



Analysis Of Human Error Risk Factors In The Implementation Of The Regional Government Information System (SIPD) In Regional Financial Management Of Tegal Regency Government

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Abstract: The implementation of the Regional Government Information System (SIPD) represents a strategic initiative by the Indonesian government to improve transparency, accountability, effectiveness, and efficiency in regional financial management through digital transformation. Despite its benefits, the implementation of SIPD remains vulnerable to human error risks that may affect the quality of financial administration and reporting. This study aims to identify and analyze human error risk factors in the implementation of SIPD within the regional financial management system of the Tegal Regency Government. A qualitative descriptive approach was employed using document analysis as the primary data collection method. Data were obtained from official government documents, including the 2023 Regional Government Financial Statements (LKPD), Notes to Financial Statements (CaLK), Government Agency Performance Reports (LKjIP), Audit Board of Indonesia (BPK) audit reports, regional regulations, and other relevant policy documents. The data were analyzed through content analysis to identify patterns and indicators of human error associated with SIPD implementation. The findings reveal that SIPD has contributed to the integration and digitization of regional financial management processes. However, several human error risk factors were identified, including asset recording inaccuracies, account classification adjustments, data inconsistencies, administrative delays, weaknesses in internal control, and limitations in user competence. These risks are primarily associated with the complexity of financial data management, insufficient system understanding, and inadequate coordination among stakeholders. To mitigate these risks, the Tegal Regency Government has implemented technical guidance programs, monitoring and evaluation mechanisms, inter-agency coordination, and strengthened internal control systems. This study contributes to the literature on digital public financial management by highlighting the importance of human factors in the successful implementation of government information systems and providing practical recommendations for enhancing SIPD effectiveness in regional governments.

Keywords: Regional Government Information System (SIPD), Human Error, Regional Financial Management, Information Systems, Regional Government.

INTRODUCTION

The development of information technology has encouraged various government agencies to undertake digital transformation in governance, including in regional financial management. The use of information technology is expected to support the creation of more effective, efficient, transparent, and accountable financial governance. One form of implementation of this digital transformation is the Regional Government Information System (SIPD), a system that integrates



development planning, budgeting, administration, reporting, and accountability processes within a single platform. The implementation of SIPD is also part of the government's efforts to realize electronic-based governance to improve the quality of public services and government administration (Regional Development Planning, Research and Development Agency of Tegal Regency, 2023).

As one of the regions that has implemented SIPD, the Tegal Regency Government is utilizing the system to support more integrated regional financial management. According to the 2023 Tegal Regency Government Performance Report, one of the regional government's policy directions is strengthening information technology-based government services, accompanied by increased transparency and accountability in regional financial management and capacity building for civil servants. This policy demonstrates that the use of SIPD is expected to be a supporting instrument for improving the quality of regional financial governance through the use of digital technology (Regional Development Planning, Research and Development Agency of Tegal Regency, 2023).

Despite its numerous benefits, the implementation of SIPD still faces several challenges. Ideally, this system is designed to simplify regional financial administration processes through more systematic data integration and work procedures. However, conditions on the ground indicate that the implementation process has not been fully optimized. Various obstacles remain, such as limited staff competency, varying levels of user understanding of the system, and difficulties adapting to changes in digital-based work procedures (Prasetyo, 2023).

In addition to human resource factors, technical challenges also frequently arise in the use of SIPD. Some common issues include server disruptions, data inconsistencies, and delays in synchronizing information between systems. These conditions can increase the risk of fraud human error in the regional financial management process, such as data input errors, account misclassification errors, and errors in the financial document verification process. Therefore, SIPD implementation depends not only on the quality of the system used but also on the readiness and ability of users to operate the system correctly (Nugroho & Lestari, 2024).

Studies on SIPD implementation have been conducted by various researchers with varying focuses. (Wijaya & Saputra, 2023) examined the effectiveness of SIPD implementation and the influence of human resource competency on the quality of regional financial management. Meanwhile, (Fitriani, 2024) examined SIPD implementation from the perspective of information



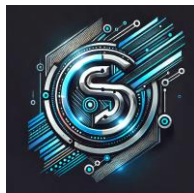
system quality and its contribution to digital-based regional governance. Other studies generally focus on system effectiveness, organizational readiness, and the quality of SIPD implementation in supporting regional financial management. However, studies that specifically identify risk factors human error the use of SIPD is still relatively limited. Therefore, a research gap exists because most previous studies have emphasized system and implementation aspects, while the potential for human error in SIPD operation has not been analyzed in depth.

Based on these phenomena and research gaps, this study aims to identify risk factors human error in the implementation of the Regional Government Information System (SIPD) in regional financial management in Tegal Regency. Tegal Regency was selected as the research location based on its active use of SIPD to support regional financial management as part of the government's digital transformation. Furthermore, the local government's commitment to strengthening information technology-based services, as stated in the 2023 Tegal Regency Government Performance Report, demonstrates the importance of optimizing SIPD implementation. However, the system implementation process still requires adjustments in terms of human resources and system management, which could potentially lead to operational errors in regional financial administration. Therefore, Tegal Regency is a relevant location for assessing various risk factors human error that arise in the use of SIPD. The results of this study are expected to provide input for local governments in formulating risk mitigation strategies, improving the competence of civil servants, and optimizing the implementation of SIPD to support more effective, transparent, and accountable regional financial management.

METHOD

Research Design

This study employed a qualitative descriptive research design to explore and analyze human error risk factors associated with the implementation of the Regional Government Information System (SIPD) in regional financial management. A qualitative approach was considered appropriate because it enables researchers to understand complex organizational phenomena within their natural context and to generate in-depth interpretations of administrative processes and information system implementation (Creswell & Poth, 2018). The study specifically adopted



a descriptive qualitative design to identify patterns and indicators of human error reflected in government financial management documents (Sandelowski, 2000).

Research Setting

The research was conducted within the Tegal Regency Government, Central Java, Indonesia. The region was selected because it has actively implemented SIPD as an integrated platform for planning, budgeting, administration, reporting, and accountability in regional financial management. Furthermore, the availability of comprehensive official documentation provided a suitable basis for investigating potential human error risks in digital public financial management.

Data Sources

The study relied on secondary data obtained from official government documents and regulatory records. The primary data sources consisted of:

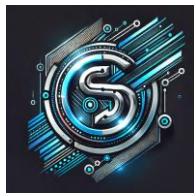
1. Regional Government Financial Statements (LKPD) of Tegal Regency for Fiscal Year 2023;
2. Notes to Financial Statements (CaLK) of Tegal Regency for Fiscal Year 2023;
3. Government Agency Performance Report (LKjIP) of Tegal Regency for 2023;
4. Audit reports issued by the Audit Board of Indonesia (BPK);
5. Tegal Regency Regional Regulation Number 2 of 2024;
6. Tegal Regent Regulation Number 28 of 2024;
7. Relevant scientific articles, policy documents, and regulations concerning SIPD implementation, digital governance, and public financial management.

Documentary evidence is considered an important source of data for investigating organizational processes and administrative practices because it provides stable and context-rich information that can be repeatedly examined (Bowen, 2009).

Data Collection Procedures

Data were collected through document review and literature study. The document review involved identifying, selecting, and examining government reports, audit findings, financial statements, and regulatory documents related to SIPD implementation. Literature studies were conducted to establish theoretical foundations regarding human error, public sector information systems, and digital governance.

The document selection process followed purposive criteria, focusing on documents directly related to regional financial management practices and SIPD implementation. Such purposive



document selection is commonly employed in qualitative document-based research to ensure the relevance and richness of the data (Bowen, 2009).

Data Analysis

The collected data were analyzed using qualitative content analysis. Content analysis is an appropriate method for systematically interpreting textual data and identifying recurring themes, patterns, and meanings within documents (Krippendorff, 2018). The analytical procedure consisted of four stages:

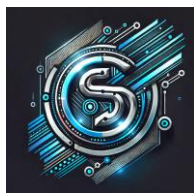
1. **Data Reduction** – extracting information relevant to SIPD implementation and financial management issues (Miles et al., 2014);
2. **Coding and Categorization** – classifying identified findings into categories of human error risks, such as asset recording inaccuracies, account classification errors, reporting delays, and internal control weaknesses;
3. **Pattern Identification** – examining relationships among categories to identify the underlying causes of human error;
4. **Interpretation and Conclusion Drawing** – interpreting findings through the perspectives of digital governance and public sector information systems (Miles et al., 2014).

Trustworthiness

To ensure the rigor and trustworthiness of the findings, source triangulation was applied by comparing information across financial reports, audit findings, performance reports, regulations, and scholarly literature. Triangulation is widely recognized as an effective strategy for enhancing credibility and reducing potential bias in qualitative research (Lincoln & Guba, 1985; Patton, 2015). Additionally, dependability was strengthened through systematic documentation of the analytical process, while confirmability was achieved through cross-checking interpretations against multiple documentary sources.

Ethical Considerations

The study utilized publicly accessible government documents and secondary data sources. No human participants were involved; therefore, formal ethical approval was not required. Nevertheless, the study adhered to principles of academic integrity, transparency, and accurate reporting throughout the research process.



RESULT AND DISCUSSION

Implementation of the Regional Government Information System (SIPD) in Regional Financial Management of Tegal Regency

The Tegal Regency Government has implemented information technology-based regional financial management as part of its efforts to increase transparency, effectiveness, and accountability. This implementation is carried out through the use of the Regional Government Information System (SIPD), which supports integrated regional financial management processes, from planning, budgeting, administration, and reporting. The SIPD implementation also aims to improve the quality of regional financial report presentations to ensure compliance with applicable regional financial management standards and regulations.

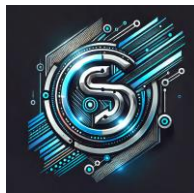
Based on the Notes to the 2023 Tegal Regency Financial Report (CALK), the preparation of the regional financial report has referred to various regional financial management regulations. These regulations include Government Regulation Number 71 of 2010 concerning Government Accounting Standards, Government Regulation Number 12 of 2019 concerning Regional Financial Management, and Tegal Regent Regulation Number 31 of 2022 concerning the Tegal Regency Regional Government Accounting System. This demonstrates that the Tegal Regency Government has clear regional accounting guidelines and systems in place to support the implementation of information technology-based regional financial management.

4.3. Basis Pengukuran yang Mendasari penyusunan Laporan Keuangan

Basis pengukuran yang mendasari penyusunan Laporan Keuangan Pemerintah Kabupaten Tegal Tahun Anggaran 2023 berpedoman pada :

- a. Peraturan Pemerintah Nomor 71 tahun 2010 tentang Standar Akuntansi Pemerintahan beserta lampirannya,
- b. Peraturan Pemerintah Nomor 12 Tahun 2019 tentang Pengelolaan Keuangan Daerah,
- c. Peraturan Menteri Dalam Negeri Nomor 64 Tahun 2013 tentang Penerapan Standar Akuntansi Pemerintahan (SAP) Berbasis Akrual pada Pemerintah Daerah,
- d. Peraturan Menteri Dalam Negeri Nomor 77 Tahun 2020 tentang Pedoman Teknis Pengelolaan Keuangan Daerah
- e. Peraturan Daerah Kabupaten Tegal Nomor 3 Tahun 2021 tentang Pengelolaan Keuangan Daerah,
- f. Peraturan Bupati Tegal Nomor 43 Tahun 2023 tentang Perubahan Kedua Atas Peraturan Bupati Tegal Nomor 30 tahun 2022 tentang Kebijakan Akuntansi Pemerintah Daerah Kabupaten Tegal (Berita Daerah Kabupaten Tegal Tahun 2023 Nomor 43);
- g. Peraturan Bupati Tegal Nomor 31 tahun 2022 tentang Sistem Akuntansi Pemerintah Daerah Kabupaten Tegal,
- h. Peraturan Bupati Tegal Nomor 85 tahun 2022 tentang Bagan Akun Standar.

Figure 1. Notes to the 2023 Tegal Regency Financial Report regarding the Basis for Preparing Regional Financial Reports.



The figure shows the basis for compiling the 2023 Tegal Regency Government financial report, which refers to various regional financial management regulations and regional government accounting systems. This demonstrates the regional government's efforts to achieve more transparent and accountable regional financial governance through the implementation of an integrated regional financial management system.

In addition to referring to regional financial management regulations, the Tegal Regency Government also applies an accounting basis in preparing regional financial reports. Based on the 2023 Tegal Regency CALK, regional financial reports are prepared using two accounting bases: the cash basis and the accrual basis. The cash basis is used in preparing budget implementation reports, while the accrual basis is used in preparing regional financial reports such as operational reports, balance sheets, statements of changes in equity, and cash flow statements. The application of these accounting bases demonstrates that regional financial management and reporting have been carried out systematically and in accordance with Government Accounting Standards.

4.2. Basis Akuntansi yang Mendasari Penyusunan Laporan Keuangan Daerah.

Penyusunan Laporan Keuangan Daerah menggunakan 2 (dua) basis akuntansi, yaitu Basis Kas dan Basis Akrua.

Basis kas dipergunakan untuk menyusun laporan pelaksanaan anggaran (*budgetary report*) yang terdiri dari Laporan Realisasi Anggaran (LRA) dan Laporan Perubahan Saldo Anggaran Lebih (LPSAL). Penggunaan basis kas dikarenakan anggaran disusun dan dilaksanakan berdasar basis kas. Penyusunan LRA menggunakan basis kas, berarti bahwa pendapatan-LRA dan penerimaan pembiayaan diakui pada saat kas diterima di rekening Kas Umum Daerah atau oleh entitas pelaporan, serta belanja, transfer dan pengeluaran pembiayaan diakui pada saat kas dikeluarkan dari rekening Kas Umum Daerah, sedangkan selisih realisasi penerimaan dan pengeluaran disebut sisa lebih atau kurang pembiayaan anggaran, sehingga tidak menggunakan istilah laba.

Basis akrual dipergunakan untuk menyusun laporan finansial yang terdiri dari Laporan Operasional (LO), Neraca, Laporan Perubahan Ekuitas (LPE) dan Laporan Arus Kas (LAK). Basis akrual untuk Laporan Operasional berarti bahwa pendapatan diakui pada saat hak untuk memperoleh pendapatan telah terpenuhi walaupun kas belum diterima di Rekening Kas Umum Daerah atau oleh entitas pelaporan dan beban diakui pada saat kewajiban yang mengakibatkan penurunan nilai kekayaan bersih telah terpenuhi walaupun kas belum dikeluarkan dari Rekening Kas Umum Daerah atau entitas pelaporan. Basis akrual untuk Neraca berarti bahwa aset, kewajiban, dan ekuitas diakui dan dicatat pada saat terjadinya transaksi, atau pada saat kejadian atau kondisi lingkungan berpengaruh pada keuangan pemerintah, tanpa memperhatikan saat kas atau setara kas diterima atau dibayar.

Figure 2. Notes to the 2023 Tegal Regency Financial Report regarding the Basis for Preparing Regional Financial Reports.

The figure shows an explanation of the accounting basis used in preparing the Tegal Regency Government's 2023 financial statements. The application of the cash and accrual basis



demonstrates that the regional government has implemented a structured regional financial reporting system in accordance with applicable laws and regulations. This situation also supports the implementation of the Regional Financial Reporting System (SIPD) in producing more effective, transparent, and accountable regional financial reports.

Risk Factors Human Error in the Implementation of SIPD

Implementation of SIPD in regional financial management has various potential risks human error which can affect the quality of regional financial information. Risk human error is the potential for errors arising from human factors in the use of information systems, such as data input errors, account misclassification errors, reporting delays, and lack of accuracy in financial administration processes. Previous research has shown that SIPD implementation still faces obstacles in the form of limited human resource competency, system complexity, and complex administrative processes, which increase the potential for administrative errors and recording errors in regional financial management (Rahmawati, 2022).

Based on the 2023 Tegal Regency LKPD and CALK documents, there are several conditions that indicate potential risks human error in regional financial management. One indication of this is the corrections to several regional financial accounts and assets. The 2023 CALK explains that there were fixed asset corrections of Rp.17,389,369,800.93 due to extra-comptable assets that did not meet capitalization limits, corrections to double-recording of land assets, and adjustments to asset classifications in accordance with applicable regulations. Furthermore, there were also adjustments to accumulated depreciation of Rp.98,925,797,153.22 due to adjustments to asset classifications and corrections to regional asset mutations. These conditions indicate that the process of managing regional asset data and recording still has the potential for administrative errors and recording discrepancies that can be influenced by factors human error in the use of regional financial information systems.



No	Uraian	Tambah	Kurang	Saldo Akhir
1	Koreksi Ekuitas penyisihan piutang	1.784.457.330,57	6.953.567,51	1.777.503.763,06
2	Koreksi Ekuitas Aset Tetap	0,00	17.389.369.800,93	(17.389.369.800,93)
3	Koreksi ekuitas akumulasi penyusutan Aset Tetap	0,00	98.925.797.153,22	(98.925.797.153,22)
JUMLAH		1.784.457.330,57	116.322.120.521,66	(114.537.663.191,09)

- c) Koreksi ekuitas Aset tetap yang mengurangi ekuitas sebesar Rp17.389.369.800,93 karena ada aset ekstrakomptable yang tidak memenuhi batas kapitalisasi di Dinas Pendidikan dan Kebudayaan sebesar Rp17.339.369.800,59, koreksi atas double catat aset tanah di RSUD dr. Soeselo sebesar Rp50.000.000,00 dan koreksi pembulatan di Dinas Kepemudaan, Olahraga dan Pariwisata sebesar Rp0,34.
- d) Koreksi Ekuitas Akumulasi Penyusutan yang mengurangi ekuitas sebesar Rp98.925.797.153,22 berupa:
- Penyesuaian satuan unit gedung Rp95.857.563.269,00
 - Penyesuaian klasifikasi barang sesuai Permen 108 Rp3.012.433.169,00
 - Penyesuaian Koreksi/Mutasi/Hibah/TemuanBaru/Reklas Rp55.800.715,22

Figure 3. Asset Correction and Accumulated Depreciation Adjustment in the 2023 Tegal Regency CALK.

The Supreme Audit Agency (BPK) audit of the Tegal Regency Government's 2023 Financial Report also revealed weaknesses in internal controls and non-compliance with statutory provisions. One of the BPK's findings was that construction work in several regional government agencies (OPD) exceeded the contract completion date and had not been subject to late fines, resulting in a shortfall in regional revenue. These findings indicate that regional financial administration still faces the risk of supervisory errors, administrative delays, and suboptimal internal controls in the regional financial management process.

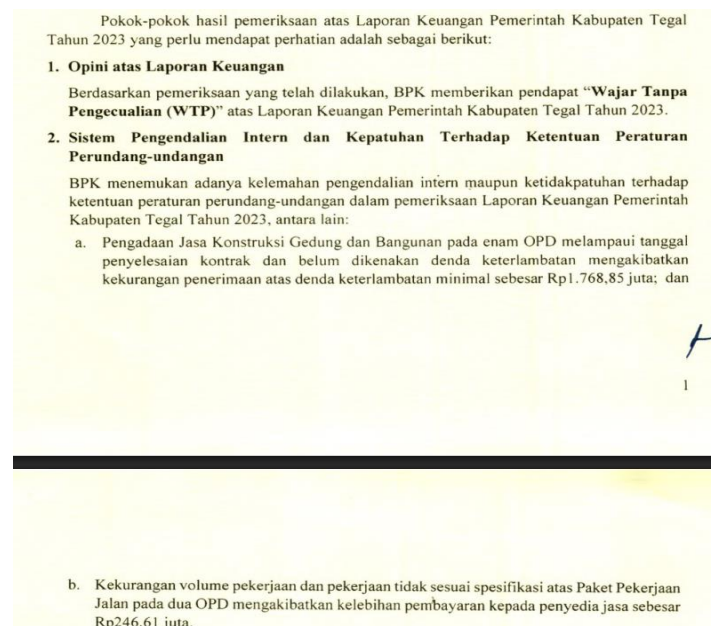


Figure 4. BPK's Findings on Weaknesses in Internal Control in Tegal Regency in 2023.



Potential risks human error this can also be seen in the complexity of managing large amounts of regional financial data. The 2023 Tegal Regency CALK (Regional Budget for Regional Government) contains various details of regional investments, equity participation, receivables, and depreciation corrections, which require high accuracy in the data recording and input process. For example, the Tegal Regency Government has equity participation in several regionally-owned enterprises (BUMDs), such as PDAM (Regional Water Company), Bank Jateng (Central Java Bank), BPR BKK Tegal Regency, and PT BPR Bank TGR (Regional Bank for Regional Governments), with a total investment value of Rp.255,274,942,466.44. Managing financial data with such significant value and detail requires precision and technical skills from system users to avoid recording errors or misclassification of regional financial data.

NO	Uraian	2022 (Rp)	Penyertaan Modal 2023	Metode Ekuitas	2023(Rp)
1	Bank Jateng	54.748.000.000,00			54.748.000.000,00
2	PDAM	146.568.622.351,00	6.000.000.000,00	5.125.279.895,00	157.693.902.246,00
3	PRPP Jateng, Semarang	407.200.000,00			407.200.000,00
4	PD BPR BKK Kabupaten Tegal	10.910.642.007,88		42.547.718,56	10.953.189.726,44
5	PT BKK JATENG CABANG KAB TEGAL	12.250.000.000,00			12.250.000.000,00
6	PT BPR Bank TGR	18.636.311.675,00	1.000.000.000,00	(413.661.181,00)	19.222.650.494,00
Jumlah		243.520.776.033,88	7.000.000.000,00	4.754.166.432,56	255.274.942.466,44

Figure 5. Table of Regional Government Capital Participation in BUMD.

Previous research also explains that SIPD implementation requires human resource readiness and the technical capabilities of system operators. Lack of understanding of information systems, changes in working mechanisms, and the complexity of administrative processes can increase the risk of data input errors and delays in regional financial reporting (Prasetyo, 2023). Therefore, SIPD implementation depends not only on the quality of the information system used but also on the competence of system users in operating regional financial management applications.

Efforts to Minimize Risk Human Error in the Implementation of SIPD

In an effort to minimize the risk human error in implementing the Regional Government Information System (SIPD), the Regional Development Planning, Research, and Development Agency (Bappedalitbang) of Tegal Regency has taken various steps to strengthen coordination, provide technical guidance, and control over planning documents. Based on the 2023 Government Agency Performance Report (LKjIP) of Bappedalitbang Tegal Regency in Figure 6, which

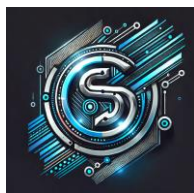


analyzes the causes of performance improvements and declines and the alternative solutions implemented, it is known that several regional agencies have not yet optimally followed up on the recommendations from the facilitation desk for the preparation of planning documents. This condition indicates the potential for administrative errors, document inconsistencies, and less than optimal operator understanding of the SIPD implementation process.

No	Tujuan/ Sasarn/ Program	Indikator Kinerja	Target	Realisasi	Capaian %	Analisis Keberhasilan/ Kegagalan	Solusi yang dilakukan
Tujuan							
1	Meningkatkan Kualitas Perencanaan dan Kelitbangan	Indeks Perencanaan dan Kelitbangan	90,61	88,9	98,11	Perencanaan dan kelitbangan relatif dapat dilaksanakan sesuai dengan norma yang ditetapkan	Menjaga konsistensi perencanaan dan kelitbangan sesuai norma
Sasaran							
1	Meningkatnya Keselarasan Perencanaan Pembangunan Daerah	Indeks Keselarasan Perencanaan Pembangunan Daerah	92,76	91,03	98,13	Keselarasn dapat tercapai dengan baik karena koordinasi antara perencanaan daerah dan perencanaan PD berlangsung efektif	Mempertahankan koordinasi antara perencanaan daerah dan perencanaan PD lebih optimal
	1) Program Perencanaan, Pengendalian Dan Evaluasi Pembangunan Daerah	Persentase Dokumen Perencanaan disusun sesuai tahapan dan Kebijakan anggaran	100	100	100	Capaian indikator persentase dokumen perencanaan disusun sesuai tahapan dan kebijakan anggaran sudah tercapai. Tahapan penyusunan dokumen perencanaan sudah sesuai dengan peraturan perundangan yang berlaku.	Meningkatkan koordinasi antara Perangkat Daerah dalam proses penyusunan Rencana Kerja (Renja) sehingga program prioritas dalam terkawal dan terlaksana

Figure 6. Analysis of the Causes of Increased/Decreased Performance and Alternative Solutions Implemented.

To mitigate these risks, the Tegal Regency Development Planning Agency (Bappedalitbang) coordinates, provides technical guidance, facilitates, and monitors and evaluates the preparation of planning documents through planning meetings and the functional activities of partner regional government agencies (OPD). Furthermore, Bappedalitbang conducts verification before finalizing the documents as legal planning documents. This step is taken to ensure data consistency, minimize administrative errors, and improve the accuracy of regional government agencies in inputting and compiling documents into the SIPD.



2) Program Koordinasi Dan Sinkronisasi Perencanaan Pembangunan Daerah	Tingkat Keselarasan Dokumen Perencanaan Pembangunan Daerah rumpun Bidang Pemerintahan dan Pembangunan Manusia	91,98	91,77	100,00	PD dalam menyusun dokumen perencanaan sudah sesuai dengan kaidah yang berlaku akan tetapi kualitas dan tingkat keselarasannya masih perlu disempurnakan	intensifikasi desk yang mendalam pada saat penyusunan dokumen perencanaanperiode berikutnya
	Tingkat Keselarasan Dokumen Perencanaan rumpun Bidang Perekonomian dan SDA	93,23	84,55	90,75	Masih terdapat beberapa OPD yang tidak menindaklanjuti rekomendasi BA hasil desk fasilitasi penyusunan dokumen perencanaan	1) melakukan koordinasi, bimbingan teknis/ fasilitasi, monev penyusunan dokumen perencanaan baik melalui forum/rapat perencanaan maupun aktivitas Fungsional Mitra OPD secara melekat; 2) verifikasi oleh Bappedalitbang sebelum dilakukan finalisasi sebagai dokumen perencanaan yang legal.
	Tingkat Keselarasan Dokumen Perencanaan rumpun Bidang Infrastruktur dan Kewilayahan	93,59	79,27	84,83	Masih terdapat beberapa OPD yang tidak menindaklanjuti rekomendasi BA hasil desk fasilitasi penyusunan dokumen perencanaan	1) melakukan koordinasi, bimbingan teknis/ fasilitasi, monev penyusunan dokumen perencanaan baik melalui forum/rapat perencanaan maupun aktivitas Fungsional Mitra OPD secara melekat; 2) verifikasi oleh Bappedalitbang sebelum dilakukan finalisasi sebagai dokumen

Figure 7. Analysis of the Causes of Increased/Decreased Performance and Alternative Solutions Implemented.

Other efforts are evident in the increased coordination between regional agencies in the work plan development process to ensure that priority programs can be effectively monitored and implemented. Furthermore, the Regional Development Planning Agency (Bappedalitbang) is also encouraging intensified in-depth desk work during the preparation of planning documents for the next period to improve the quality of alignment between regional development documents. With this periodic monitoring, evaluation, and mentoring, the risk of human error in the implementation of SIPD, it can be minimized so that the regional data planning and management process becomes more effective, transparent and accurate.



CONCLUSION

This study examined human error risk factors in the implementation of the Regional Government Information System (SIPD) within the regional financial management practices of the Tegal Regency Government. The findings indicate that SIPD has played a significant role in supporting the digital transformation of public financial management by enhancing the integration, transparency, accountability, and efficiency of financial administration processes. The adoption of SIPD has enabled regional governments to align financial management practices with regulatory requirements and Government Accounting Standards, thereby strengthening the quality of financial reporting and governance.

Despite these achievements, the study identified several human error-related risks that may compromise the effectiveness of SIPD implementation. These risks include asset recording inaccuracies, account classification errors, data inconsistencies, administrative delays, and weaknesses in internal control mechanisms. The findings suggest that such risks are primarily associated with the complexity of financial data management, limited user competence, insufficient understanding of system functionalities, and inadequate coordination among organizational units. Therefore, the effectiveness of digital financial management systems depends not only on technological capabilities but also on the readiness and capacity of human resources operating the system.

From a practical perspective, the study highlights the importance of strengthening technical training, continuous monitoring and evaluation, inter-agency coordination, and internal control systems to reduce the occurrence of human errors. These measures are essential for ensuring the reliability, accuracy, and accountability of regional financial information generated through SIPD. Furthermore, the findings contribute to the growing literature on digital governance and public sector information systems by emphasizing the critical role of human factors in determining the success of information system implementation in government organizations.

This study is limited by its reliance on document-based analysis and its focus on a single local government context. Future research is recommended to employ mixed-method or quantitative approaches involving system users, financial administrators, and policymakers across multiple regional governments to provide a more comprehensive understanding of human error determinants and risk mitigation strategies in SIPD implementation. Such investigations would



contribute to the development of more resilient and sustainable digital public financial management systems.

REFERENCE

- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40. <https://doi.org/10.3316/QRJ0902027>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). SAGE Publications.
- Fitriani, D. (2024). Analysis of risk factors in the implementation of the Regional Government Information System in regional financial management. *Journal of Accounting and Government Information Systems*, 6(1), 45–56.
- Krippendorff, K. (2018). *Content Analysis: An Introduction to Its Methodology* (4th ed.). SAGE Publications.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. SAGE Publications.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). SAGE Publications.
- Nugroho, F., & Lestari, D. (2024). Effectiveness of implementing the Regional Government Information System in regional financial management. *Journal of Government Management*, 8(1), 22–35.
- Patton, M. Q. (2015). *Qualitative Research and Evaluation Methods* (4th ed.). SAGE Publications.
- Prasetyo, A. (2023). Analysis of the implementation of the Regional Government Information System application on regional financial management. *Journal of Regional Finance and Public Policy*, 7(2), 55–67.
- Rahmawati, I. (2022). Obstacles to the implementation of the Regional Government Information System in regional governance. *Journal of Government Information Systems*, 3(1), 30–41.
- Regional Development Planning, Research and Development Agency of Tegal Regency. (2023). *Government Agency Performance Report (LKjIP) of the Tegal Regency Bappedalitbang for 2023*.
- Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing and Health*, 23(4), 334–340. [https://doi.org/10.1002/1098-240X\(200008\)23:4<334::AID-](https://doi.org/10.1002/1098-240X(200008)23:4<334::AID-)



NUR9>3.0.CO;2-G

- Tegal Regency Government. (2023). Notes to the Financial Report (CALK) of Tegal Regency 2023. Tegal Regency Government.
- Tegal Regency Government. (2023). Tegal Regency Government Financial Report 2023. Tegal Regency Government.
- Tegal Regency Government. (2023). Tegal Regency Government Performance Report 2023. Tegal Regency Government.
- Tegal Regency Government. (2023). The Audit Board's opinion on the 2023 Tegal Regency Government financial report. Tegal Regency Government.
- Tegal Regency Government. (2024). Tegal Regency Regional Regulation Number 2 of 2024 concerning Accountability for the Implementation of the 2023 Fiscal Year Regional Budget. Tegal Regency Government.
- Tegal Regency Government. (2024). Tegal Regent Regulation Number 28 of 2024 concerning the Explanation of Accountability for the Implementation of the 2023 Regional Budget. Tegal Regency Government.
- Wijaya, H., & Saputra, D. (2023). The influence of human resource capacity on the implementation of the Regional Government Information System. *Journal of Accounting and Information Technology*, 6(2), 76–89.