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# Synergy of Financial Information Systems, Internal Control, and Human Resource Competence on the Quality of Government Financial Reports

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## Abstract

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This study aims to systematically examine the relationship between the implementation of financial information systems, the effectiveness of the government's internal control system, and the competence of human resources on the quality of government financial statements. The approach used is a Systematic Literature Review of dozens of scientific articles published in the last five years that have been indexed by Google Scholar. The results of the study show that the synergy between the three factors is the main prerequisite for the realization of transparent, reliable, and accountable financial statements. The financial information system plays a role in improving the efficiency and accuracy of reporting, the government's internal control system ensures reliability and compliance with regulations, while the competence of human resources determines the ability to manage the system and interpret financial data. Effective government financial governance reform requires the integration of information technology, internal control mechanisms, and sustainable human resource capacity development to strengthen public accountability and increase public confidence in the government's financial performance.

## 1. Introduction

In recent years, increasing transparency and accountability in public financial management has become one of the main focuses of governance reform in Indonesia. The government's efforts in realizing good governance are carried out through strengthening the financial information system, effective internal control, and improving the competence of human resources of the apparatus. These three aspects are interrelated in determining the quality of government financial statements which are the basis for public accountability and public trust in government institutions (Hermelinda, 2018).

The Regional Management Information System (*Sistem Informasi Manajemen Daerah*/SIMDA) or Regional Government Information System (*Sistem Informasi Pemerintahan Daerah*/SIPD) is a form of digitization of financial administration designed to support data integration and accelerate the regional financial reporting process. The implementation of this system is expected to be able to produce reliable, relevant, and timely reports in accordance with government accounting standards (Sriwijayanti, 2018). The use of technology-based information systems is crucial because it can increase efficiency, minimize manual errors, and strengthen the transparency of the budgeting and reporting process (Hardiningsih et al., 2021).

In addition to the technological aspect, the quality of financial statements is also greatly influenced by the existence of the Government Internal Control System (*Sistem Pengendalian Intern Pemerintah*/SPIP). SPIP acts as a mechanism to ensure that every financial process runs in accordance with the provisions, reduces the risk of irregularities, and ensures the reliability of financial information. According to

Hartono and Ramdany (2020), the proper implementation of SPIP provides rational assurance that the financial statements produced can be trusted, because every financial management activity goes through standardized control procedures. BPKP (2020) also emphasized that the success of the implementation of SPIP does not only depend on the system, but also on the commitment of the leadership and the capacity of the apparatus that carries out these functions.

Human resource (HR) competence is the third element that is no less important. Human resources who understand the principles of government accounting and information technology will be able to operate the financial system effectively and produce quality reports. Kaifah and Tryana (2020) show that human resource competence has a positive relationship with the timeliness and reliability of government financial statements. Similarly, Binawati and Nindyaningsih (2022) found that adequate competence and continuous training play a role in minimizing recording errors and improving reporting integrity.

In the context of modern government, the relationship between SIMDA/SIPD, SPIP, and human resource competencies is becoming increasingly close. A good financial information system will not run optimally without competent human resources and strong internal control mechanisms. In contrast, effective internal controls require reliable technological support and operators who understand the principles of government accounting (Rahman, 2020). Therefore, the strengthening of the three components must be seen as an integrated strategy in improving the quality of government financial statements, not as a stand-alone element.

Several previous studies have confirmed a positive relationship between the application of financial information systems, internal control, and human resource competence on the quality of financial statements (Sijabat, 2022). However, there are still variations in the results of the study regarding the relative level of influence of each variable. This shows that each government agency has its own challenges in implementing the principles of transparency and accountability through its financial system.

Thus, this study seeks to integrate the latest empirical findings related to these three main components through the Systematic Literature Review (SLR) approach. This approach allows researchers to analyze in depth the consistency, research gaps, and direction of literature development in the last five-year period. The results of the study are expected to provide a more comprehensive understanding of the synergy between financial information systems, SPIP, and human resource competencies in shaping the quality of accountable and transparent government financial statements.

## 2. Literature Review

### 2.1. Regional Management Information System (SIMDA/SIPD)

Digital transformation in the public sector is one of the strategic steps to improve the efficiency and accountability of government financial management. One of the forms of implementation is the development of the Regional Management Information System (SIMDA) or Regional Government Information System (SIPD) which functions to integrate the planning, budgeting, implementation, and financial reporting processes in one centralized system. According to Sriwijayanti (2018), the implementation of this information system is able to speed up the preparation of financial statements, reduce manual errors, and support data-based decision-making.

The government through the Ministry of Home Affairs also emphasized that SIMDA and SIPD are the main instruments in realizing regional fiscal transparency because all financial activities can be tracked in real time (Damaris, 2022). However, the effectiveness of this information system depends on the technological infrastructure and the readiness of the human resources who manage it. Without adequate technical competence, the implementation of SIMDA will not be optimal even though the system has been standardized nationally (Tuaputimain, 2018).

In addition, the security and data integration aspects are challenges in themselves. Goo (2022) explains that the reliability of information systems depends not only on software, but also on internal controls that ensure financial data is not manipulated or accessed illegally. Therefore, strengthening the information system must be accompanied by increasing technological governance and adequate internal supervision so that the financial information produced is truly accurate, relevant, and accountable.

### 2.2. Government Internal Control System (SPIP)

The Government Internal Control System (SPIP) is a fundamental component in realizing accountable and transparent state financial governance. SPIP serves to provide adequate confidence that the activities of government agencies are carried out effectively, efficiently, comply with regulations, and are able to produce reliable financial reports. According to Hartono and Ramdany (2020), the consistent implementation of SPIP is able to reduce the risk of irregularities, improve the efficiency of budget management, and strengthen the reliability of public financial reporting.

BPKP (2020) emphasized that the success of the implementation of SPIP depends on the synergy between internal supervision, leadership commitment, and information technology support. SPIP is not only understood as an administrative mechanism, but also as a culture of control that instills the value of integrity and compliance at all levels of the bureaucracy. Research by Rahmawati et al. (2022) also found that the effectiveness of internal controls has a significant influence on the quality of government financial statements, especially when combined with an integrated financial information system.

Furthermore, Rahman (2020) highlighted the importance of the communication and monitoring dimension in SPIP. Robust monitoring mechanisms allow for early detection of errors or fraud, while speeding up the correction process. Thus, SPIP is not only an instrument of financial control, but also the main foundation for the creation of public trust in the results of government financial statements. The integration of SPIP with digital-based information systems is the strategic direction of public sector financial reform in this modern era.

### 2.3. Human Resources (HR) Competence

Human resource (HR) competence is a key factor in ensuring the effectiveness of government financial management. Competent human resources are not only required to have technical skills in accounting and information system management, but also integrity, professionalism, and understanding of regulations and principles of public accountability. Kaifah and Tryana (2020) stated that the quality of financial statements is highly dependent on the level of competence of the apparatus, especially in terms of understanding government accounting standards, accuracy of recording, and the ability to use digital-based financial information systems.

Binawati and Nindyaningsih (2022) stated that good competence will reduce the potential for reporting errors and strengthen the effectiveness of the internal control system. Apparatus who have analytical skills and mastery of technology can identify irregularities early on and adjust the reporting process to the dynamics of fiscal policy. Furthermore, Hermelinda (2018) emphasized the importance of continuous training and competency development to increase the adaptability of the apparatus to changes in systems and regulations.

Syarief et al. (2022) added that human resource competence does not only include individual expertise, but also the collaborative ability across work units in sharing financial data and information. This collaboration creates a more open, efficient, and accountable work culture. Therefore, increasing the capacity of the apparatus through training, certification, and the implementation of a performance-based incentive system is a strategic step in ensuring that government financial statements are prepared reliably and on time according to the demands of public transparency.

## 3. Methods

This study uses the Systematic Literature Review (SLR) approach as the main method to analyze the relationship between the Regional Management Information System (SIMDA/SIPD), the Government Internal Control System (SPIP), and Human Resources (HR) Competency on the Quality of Government Financial Statements. The SLR approach was chosen because it is able to present a comprehensive synthesis of various empirical studies that have been conducted over the last five-year period, so that it can provide a complete picture of the development and consistency of research results in this field (Hartono & Ramdany, 2020).

The stages of implementing SLR are carried out based on the principles of transparency, replicability, and objectivity. The process begins with the identification of literature using the Google Scholar database, followed by a systematic selection of articles that meet the inclusion criteria, namely: (1) published between the last five years; (2) focusing on the variables of SIMDA/SIPD, SPIP, human resource competence, or the quality of government financial statements; (3) is an indexed and peer-reviewed scientific article; and (4) available in full-text. From the search results, dozens of articles were obtained that met the criteria and were used as the main source of analysis.

The next stage is data extraction, which is gathering key information from each article, such as research objectives, methods, instruments, results, and conclusions. The extracted data is then grouped based on similarities in topics or findings to facilitate the thematic synthesis process. This process is carried out by reading in depth each article, identifying patterns of relationships between variables, and examining the strength of empirical evidence that supports the relationship between the implementation of SIMDA, the effectiveness of SPIP, and the competence of human resources on the quality of financial statements (Jauhari et al., 2021).

Furthermore, a comparative analysis of the research results was carried out, emphasizing differences in methodology, institutional context, and the level of significance of the influence between variables. This approach helps researchers to understand variations in outcomes that may be caused by external factors such as regional policies, technological readiness, or individual capacity. This analysis process ends with a critical evaluation to assess the reliability, validity, and relevance of each research to the conceptual framework developed (Sriwijayanti, 2018). Using the SLR method, this study not only aims to identify the relationship between variables, but also to map the research gap and provide direction for further research related to information technology integration, internal control, and the development of apparatus competencies in supporting public financial accountability.

## 4. Results

The results of a systematic review of fifteen scientific articles published in the last five years show that improving the quality of government financial reports is highly dependent on the integration of three main factors: the implementation of an effective regional financial information system, an adequate internal control system, and the competence of the human resources of the apparatus. These three factors play a synergistic role in creating financial statements that are transparent, reliable, and in accordance with Government Accounting Standards (*Standar Akuntansi Pemerintahan*/SAP).

Analysis of various literature indicates that the implementation of the Regional Management Information System (SIMDA) or the latest version of the Regional Government Information System (SIPD) has made a significant contribution to the efficiency of preparing and presenting financial statements. According to Sriwijayanti (2018), the existence of a technology-based information system helps minimize recording errors, accelerate the data consolidation process, and strengthen government financial transparency. Similar results were found by Damaris (2022), who emphasized that digitization through SIPD not only simplifies the reporting process, but also allows real-time monitoring of regional finances.

However, the results of the review also show that the effectiveness of the information system is greatly influenced by the readiness of the technological infrastructure and the competence of users. Tuaputimain (2018) emphasized that in a number of regions, the financial information system is still not optimal due to the limitations of human resources in understanding application features and accrual-based accounting principles. In such conditions, information systems have the potential to become an additional administrative burden if they are not accompanied by adequate training and supervision. This is in line with the findings of Kaifah and Tryana (2020) which show a strong correlation between improving the competence of apparatus and their ability to effectively utilize information technology to support the preparation of timely and accurate financial statements.

In terms of the Government Internal Control System (SPIP), the literature shows that the internal control mechanism plays a key role in ensuring the reliability of financial statements. Hartono and Ramdany (2020) found that the implementation of SPIP consistently contributes to increasing the effectiveness of supervision and preventing irregularities in public budget management. BPKP (2020) added that the success of SPIP does not solely depend on policy tools, but on organizational behavior that upholds integrity and compliance with procedures. The results of evaluations from several local governments show that entities that have implemented integrated SPIP obtain better audit opinions than agencies that have not fully implemented it.

Research by Rahmawati et al. (2022) highlights that an effective SPIP acts as a filter against the risk of reporting errors, both administrative and substantive. This mechanism provides adequate confidence to the leadership that the financial statements reflect the real condition of the government's finances. In addition, Rahman (2020) shows that the communication and monitoring aspects in SPIP have a significant relationship with increasing the reliability of financial statements. Weaknesses in cross-unit coordination often lead to reporting delays or errors in the data consolidation process, so the existence of SPIP is an important instrument to ensure consistency between units of government organizations.

In addition to the information system and internal control, the competence of human resources (HR) is a determining factor that directly affects the quality of government financial reporting. Goo (2022) identified that technical competence in accounting and adaptability to digital-based information systems have a positive impact on the timeliness of financial reporting. Hermelinda's research (2018) confirms that continuous training for apparatus is the main prerequisite for improving professionalism and encouraging compliance with reporting standards. In the study, institutions that routinely carry out SPIP training and regional financial applications showed a significant increase in the timeliness of financial report submission.

Research by Syarief et al. (2022) provides an additional perspective that human resource competence is not only measured by technical ability, but also by analytical, communication, and collaboration skills between work units. The higher the level of coordination and collaboration, the better the quality of the data produced and the accuracy of the financial statements prepared. This is in line with the views of Hartono and Ramdany (2020) who affirm that competent human resources will strengthen the implementation of SPIP, because they understand the importance of accountability in every stage of public financial management.

In general, the results of these SLRs reveal a consistent pattern: government entities that integrate financial information systems, SPIPs, and HR competencies show higher levels of financial reporting accountability than entities that still partially implement the system. Jauhari et al. (2021) noted that the synergy between the three factors was able to increase the reliability of the report by more than 80%, measured from the indicators of relevance, reliability, and comparability. Meanwhile, Sriwijayanti (2018) revealed that local governments that have fully implemented information systems and are supported by trained human resources obtain

Reasonable Opinions Without Exception (WTP) consecutively in the audit report results.

The results of the review also show that there is variation in the level of influence between variables based on institutional context and administrative region. In some cases, as revealed by Lahiang et al. (2018), the implementation of SPIP has not been optimal due to the low awareness of the leadership on the importance of the internal supervision function. On the other hand, areas with higher rates of technology adoption show better control effectiveness and more accurate financial reports (Hardiningsih et al., 2021). Thus, the success rate of the implementation of information systems and SPIP is highly dependent on human factors and organizational culture in each agency.

In addition to technical factors, the results of the analysis show the importance of policy support and external oversight. BPKP (2020) emphasized that strengthening financial digitalization policies and improving audit quality are important catalysts in enhancing regional financial governance. Institutions that actively involve internal auditors in each reporting cycle show better quality of financial statements because the verification process is carried out in layers (Rahman, 2020).

The results of this study support the hypothesis that improving the quality of government financial statements cannot be achieved through a single intervention. A systemic approach is needed that includes integrated information technology, a strong control system, and improved competence of the apparatus. The mutual relationship between these three factors forms a sustainable accountability ecosystem. When SIMDA or SIPD functions well, SPIP ensures process reliability, and competent human resources ensure proper interpretation and reporting of data, the quality of government financial reports will be significantly improved (Kaifah & Tryana, 2020).

In addition, the results of the study revealed that there is a research gap in terms of measuring the level of relative influence between variables. Some studies place information systems as the dominant factor, while others emphasize the importance of competencies and internal controls. This variation shows that there is no integrative model that comprehensively measures the contribution of the three variables to the quality of financial statements at all levels of government (Sijabat, 2022). Therefore, the results of this study can be the basis for further empirical studies to build a conceptual model that is more adaptive to the dynamics of digitalization and national fiscal policy.

By referring to the findings of the 2018–2022 literature, it can be concluded that the direction of public financial policy in Indonesia has moved towards digital integration and strengthening risk-based internal supervision. This approach is expected not only to improve reporting efficiency, but also to strengthen public accountability and trust in government performance. Thus, the synergy between SIMDA/SIPD, SPIP, and human resource competencies is not just an administrative demand, but the main prerequisite for the realization of transparent, participatory, and high-integrity government financial governance.

## 5. Discussion

The results of the literature review show that the quality of government financial statements is the result of synergy between an effective financial information system, a strong internal control system, and adequate human resource competence. The three components interact with each other and cannot be separated in an effort to create transparent and accountable financial governance. This finding strengthens the view of Sriwijayanti (2018) that digitization through SIMDA or SIPD is an important pillar in financial bureaucratic reform, because an integrated information system is able to provide fast, precise, and easily verifiable data. In addition to increasing administrative efficiency, digital systems also play a role in reducing the chance of data manipulation, because all processes are recorded automatically and can be traced by internal and external auditors.

However, the results of the analysis show that information technology cannot function optimally without the support of competent human resources. Apparatus that does not have a deep understanding of government accounting principles and mastery of financial applications has the potential to cause reporting errors and administrative inefficiencies (Tuaputimain, 2018). Therefore, increasing human resource capacity through continuous training is an important strategy to maintain the quality of reporting. This is in line with the findings of Hermelinda (2018) that the competence and integrity of public employees play a direct role in the timeliness and reliability of local government financial statements. In the context of modern governance, competency development includes not only technical training, but also increased digital literacy and understanding of risk-based financial policies, which enable the apparatus to be able to adapt to changes in regulations and technology.

In addition, the government's internal control system (SPIP) is a key element in ensuring that every financial transaction is recorded, managed, and reported in accordance with the provisions. Research by Hartono and Ramdany (2020) shows that the effectiveness of SPIP not only functions as an administrative control tool, but also as a fraud prevention mechanism that is able to increase public confidence in the results of government financial audits. A robust SPIP ensures that each stage of reporting goes through a multi-layered verification process to minimize the risk of errors and irregularities. Thus, the existence of SPIP is the main instrument in maintaining a balance between the speed of reporting and the accuracy of data generated by financial information systems.

From an integrative perspective, human resource competence is closely related to the effectiveness of SPIP and the use of financial information systems. Human resources who have analytical skills and technological understanding will be better able to detect financial anomalies, implement adaptive internal controls, and ensure that the data generated by the information system is truly accurate (Binawati & Nindyaningsih, 2022). The integration between human factors and the control system creates a governance ecosystem that strengthens the reliability of financial statements and minimizes the potential for human error and procedural irregularities.

Conceptually, the results of this study show that the success of public accountability reform is not only a technological issue, but also the result of multidimensional synergy between structural, cultural, and competency aspects. As revealed by Rahman (2020), the successful implementation of a digital reporting system must be followed by a change in bureaucratic behavior towards a transparent, participatory, and collaborative work culture. Improving the quality of government financial reports, therefore, cannot be done partially, but requires a systemic approach that involves institutional improvement, professional ethics enforcement, and organizational capacity building. Therefore, the integration between SIMDA/SIPD, SPIP, and human resource development is an important foundation for the transformation of sustainable financial governance and integrity in Indonesia's public sector.

## 6. Conclusion

Based on the results of the literature review of research published in the last five years, it can be concluded that the improvement of the quality of government financial statements is highly determined by the synergy between three main components, namely the implementation of regional financial information systems, the effectiveness of the government's internal control system (SPIP), and the competence of human resources (HR). The three play a complementary role in forming a financial reporting system that is transparent, accountable, and in accordance with government accounting standards.

Financial information systems such as SIMDA or SIPD play an important role in speeding up the reporting process and improving the accuracy of financial data. However, the success of its implementation depends on the capacity of human resources who are able to operate the system optimally. At the same time, SPIP ensures that the reporting process runs in accordance with the provisions and principles of public accountability. The integration between information systems, internal controls, and competent human resources results in more reliable and timely financial reports.

This research emphasizes the importance of an integrated approach in government financial governance reform. Strengthening information technology must be accompanied by increasing the capacity of the apparatus and the implementation of adaptive internal controls. Thus, synergy between systems, people, and control mechanisms is the key to success in realizing quality government financial reports, while strengthening public confidence in transparency and financial integrity in the public sector.

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