analysis was conducted without statistical testing or the use of quantitative software such as SPSS or SmartPLS, focusing instead on literature synthesis to systematically examine and integrate arguments from previous studies. Through this approach, the study conceptually analyses the relationships between technological utilisation (X1), human resource competence (X2), and village financial accountability (Y).

Table 1. Operational Definition Table

No	Variable	Variable Type	Operational Definition	Main Indicators	Measurement Scale
1	Utilisation of the Village Information System (SID) (X1)	Independent Variabel	The level of use and utilisation of the Village Information System by village officials in supporting the process of administration, recording, processing, and reporting of village finances in a digital, integrated, and transparent manner.	1) Intensity of SID usage 2) Ease of use of the system 3) Usefulness of the system in financial management 4) Accuracy and speed of financial data presentation 5) Transparency of financial information	Likert (1–5)
2	Human Resource Capacity (HR) (X2)	Independent Variabel	The capacity of village officials, including their knowledge, skills, experience and understanding of financial regulations, to operate information systems and manage village finances in an accountable manner.	1) Technical competence in financial management 2) Information technology literacy 3) Understanding of village financial regulations 4) Work experience 5) Ability to resolve financial administration issues	Likert (1–5)
3	Accountability in Village Financial Management (Y)	Dependent Variabel	The level of the village government's ability to account for the process of planning, implementation, administration, reporting, and financial accountability of the village in accordance with the provisions of laws and regulations.	1) Transparency in financial management 2) Timeliness of reporting 3) Compliance with regulations 4) Reliability of financial reports 5) Accessibility of financial information to the public	Likert (1–5)

Although this research does not empirically apply the SEM-PLS technique, the methodological design is aligned with a structural perspective, enabling a qualitative interpretation of the magnitude and direction of inter-variable relationships as suggested by the conceptual framework. This descriptive qualitative analysis aims to provide a strong explanatory foundation regarding how and why the interaction between technology and human resource capacity contributes to strengthening transparency and accountability in village governance.

IV.   DISCUSSION

This section outlines the expected research results based on the conceptual framework, theoretical basis, and methodological design that has been developed. The expected research results are formulated based on the proposed conceptual framework and theoretical foundations, which suggest significant structural relationships among the examined variables. Using the SEM-PLS approach, this study is expected to reveal both the magnitude and direction of the relationships between latent constructs, emphasizing the predictive capability of the model rather than mere theory confirmation (Mastana, A. S. (2025).

a.   Expected Measurement Model (Outer Model)

Based on the research instrument design and operational definitions of variables, the measurement model is expected to meet the validity and reliability criteria required in SEM-PLS analysis. All indicators in each construct are expected to show a factor loading value above 0.70, which indicates an adequate level of convergent validity. In accordance with established SEM-PLS guidelines, the measurement model is expected to demonstrate adequate convergent validity, as indicated by factor loading values exceeding 0.70 and Average Variance Extracted (AVE) values above 0.50, reflecting the construct's ability to explain the majority of variance in its indicators (Fornell & Larcker, 1981; Hair et al., 2014).

In terms of discriminant validity, it is expected that the square root of the AVE of each construct will be greater than the correlation between other constructs, indicating that each latent variable has different measurement characteristics and does not overlap. Furthermore, the Composite Reliability and Cronbach's Alpha values are expected to be above 0.70, indicating the internal consistency of the instrument in measuring the research construct. With these criteria met, the research instrument is predicted to be suitable for testing the structural relationship between variables.

b.   Expected Structural Model (Inner Model) Test Results

Based on the structural model assessment, a moderate to strong coefficient of determination (R^2) is expected, indicating that the utilisation of SIMDes, the implementation of Siskeudes, and human resource capacity collectively explain substantial variation in village financial management accountability. Furthermore, a predictive relevance value (Q^2) greater than zero would confirm that the proposed model possesses adequate predictive power in explaining the observed phenomenon (Evi, T., & Rachbini, W. (2023).

In addition, the predictive relevance value (Q^2) is expected to be greater than zero, indicating that the research model has adequate predictive power for the phenomenon under study.

c.   Expected Results of Direct Effect Testing

The results of the direct effect testing are expected to demonstrate that the utilisation of the Village Information System (SIMDes) has a positive influence on the accountability of village financial management. This finding is anticipated to reflect that the optimal use of SIMDes enhances information transparency and administrative efficiency, thereby strengthening the financial accountability of village governments to the community. Digital-based village information systems facilitate systematic data management and timely disclosure of financial information, which are essential elements in promoting accountable and transparent governance (Pina et al., 2010).

Furthermore, the implementation of the Village Financial System (Siskeudes) is expected to have a positive direct effect on village financial management accountability. The use of a standardised village financial system is believed to

improve the quality and reliability of financial reports, strengthen internal control mechanisms, and reduce the risk of irregularities in the management of village funds. Prior studies indicate that Siskeudes plays a critical role in ensuring compliance with financial regulations and enhancing the credibility of village financial reporting (Dewila, D. (2025).

In addition, human resource capacity is predicted to exert a positive direct influence on the accountability of village financial management. Village officials who possess adequate technical competence and digital literacy are more capable of managing village finances in an orderly, accurate, and regulation-compliant manner. Competent human resources enable the effective utilisation of digital financial systems and support the production of reliable financial information, which ultimately strengthens public accountability (Mawansyah, J. (2024).

V. CONCLUSION

In line with the research objectives as formulated in the abstract, this study was designed to analyse the effect of the utilisation of the Village Information System (SIMDes) and the implementation of the Village Financial System (Siskeudes) on the accountability of village financial management, with human resource capacity as a moderating variable. This study uses an explanatory quantitative approach with a Partial Least Squares-based Structural Equation Modelling (SEM-PLS) analysis method. (Septiani, S., et.al, 2025)

Based on the conceptual framework and methodological design that has been developed, the expected results show that the utilisation of SIMDes and the implementation of Siskeudes are predicted to have a positive effect on the accountability of village financial management. This effect is expected to emerge through increased transparency, administrative efficiency, and the quality of village financial reporting. In addition, human resource capacity is seen as having a strategic role, both as a factor that directly influences accountability and as a variable that strengthens the effectiveness of SIMDes and Siskeudes utilisation.

Thus, this study conceptually confirms that the success of digital system implementation in village financial management is not only determined by the availability of technological systems, but also depends heavily on the readiness and competence of village officials as system users. This study is expected to contribute theoretically to the development of public sector accounting literature and digital-based village governance.

In line with the objectives and expected results as described in the abstract and conclusions, this study recommends that local governments and relevant stakeholders not only focus on developing village information and financial systems, but also on strengthening the capacity of village officials through continuous training and mentoring.

For village governments, it is recommended to increase their commitment to consistently utilise SIMDes and Siskeudes as instruments to support transparency and accountability in village financial management. Meanwhile, for future researchers, this research design can be developed into empirical research by expanding the scope of the study, adding other relevant variables, or using alternative methodological approaches to enrich the understanding of village financial governance.

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