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Implementation Challenges of the SAKTI Application in Enhancing Budget Management Efficiency at the Makassar Immigration Detention Center

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ABSTRACT

The implementation of digital financial management systems is essential for improving efficiency, transparency, and accountability in public sector financial administration. However, challenges at the organizational level may hinder the effective use of integrated financial applications. This study aimed to identify and analyze the challenges associated with implementing the Agency-Level Financial Application System (Sistem Aplikasi Keuangan Tingkat Instansi, SAKTI) for budget management at the Makassar Immigration Detention Center in Indonesia. The study examined implementation barriers among financial management personnel, focusing on human resource competencies, technical training, network infrastructure, system complexity, and organizational readiness for digital transformation. The findings revealed several interconnected challenges that constrained effective implementation. Of the three financial managers, only one had received formal training in using SAKTI, indicating a substantial gap in user competency and training coverage. In addition, inadequate network infrastructure, system complexity, and limited organizational preparedness hindered the transition from manual procedures to digital financial management. These findings highlight the importance of both technical capacity and organizational support in implementing digital public financial systems. The study recommends providing regular technical training and financial system certification for all users, strengthening digital infrastructure, and fostering a digital work culture supported by transformational leadership. These measures can improve user competency, facilitate organizational adaptation, and strengthen the effective and accountable management of public funds. The study contributes practical insights for public institutions seeking to address implementation barriers and maximize the benefits of digital financial management systems.

1. Introduction

In the era of rapid digital transformation, government institutions face increasing pressure to improve the efficiency, transparency, and accountability of public financial management. Digital financial systems have emerged as important instruments for strengthening budgetary control, improving reporting accuracy, and facilitating access to financial information in a timely manner. These developments are particularly relevant to public institutions that manage state funds and must ensure that financial resources are allocated and utilized in accordance with established administrative requirements. In Indonesia, the implementation of integrated financial management technology represents an important step toward modernizing public sector administration. The Makassar Immigration Detention Center (Rudenim Makassar) (2023), as a government institution responsible for managing public resources and supporting services for detainees and refugees, is expected to utilize digital technology to strengthen its financial governance and operational effectiveness.

The adoption of financial technology in public financial management reflects a broader transformation in the way organizations conduct financial transactions, prepare reports, and maintain accountability.That financial technology can streamline financial transactions and strengthen accountability in budget reporting, particularly in

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organizations with limited resources and substantial administrative responsibilities. Similarly, the potential of digital financial systems to reduce fraud risks, facilitate auditing, and strengthen oversight through transparent access to financial information in real time. These perspectives demonstrate the potential value of digital systems in improving public financial management. However, the benefits of digitalization depend not only on the technological capabilities of an application but also on the ability of organizations and their personnel to implement and operate the system effectively.

In response to these demands, the Indonesian Ministry of Finance introduced the *Sistem Aplikasi Keuangan Tingkat Instansi* (SAKTI), an integrated financial management application designed to connect different stages of government financial administration, from planning and budget execution to reporting and accountability. The implementation of SAKTI is intended to support more coordinated financial processes, improve data consistency, and strengthen transparency across government work units. At Rudenim Makassar, the application forms part of the institutional effort to modernize financial operations and improve the management of public funds. Nevertheless, the successful adoption of an integrated financial application requires adequate human resource competencies, appropriate technological infrastructure, continuous technical support, and organizational readiness for changes in established working procedures.

Despite its intended benefits, SAKTI implementation at the work-unit level may encounter practical obstacles that limit its effectiveness. These obstacles include inadequate human resource capacity, insufficient technical training, limited network infrastructure, system complexity, and resistance to technological change. That although SAKTI has the potential to improve the structure and timeliness of budgeting processes, its effectiveness depends substantially on user readiness and institutional support. This perspective suggests that the implementation of digital financial systems should be examined not merely in terms of system availability but also in relation to the organizational conditions that enable personnel to use the system appropriately. Consequently, identifying the specific barriers experienced by financial management personnel is necessary to understand why the expected benefits of digitalization may not be fully realized in individual government institutions.

In addition to human resource and organizational challenges, technical integration presents another concern in the implementation of digital financial management systems. Differences in financial data formats and administrative procedures across government units can complicate data integration and create inconsistencies in financial information. Without appropriate data harmonization and adequate technical support, these problems may affect reporting reliability and the quality of financial decision-making. Organizational culture is equally important because the transition from manual procedures to automated systems requires personnel to adapt to new workflows and develop the digital competencies necessary for their responsibilities. Leadership support, particularly through approaches that encourage learning, adaptation, and innovation, can help institutions address resistance to change and establish a more supportive digital working environment.

Although previous studies have discussed the potential benefits of financial technology and the importance of institutional readiness in implementing digital financial systems, further investigation is needed to understand how these challenges emerge in specific government work units. The existing discussion establishes the relevance of financial technology, accountability, and user readiness. However, the practical challenges associated with implementing SAKTI at Rudenim Makassar require more context-specific examination, particularly concerning the relationship between personnel competencies, technical training, infrastructure adequacy, system complexity, and organizational preparedness. Addressing this gap can provide a more detailed understanding of the operational barriers that affect the implementation of integrated financial applications in public institutions. The present study therefore focuses on the implementation experience of Rudenim Makassar rather than assuming that the benefits of digital financial systems are automatically achieved once the technology is introduced.

The research problem addressed in this study is the presence of potential human resource, technical, infrastructural, and organizational barriers to the effective implementation of SAKTI for budget management at Rudenim Makassar. These barriers are important because inadequate implementation

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may contribute to delays in financial administration, inefficient budget management, and weaknesses in accountability. Such risks are particularly significant for an institution that must manage public funds while supporting services for detainees and refugees. Accordingly, this study aims to identify and analyze the challenges encountered in implementing SAKTI at Rudenim Makassar and to formulate practical recommendations for improving its implementation. Specifically, the study examines the adequacy of personnel competencies and technical training, the availability of supporting infrastructure, the complexity of system use, and the institution's readiness to adapt to digital financial management procedures.

This study offers practical and institutional contributions by providing context-specific insights into the factors that may constrain the implementation of integrated financial management systems in government work units. Theoretically, it contributes to the discussion of digital transformation in public financial management by emphasizing the interaction between technological requirements, human resource capacity, and organizational readiness. Practically, the findings can inform institutional leaders and relevant government stakeholders in designing targeted training programs, strengthening digital infrastructure, improving technical assistance, and encouraging a supportive digital work culture. The novelty of this study lies in its focused examination of SAKTI implementation challenges within the specific operational context of Rudenim Makassar. By connecting implementation barriers with actionable institutional responses, the study seeks to support more effective, transparent, and accountable public financial management.

2. Literature Review

2.1. Conceptual and Theoretical Foundations

2.1.1. Immigration Detention Centers

An Immigration Detention Center (*Rumah Detensi Imigrasi*, Rudenim) is an institution operating under the Directorate General of Immigration within Indonesia's immigration administration system. According to Law No. 6/2011 on Immigration, Rudenim is responsible for the temporary accommodation of foreign nationals subject to immigration detention while their cases are processed or arrangements for deportation are undertaken, in accordance with applicable legal provisions and human rights standards. Beyond its detention function, Rudenim also requires effective administrative coordination and accountable financial management to support its operational responsibilities.

Budiman (2020) describes Rudenim not merely as a detention facility but also as a coordination center for resolving immigration cases based on principles of justice and international human rights. This institutional role requires reliable administrative systems and the efficient use of public resources. Accordingly, the implementation of digital financial management systems at Rudenim Makassar is relevant to strengthening budgetary administration, financial reporting, and institutional accountability.

2.1.2. Financial Information Systems

Financial information systems (FIS) are designed to collect, process, store, and analyze financial information to support organizational operations and decision-making. Laudon and Laudon (2018) explain that information systems integrate hardware, software, databases, and procedures to facilitate organizational activities. The importance of databases and software in improving the speed and accuracy of financial reporting. These perspectives establish the technological foundation for understanding how integrated financial applications can support public financial management.

The application of financial information systems in government institutions can be understood through several interconnected functions. First, operational efficiency is supported by the automation of financial processes, which can reduce manual procedures and improve transaction processing (Gomber et al., 2018). Second, transparency and accountability can be strengthened through monitoring mechanisms and audit trails that facilitate the examination of financial activities (Carney, 2018). Third, data security can be supported by technological mechanisms such as encryption and blockchain (Chen et al., 2020). Fourth, system integration enables financial information to be coordinated across departments and administrative functions.

The adoption of financial information systems in public organizations is also supported by empirical studies. Widodo et al. (2019), Pramono (2021), and

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Setiawan and Kusuma (2020) identify benefits associated with government transparency, reporting accuracy, and job satisfaction. Nevertheless, the implementation of such systems remains subject to resource limitations, resistance to organizational change, and inadequate infrastructure (Laudon & Laudon, 2018).These challenges indicate that the effectiveness of a financial information system depends not only on its technological capabilities but also on the availability of organizational resources and the readiness of its users.

2.1.3. Implementation of the SAKTI Application

The *Sistem Aplikasi Keuangan Tingkat Instansi* (SAKTI) is a web-based financial management application developed by the Indonesian Ministry of Finance. The application integrates government financial management activities, including budget planning, fund disbursement, accounting, and reporting. Its integration with the *Sistem Perbendaharaan dan Anggaran Negara* (SPAN) supports the coordination of financial administration and the availability of information for monitoring and accountability.

SAKTI incorporates budgeting, treasury, accounting, and reporting functions to facilitate compliance with government accounting standards. Through these functions, the application is intended to improve financial transparency, support internal auditing, and reduce opportunities for financial irregularities. Its web-based architecture also facilitates access to financial information without requiring all administrative activities to be performed through physical documentation.

Pramono (2021) indicates that SAKTI is aligned with the operational requirements of Rudenim. However, the practical effectiveness of its implementation depends on users' ability to operate the application, the reliability of supporting infrastructure, and the organization's capacity to adapt to digital procedures. Therefore, examining SAKTI implementation requires attention to both the benefits of system integration and the challenges encountered by personnel responsible for financial management.

2.1.4. Budget Management

Budget management encompasses the planning, allocation, execution, monitoring, and evaluation of financial resources to achieve organizational objectives. In the public sector, these activities must ensure that government funds are used efficiently, transparently, and accountably. Mahmudi (2010) and Mardiasmo (2009) emphasize efficiency, transparency, accountability, and public participation as important principles of public financial management.

Jones and Pendlebury (2000) identify four principal stages of the budgeting process:

a. Budget planning: Establishing financial priorities and determining the resources required to achieve organizational objectives.
b. Budget allocation: Distributing available financial resources according to institutional needs and priorities.
c. Budget implementation: Executing approved expenditures and managing financial transactions.
d. Monitoring and evaluation: Reviewing budget execution and assessing the extent to which financial resources are used effectively.

The integration of technology into these stages can improve data accuracy, facilitate real-time monitoring, and minimize administrative errors (Yuliani, 2022). In the context of Rudenim Makassar, SAKTI supports the digitalization of budget administration and financial oversight. Pramono (2019) further emphasizes the role of digital applications in strengthening accountability in public sector financial management.

These conceptual foundations suggest that the contribution of SAKTI should be assessed in relation to the practical requirements of budget management. Although integrated systems can facilitate financial administration, their effectiveness may be constrained by limited personnel competencies, inadequate infrastructure, and difficulties in adapting to new working procedures.

2.2. Review of Empirical Studies

Previous empirical studies provide insights into the application of digital financial systems, the implementation of SAKTI and SPAN, and the contribution of information technology to public financial management. These studies differ in their research approaches, institutional settings, and analytical methods. Their findings nevertheless provide a basis for understanding the potential benefits of digitalization and the conditions that influence implementation outcomes. Table 1 summarizes the ten previous studies identified in the

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original manuscript.

Table 1. Empirical Review of Previous Studies

Title and Author(s)	Methodology	Key Findings
Andry and Sutopo (2018) *Implementation of Financial Management Information System to Improve Budget Accuracy*	Case Study, Descriptive Analysis	Digital systems significantly enhance speed and accuracy in budget processes, reducing recording errors and increasing efficiency by up to 20%. They support greater transparency and accountability in public institutions.
Dewi and Hidayati (2019) *Evaluation of SPAN in Government Budget Management*	Quantitative	SPAN accelerates budget transactions and improves transparency, especially at the regional level, enabling real-time access to financial data and reducing errors.
Rahmat and Putra (2020) *Efficiency of Digital-Based Budget Management in Local Government*	Quantitative, Linear Regression	Digital systems save up to 15% of the budget long-term by reducing unnecessary costs and improving transparency.
Fitriani and Saputra (2020) *Role of SAKTI Application in Financial Management Efficiency*	Descriptive Study	Web-based SAKTI enhances efficiency through accessible features, a single database, and simplified interdepartmental coordination.
Taufik and Handoko (2021) *Effectiveness of SAKTI Application in State Financial Management*	Qualitative, Interviews	SAKTI improves reporting speed, strengthens budget control, and enhances transparency through digital monitoring tools.
Nurul and Wijaya (2021) *Impact of Big Data in Budget Optimization at Ministry of Finance*	Big Data Analysis	Big Data enhances planning accuracy, supports data-driven decisions, and reduces over-budgeting.
Fadhilah and Prasetyo (2022) *Digital Finance Technology in SPAN: Case Study in Local Government*	Quantitative Survey	SPAN enables real-time budget monitoring and accelerates detection of irregularities, supporting internal and external audits.
Amanda and Kurniawan (2022) *SAKTI and Its Role in Central Government Financial System*	Descriptive Analysis	SAKTI offers remote access flexibility and ensures reporting efficiency despite physical constraints.
Rizky and Ramadhan (2023) *Effectiveness of Financial Information Systems in Immigration Detention Centers*	Case Study	Implementation of financial technology in Rudenim accelerates fund disbursement and improves budget transparency.
Lestari and Setiawan (2023) *Digital Transformation in Regional Financial Management: SPAN and SAKTI Analysis*	Qualitative Approach	Digitalization reduces budget overlap, enhances allocation efficiency, and improves public financial accountability.

Source: Compiled from the studies identified in the original manuscript.

The studies presented in Table 1 demonstrate several recurring benefits of digital financial management systems. Andry and Sutopo (2018) and Rahmat and Putra (2020) emphasize improvements in budget accuracy and efficiency, reporting increases of up to 20% in efficiency and potential long-term budget savings of up to 15%, respectively. Dewi and Hidayati (2019) and Fadhilah and Prasetyo (2022) highlight the role of integrated financial systems in accelerating transactions, improving access to financial information, and strengthening monitoring. Meanwhile, Fitriani and Saputra (2020), Taufik and Handoko (2021), and Amanda and Kurniawan (2022) focus on the contribution of SAKTI to integrated financial administration, reporting efficiency, and budget control.

Other studies broaden the discussion beyond the immediate functions of financial applications. Nurul and Wijaya (2021) examine the contribution of big data to planning accuracy and budget

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optimization, whereas Lestari and Setiawan (2023) emphasize the relationship between digital transformation, allocation efficiency, and public financial accountability. Rizky and Ramadhan (2023) provide a contextually relevant perspective by examining financial information systems in immigration detention centers, where digitalization is associated with faster fund disbursement and improved budget transparency.

Taken together, these studies suggest that digital financial systems can improve financial administration through automation, data integration, and more accessible monitoring mechanisms. However, their reported benefits do not necessarily establish that implementation will be equally effective across all institutions. Differences in user competencies, technological infrastructure, institutional arrangements, and organizational readiness may influence the extent to which these benefits are realized. This consideration provides a basis for examining the implementation challenges experienced by Rudenim Makassar.

2.3. Identification of the Research Gap

The reviewed literature establishes the importance of digital financial systems in improving budget efficiency, reporting accuracy, transparency, and accountability. Nevertheless, the studies summarized in Table 1 primarily emphasize system benefits and improvements in financial administration. The practical barriers that may prevent institutions from realizing these benefits require further examination in specific organizational contexts. First, a contextual gap remains concerning the implementation of SAKTI in immigration detention centers. Although Rizky and Ramadhan (2023) examined financial information systems in immigration detention centers, the present study specifically investigates the implementation challenges experienced by Rudenim Makassar. This focus enables an examination of the institutional conditions affecting the use of SAKTI in a particular public sector work unit. Second, the reviewed studies provide varying levels of attention to human resource competencies, technical training, infrastructure, system complexity, and organizational readiness. These factors are interconnected: personnel may experience difficulties operating an integrated application when technical assistance is insufficient, network access is unreliable, or organizational procedures have not fully adapted to digital operations. Examining these issues together provides a more comprehensive understanding of the implementation process than considering system efficiency alone. Third, the practical implications of implementation challenges require further clarification. Identifying obstacles is important not only for understanding operational difficulties but also for developing recommendations that address the actual needs of users and institutional leaders. A context-specific investigation can therefore help connect the reported benefits of digital financial systems with the organizational and technical conditions necessary to achieve them.

Accordingly, the research gap addressed in this study concerns the need for a contextual and in-depth understanding of the challenges associated with implementing SAKTI for budget management at Rudenim Makassar. The study focuses on human resource capacity, technical training, infrastructure adequacy, system complexity, and organizational readiness. Its contribution lies in examining these challenges within the operational context of an immigration detention center and translating the findings into practical recommendations for strengthening financial management.

2.4. Development of the Conceptual Framework

The conceptual framework of this study is based on the relationship between digital financial system implementation and the organizational conditions that influence its effectiveness. Financial information systems provide technological capabilities for processing transactions, integrating financial data, and facilitating reporting. In public financial management, these capabilities can support efficiency, transparency, and accountability. However, the realization of these benefits depends on the institution's capacity to use and sustain the system effectively.

The implementation of SAKTI at Rudenim Makassar is examined through five interrelated dimensions. Human resource capacity concerns the availability of personnel with the knowledge and skills required to operate the application. Technical training concerns the provision of ongoing guidance to ensure that users understand system functions and financial procedures. Digital infrastructure concerns the availability and reliability of network connectivity and supporting equipment. System complexity

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concerns the operational difficulties associated with using an integrated application and adapting to its procedures. Organizational readiness concerns leadership support, digital work culture, and the institution's ability to adapt to changes in financial administration.

These dimensions provide an analytical basis for understanding the challenges encountered during SAKTI implementation. Their interaction may influence the extent to which the application supports budget planning, execution, monitoring, and reporting. For example, an integrated system may offer efficient reporting functions, but its benefits can be constrained when users lack technical competencies or network disruptions interrupt system access. Similarly, adequate infrastructure alone may not ensure effective implementation if personnel and organizational procedures are insufficiently prepared for digital transformation.

The framework therefore connects the implementation conditions at Rudenim Makassar with the practical outcomes of budget management, including operational efficiency, reporting accuracy, transparency, and accountability. Rather than testing predetermined causal relationships between statistically measured variables, the study uses these concepts to guide the exploration of implementation experiences and the identification of actionable improvements.

The framework is intended to organize the qualitative investigation rather than represent statistically tested causal relationships. It directs attention to the challenges experienced by personnel, the organizational and technological conditions surrounding SAKTI implementation, and the implications of these conditions for budget management at Rudenim Makassar.

2.5. Hypotheses or Research Propositions

This study adopts a qualitative approach to explore the experiences, perceptions, and challenges associated with implementing SAKTI at Rudenim Makassar. The research is intended to identify implementation barriers and develop practical recommendations rather than statistically test relationships between independent and dependent variables. Consequently, the original manuscript does not formulate explicit research hypotheses or formally stated research propositions.

Consistent with the stated research objective, the investigation focuses on understanding how human resource capacity, technical training, digital infrastructure, system complexity, and organizational readiness relate to the practical implementation of SAKTI. These concepts function as analytical areas for examining the experiences of personnel involved in budget management. The study's findings are then used to formulate recommendations for improving technical capacity, strengthening infrastructure, and supporting organizational adaptation to digital financial management.

Accordingly, no additional hypotheses are introduced in this section. The conceptual framework serves as a guide for the qualitative inquiry, while the research findings provide the basis for interpreting implementation challenges and identifying appropriate institutional responses.

3. Research Methods

3.1. Research Design

This study employed a qualitative research approach to explore and analyze the experiences, perceptions, and perspectives of individuals involved in implementing the *Sistem Aplikasi Keuangan Tingkat Instansi* (SAKTI) at the Makassar Immigration Detention Center (Rudenim Makassar). A qualitative approach was appropriate for examining the practical challenges associated with digital financial management, particularly those related to human resource capacity, technical training, infrastructure, system utilization, and organizational adaptation. The research design emphasized an in-depth understanding of the implementation process within its institutional context. Data were collected through interviews, direct observation, and document analysis to obtain complementary perspectives on the implementation of SAKTI.

3.2. Research Context and Setting

The research was conducted at the Makassar Immigration Detention Center (Rudenim Makassar), located on Jl. Lembaga Bollangi, Timbuseng Village, Patalassang District, Gowa Regency, South Sulawesi Province, Indonesia. The fieldwork was scheduled for May–June 2025. Rudenim Makassar was selected because the institution manages public funds and uses SAKTI to support its financial administration and budget management activities. This setting provided an appropriate context for examining the practical challenges of implementing an integrated

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digital financial management application within a government work unit.

3.3. Population and Sample / Research Participants

The research participants comprised institutional leaders and financial management personnel at Rudenim Makassar who were directly involved in budget management and the use of the SAKTI application. These participants were relevant to the research objectives because they possessed direct experience of the system's implementation, operational requirements, and associated challenges.

The original research description did not specify the sampling technique, the total number of participants planned before data collection, or formal inclusion and exclusion criteria. Therefore, these details should be reported based on the actual participant selection process and fieldwork records. Participants should be identified according to their involvement in SAKTI implementation and their ability to provide relevant information about financial management practices.

3.4. Data Sources and Data Collection

This study used primary and secondary data to develop a contextual understanding of SAKTI implementation at Rudenim Makassar.

Primary data were obtained directly from institutional leaders and financial management personnel involved in budget administration and the use of SAKTI. These data were collected through in-depth interviews and direct field observations. Interviews were intended to explore participants' experiences, perceptions, and assessments of the implementation process, while observations provided information about actual system use, budget management procedures, and staff interactions with the application.

Secondary data consisted of existing documents relevant to financial information systems and public sector budget management. These materials included financial documents from Rudenim Makassar, SAKTI application manuals, annual budget reports, official records, administrative documents, relevant government publications, academic literature, and available audit documentation. Document analysis was used to complement the primary data and provide additional context for interpreting the implementation challenges.

Three data collection techniques were employed:

a. Direct observation. Observation focused on the use of SAKTI in daily financial administration, including budget management procedures, application use, and interactions between personnel and the system. This technique enabled the researcher to examine operational practices and identify issues that might not be fully captured through interviews.
b. In-depth interviews. Interviews were conducted with personnel involved in SAKTI implementation at Rudenim Makassar. Structured and semi-structured interview formats were considered to explore the implementation process, operational difficulties, user experiences, and perceived system effectiveness. The actual interview format and implementation should be reported according to the fieldwork records.
c. Document analysis. Relevant financial reports, official records, administrative documents, SAKTI application manuals, and available audit documents were examined to complement interview and observation findings. This technique provided documentary evidence for understanding the institutional and administrative context of the implementation process.

3.5. Measurement of Variables and Research Instruments

Because this study employed a qualitative research design, it did not operationalize variables through numerical measurement scales or statistical indicators. Instead, the investigation focused on several analytical concepts relevant to SAKTI implementation: human resource capacity, technical training, digital infrastructure, system utilization and complexity, organizational readiness, and budget management effectiveness.

Data collection instruments consisted of interview guides, observation procedures, and document review guidelines. These instruments were intended to organize the collection of information about participants' experiences, operational practices, technical difficulties, and institutional responses to digital financial management. The original methodology did not specify a formally validated instrument or standardized measurement scale. Accordingly, no claims regarding instrument

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validation or psychometric testing are made.

3.6 Data Analysis Techniques

The data were analyzed using descriptive analysis, triangulation, and interpretation. These techniques were used to organize the information collected from interviews, observations, and documents and to develop an understanding of the challenges associated with implementing SAKTI at Rudenim Makassar.

Descriptive analysis was used to describe the institutional context, implementation practices, and recurring issues identified in the collected data. Interview accounts, observation notes, and documentary information were examined to identify relevant patterns concerning system use, personnel competencies, infrastructure, and organizational adaptation.

Triangulation was used to compare information obtained from different data sources and collection techniques. Findings from interviews were examined alongside observation records and relevant documentation to determine whether the sources provided consistent or complementary evidence. For example, participants' accounts of technical difficulties or improvements in financial administration could be compared with observed practices and available institutional records. This process was intended to strengthen the credibility of the interpretation.

Interpretation and conclusion drawing involved relating the identified findings to the study's conceptual foundations and the practical context of public financial management. The researcher synthesized the main implementation challenges and used the resulting insights to formulate recommendations for improving SAKTI utilization, strengthening personnel capacity, and supporting institutional readiness at Rudenim Makassar.

The original methodology did not identify a specific qualitative analysis software package or a formal coding framework. Consequently, no software-assisted analysis or specialized coding procedure is claimed in this section.

3.7 Validity, Reliability, and Trustworthiness

The trustworthiness of the qualitative findings was addressed through triangulation of interviews, direct observations, and documentary evidence. Comparing information from these sources helped the researcher assess the consistency of reported experiences and identify areas requiring further interpretation.

Credibility was supported by examining implementation challenges from the perspectives of institutional leaders and financial management personnel and comparing their accounts with available observational and documentary evidence. Dependability required a consistent approach to collecting, organizing, and interpreting the data. Confirmability was supported by grounding interpretations in the collected evidence rather than relying solely on the researcher's assumptions.

The original methodology did not specify additional procedures such as participant checking, independent coding, or an external audit of the analysis. Such procedures should only be reported if they were actually conducted during the research.

3.8 Ethical Considerations

The research involved institutional personnel and potentially confidential financial and administrative information. Accordingly, the research process should protect participants' privacy, maintain the confidentiality of sensitive institutional information, and ensure that collected data are used only for appropriate research purposes. Participants should be informed about the research objectives and the intended use of their information, and informed consent should be obtained before interviews are conducted.

Access to internal financial documents and administrative records should be handled in accordance with the institution's applicable authorization and data protection requirements. The original methodology did not provide information about formal ethical approval, an ethics committee reference number, or documented consent procedures. These details should be added only after verification against the actual research records.

3.9 Research Procedure

The research procedure comprised several interconnected stages. First, the researcher established the research focus and design around the implementation of SAKTI at Rudenim Makassar. Second, the research setting and relevant participants were identified based on their involvement in budget management and system use. Third, primary and secondary data were collected through interviews,

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direct observation, and document analysis. Fourth, information from the different sources was organized and examined using descriptive analysis. Fifth, triangulation was undertaken to compare findings across interviews, observations, and documents. Finally, the findings were interpreted in relation to the research objectives and conceptual foundations, and recommendations were formulated to address the identified implementation challenges.

These stages provided a structured process for examining the institutional and operational conditions associated with SAKTI implementation. The fieldwork was scheduled for May–June 2025, and the final description of the research procedure should reflect the sequence of activities actually completed.

3.10 Methodological Limitations

This study focuses on a single institutional setting, Rudenim Makassar. Therefore, its findings are intended to provide contextual insights into SAKTI implementation rather than statistical generalizations to all government institutions. Differences in organizational structures, infrastructure, staffing, and financial management procedures may influence implementation experiences in other settings.

The qualitative approach provides an opportunity to explore participants' experiences and operational challenges in depth. However, the interpretation of findings depends on the information available from participants, observations, and institutional documents. The strength of the analysis therefore depends on the completeness and consistency of these sources.

The original methodology also does not specify the sampling technique, a predetermined participant count, a formal coding framework, or a qualitative analysis software package. These omissions limit the level of procedural detail that can be reported from the information currently available. Future studies could strengthen methodological comparability by documenting participant selection and analysis procedures more explicitly and by examining SAKTI implementation across multiple government work units.

4. Results and Discussion

4.1. Research Results

4.1.1. Sample Description and Descriptive Statistics

The research data were obtained through in-depth interviews with key informants directly involved in budget management at the Makassar Immigration Detention Center (Rudenim Makassar). The informants included the Head of Rudenim Makassar, the Head of Finance, and financial operational staff who regularly used the *Sistem Aplikasi Keuangan Tingkat Instansi* (SAKTI) in their daily activities. The interviews explored the implementation of the application, its contribution to financial administration, and the challenges encountered by personnel.

The finance unit at Rudenim Makassar consisted of three personnel, of whom only one had received formal SAKTI training. The other personnel relied on informal peer guidance and experiential learning. This staffing profile provided important contextual information for understanding the challenges associated with technical competency, training coverage, and the effective use of the application.

The research also examined institutional budget realization before and after SAKTI implementation, together with reported changes in administrative procedures and audit findings. Because this was a qualitative study, the analysis emphasized descriptive institutional information, interview accounts, and available administrative figures rather than statistical measures such as means and standard deviations.

4.1.2. Data Quality and Preliminary Analysis

The study used information obtained from interviews, direct observations, and institutional documentation. The data were examined descriptively and compared across sources to identify consistent findings concerning SAKTI implementation. Triangulation was used to compare participants' accounts with available observations and documentary evidence.

The preliminary analysis identified several recurring issues: limited technical competencies, insufficient formal training, unstable internet connectivity, system maintenance disruptions, and budgetary constraints associated with central government policies. The available research description does not report formal statistical tests, reliability coefficients, or model-fit assessments. These procedures were not applicable to the qualitative analytical approach described in the study.

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4.1.3. Main Analytical Results

The findings indicate that SAKTI has facilitated the integration of financial administration processes and improved access to budget information at Rudenim Makassar. Nevertheless, its implementation has been affected by human resource limitations, technical disruptions, organizational adaptation challenges, and external budgetary policies.

a. Budget realization before and after SAKTI implementation

The research reports changes in budget realization between 2020 and 2024. Table 2 presents the budget ceiling, realized expenditure, and realization percentages reported in the original research.

Table 2. Budget Realization Before and After SAKTI Implementation

Year	Implementation Status	Budget Ceiling (IDR)	Realized Expenditure (IDR)	Budget Realization
2020	Before SAKTI	5,449,528,000	4,857,342,718	89.13%
2024	After SAKTI	16,727,632,000	16,308,004,957	97.49%

Source: Institutional budget data reported in the research manuscript.

As shown in Table 2, the reported budget realization increased from 89.13% in 2020 to 97.49% in 2024. The corresponding realized expenditure increased from IDR 4,857,342,718 to IDR 16,308,004,957, while the budget ceiling increased from IDR 5,449,528,000 to IDR 16,727,632,000.

The manuscript also provides a separate annual series for budget absorption before and after SAKTI implementation. These figures are reproduced in Table 3.

Table 3. Annual Budget Absorption Rate at Rudenim Makassar

Implementation Period	Year	Budget Absorption Rate
Pre-SAKTI	2020	89.13%
Pre-SAKTI	2021	97.38%
Post-SAKTI	2022	99.77%
Post-SAKTI	2023	99.87%
Post-SAKTI	2024	99.49%

Source: Annual budget absorption figures reported in the research manuscript.

Table 3 shows an increase in the reported absorption rate from 89.13% in 2020 to 99.87% in 2023, followed by a decrease to 99.49% in 2024. The figures indicate a generally high level of budget absorption during the reported post-implementation period.

However, the 2024 absorption rate in Table 2 is reported as 99.49%, whereas Table 1 reports 97.49% for the same year. The manuscript does not explain this discrepancy. Both figures are retained here as reported and should be verified against the original institutional records before publication.

b. Changes in financial administration and audit findings

Before SAKTI implementation, budget disbursement involved manual procedures, physical documentation, and in-person submissions to the State Treasury Office (*Kantor Pelayanan Perbendaharaan Negara*, KPPN). Following implementation, electronic signatures and document uploads enabled financial transactions to be processed digitally, reducing the need for physical attendance and supporting more efficient administrative procedures.

The manuscript also reports that administrative errors identified before implementation, including document-numbering discrepancies and delayed data entry, decreased after the introduction of SAKTI. However, the original research does not provide a numerical count of audit findings before and after implementation. Therefore, the extent of this reduction cannot be quantified from the available data.

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Table 4. Summary of Reported Changes in Financial Administration

Aspect	Conditions Before SAKTI	Conditions After SAKTI
Financial applications	SAIBA, SIMAK BMN, and SPAN were used independently.	Financial management processes were consolidated within an integrated application.
Budget disbursement	Manual processing, physical documents, and in-person submissions to KPPN.	Electronic signatures and document uploads facilitated digital processing.
Reporting	Reporting processes involved separate applications and manual procedures.	Integrated reporting and system-based monitoring were available.
Administrative errors	Document-numbering discrepancies and delayed data entry were reported.	The manuscript reports a reduction in these errors.
System accessibility	Financial administration relied more heavily on conventional procedures.	The application could be accessed online by authorized users.

Source: Research interviews and institutional information reported in the manuscript.

c. Human resource competencies and technical training

The research identified limited human resource capacity as a major obstacle to effective SAKTI implementation. The finance unit comprised three personnel, but only one had received formal training. Differences in digital literacy and system comprehension affected data entry, electronic verification, and approval processes.

The manuscript also reports that internal training was conducted three times in 2023 for budget operators, financial administrators, and technical personnel. The training covered budgeting, payment commitments, treasury, and reporting modules. Additional training addressed ethics and risk management. Nevertheless, differences in individual competencies persisted, and the research identified a continuing need for structured training, certification, and mentoring.

Several quantitative figures concerning training and competency are reported in the manuscript. These are summarized in Table 5.

Table 5. Reported Indicators of Financial Management Competency and Training

Indicator	Reported Figure
Financial managers at the Ministry of Law and Human Rights holding relevant certifications	38%
Financial managers relying on limited or informal training	62%
Contribution of human resource competency to digital financial system effectiveness	Up to 47%
Immigration work units lacking certified finance personnel	Over 47%
Ministry of Law and Human Rights respondents reporting difficulties with digital budgeting	67%

Source: Figures and references reported in the original manuscript.

The figures in Table 5 indicate that training and certification were identified as important concerns at both institutional and broader organizational levels. The percentages represent the figures as reported in the manuscript; the original source documents and underlying samples should be checked before these statistics are treated as independently verified evidence.

d. Technical and infrastructure challenges

The interviews identified system maintenance, application updates, internet instability, and server downtime as operational difficulties. Because SAKTI relies on online access, disruptions may delay data entry, validation, and financial reporting. Staff also indicated that changes to system features were not always accompanied by sufficient advance notification or training.

The manuscript cites the Directorate of Information Systems and Treasury Technology (2023), which reportedly found that 71% of work units in Eastern Indonesia experienced disruptions associated with unscheduled maintenance and that 42% of affected units did not receive prior notification. That system changes without adequate support could reduce employee effectiveness by up to 36% in the first month. The manuscript further reports that biannual training improves report accuracy by 15%. These figures are presented in

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Table 6 without introducing additional numerical estimates.

Table 6. Reported Technical and Infrastructure Challenges

Indicator	Reported Figure
Work units in Eastern Indonesia experiencing disruptions from unscheduled maintenance	71%
Affected work units not receiving prior notification	42%
Reported reduction in employee effectiveness following unsupported system changes	Up to 36% in the first month
Reported improvement in report accuracy following biannual training	15%

Source: Technical and training statistics reported in the original manuscript.

e. Policy and interagency coordination challenges

The research also identified external budgetary policies as a factor affecting budget execution. The Head of Rudenim Makassar reported that central government budget-blocking measures associated with national efficiency policies reduced budget absorption despite the implementation of SAKTI.

The manuscript reports that 15.7% of the budget ceiling at the Ministry of Law and Human Rights was blocked in 2022. It also cites the Directorate General of Immigration (2023), which reportedly found that 42.4% of immigration units experienced budget realization below 85% following abrupt policy changes accompanied by inadequate socialization.

Rudenim Makassar responded to coordination challenges by working with KPPN, regional treasury offices, and central finance directorates. These arrangements were intended to support administrative coordination and address operational difficulties arising from central policy changes.

f. Organizational culture and adaptation to digital procedures

The findings indicate that implementing SAKTI required changes in working practices, responsibilities, and approval procedures. Under the integrated system, operators, validators, and approvers were expected to understand their respective roles in the digital budgeting process. Staff accustomed to manual documentation and informal communication experienced difficulties adapting to centralized electronic workflows.

To support adaptation, Rudenim Makassar introduced weekly interdepartmental forums to discuss operational challenges, system updates, and new standard operating procedures. A daily log-sheet application was also introduced in the second quarter of 2023 to track staff progress, with weekly reviews intended to identify problems and recognize performance.

The manuscript reports that Rudenim Makassar's budget realization increased from 81.5% in 2022 to 89.4% in 2023, compared with the Directorate General of Immigration average of 91.8%. These figures differ from the annual budget absorption series presented in Table 2. Because the manuscript does not explain the differences in measurement or reporting basis, the two sets of figures are retained separately.

4.1.4. Hypotheses Testing / Key Findings

The principal findings can be organized into five areas.

a. Improved financial integration and reporting. SAKTI consolidated previously separate financial applications and facilitated digital reporting, system-based monitoring, and access to financial information.
b. Limited personnel competencies and training coverage. The finance unit had three personnel, of whom only one had received formal SAKTI training. Uneven system comprehension remained an obstacle to effective use.
c. Technical and infrastructure constraints. Unstable internet connectivity, server downtime, maintenance disruptions, and insufficient preparation for system updates affected operational continuity.
d. External policy and coordination challenges. Central government budget-blocking measures

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and abrupt policy changes affected budget execution and required coordination between local work units and central authorities.

e. Organizational adaptation requirements. Digital transformation required changes in work culture, clearer understanding of electronic approval responsibilities, continued training, and leadership support.

Because the study was qualitative, these findings address the research objective of identifying and analyzing SAKTI implementation challenges rather than testing statistical hypotheses.

4.1.5. Visual Presentation of Results

Tables 2–6 present the numerical information and descriptive findings reported in the original manuscript. Table 2 summarizes the budget ceiling and realized expenditure for 2020 and 2024, while Table 3 presents the annual budget absorption series for 2020–2024. Table 4 summarizes changes in financial administration, and Tables 5 and 6 organize the reported training, competency, and technical disruption statistics.

The tables are intended to improve clarity and traceability. They do not establish that SAKTI alone caused the reported changes in budget realization or administrative performance. Such a causal conclusion would require additional evidence and an analytical design capable of separating the effects of SAKTI from other factors, including changes in budget ceilings and central government policies.

4.2 Research Discussion

4.2.1. Interpretation of Key Findings

The findings show that SAKTI has supported the integration of financial administration at Rudenim Makassar, while its implementation continues to be constrained by human resource, technical, policy, and organizational challenges. This result addresses the study's objective of examining both the practical benefits of the application and the barriers that limit its optimal use.

The first major finding concerns the relationship between system integration and administrative efficiency. The consolidation of previously separate applications into one platform facilitated reporting and financial monitoring. Interview accounts indicate that digital procedures reduced dependence on physical documentation and enabled electronic approvals. These changes illustrate the practical value of integrated financial management in a public institution.

However, the reported improvements in budget realization should be interpreted cautiously. Although the manuscript reports increases in several budget realization and absorption figures, the figures for 2024 are inconsistent across sections. Furthermore, changes in budget ceilings and central government expenditure policies may also influence budget realization. The available evidence therefore supports the conclusion that SAKTI implementation coincided with improvements in reported financial administration, but it does not establish that the application alone caused those improvements.

The second major finding concerns human resource readiness. The limited number of trained personnel and the fact that only one of the three finance staff members had received formal SAKTI training indicate a gap between system requirements and the competencies available within the unit. Because the application requires users to understand integrated modules and electronic approval procedures, uneven competency can create delays and errors.

The third finding concerns technical infrastructure. Internet instability, server downtime, and maintenance-related errors interrupted access to the application and affected administrative continuity. These findings indicate that digital financial management depends on the reliability of the supporting technological environment, not solely on the capabilities of the application itself.

The fourth finding concerns external policy constraints. Budget blocking and changes in central government expenditure priorities affected budget execution independently of the technical operation of SAKTI. This distinction is important because an effective information system cannot eliminate financial constraints arising from policy decisions.

Finally, organizational adaptation emerged as an important implementation requirement. The transition to digital procedures required changes in employees' responsibilities, work habits, and understanding of electronic approval workflows. Leadership communication, interdepartmental forums, and ongoing mentoring were therefore relevant to sustaining implementation.

4.2.2. Comparison with Previous Studies

The findings are consistent with the reported

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that SAKTI implementation in regional government agencies encountered technical challenges and human resource constraints. Their emphasis on change management is relevant to Rudenim Makassar, where differences in digital literacy and familiarity with manual procedures affected adaptation.

The findings also correspond with Lestari and Nugroho (2020), who emphasized the importance of organizational culture readiness, infrastructure, and user competencies in digital transformation. At Rudenim Makassar, leadership communication and interdepartmental forums supported adaptation, but technical limitations and differences in system understanding continued to affect implementation.

Mulyadi and Saraswati (2021) similarly highlighted the roles of information technology infrastructure, training, and change management in digital accounting system adoption. The reported problems with network stability, equipment quality, and system updates at Rudenim Makassar reinforce the relevance of these factors.

Yuliana (2022) observed that public employees may perceive digitalization as an additional burden rather than a productivity tool. This perspective helps contextualize the adaptation challenges experienced by staff accustomed to manual processes. The findings suggest that digital transformation requires not only technical instruction but also communication about the purpose and benefits of new working procedures.

The organizational interventions at Rudenim Makassar are also relevant to change management model, which emphasizes communicating a vision and engaging organizational members in sustainable change. Weekly interdepartmental forums and leadership reminders reflect efforts to encourage participation and reinforce expectations concerning accurate and timely financial reporting.

That 67% of Ministry of Law and Human Rights respondents experienced difficulties with digital budgeting because of procedural bureaucracy and limited adaptability. This finding is consistent with the challenges identified at Rudenim Makassar, where electronic approval requirements and unequal system understanding affected work processes.

The combined importance of technical training, infrastructure, and active leadership in SAKTI implementation. The present findings support the need to address these factors together rather than treating training or infrastructure as isolated solutions.

User competence and training intensity as conditions for digital system success. The limited formal training coverage at Rudenim Makassar is consistent with the relevance of these factors. Setiawan and Rahmawati (2020) also advocated continuous training and peer mentoring, supporting the recommendation to combine formal instruction with ongoing assistance in the workplace.

Finally, the findings are consistent with the general argument that digital financial management requires coordination between technological systems, institutional capacity, and organizational practices. Nevertheless, the current study adds a context-specific account of these challenges in an immigration detention center, where limited finance personnel and responsibilities related to detainee and refugee services shape operational requirements.

4.2.3. Theoretical Contributions

This study contributes to the discussion of digital transformation in public financial management by demonstrating the importance of examining technological integration alongside human resource capacity, infrastructure reliability, policy conditions, and organizational culture.

First, the findings extend the practical application of financial information system concepts by showing that system integration does not automatically guarantee optimal use. The benefits of centralized reporting and electronic approvals depend on the capacity of personnel to operate the application and on the reliability of the infrastructure supporting it. Second, the findings contribute to the discussion of organizational change by highlighting the relevance of leadership communication, peer learning, and the adaptation of established working procedures. The experience of Rudenim Makassar indicates that digital transformation involves changes in work practices and individual responsibilities as well as the introduction of new technology. Third, the study distinguishes technical implementation challenges from external policy constraints. This distinction helps explain why the performance of a digital financial application cannot be assessed solely through budget realization figures. Financial outcomes may also reflect changes in budget ceilings, expenditure restrictions, and coordination between central and local institutions.

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These contributions are contextual rather than the result of formal theory testing. The study does not establish a new causal model or statistically validate relationships between variables. Instead, it provides qualitative evidence that can inform future theoretical development concerning integrated financial systems in public institutions.

4.2.4. Practical and Policy Implications

The findings support several practical measures for improving SAKTI implementation at Rudenim Makassar. First, expand technical training and certification. The Ministry of Law and Human Rights, in coordination with the Ministry of Finance, should provide structured and periodic training covering budget planning, execution, treasury, accounting, reporting, and digital accountability. Training should prioritize small work units with limited numbers of financial personnel. Face-to-face instruction, online learning, self-directed modules, and peer mentoring can be combined to accommodate different learning needs. Second, strengthen digital infrastructure. Rudenim Makassar should assess internet reliability, computer specifications, and access to technical support. Appropriate backup arrangements and clear procedures for reporting system disruptions can help reduce interruptions to financial administration. Maintenance schedules and advance notifications of system updates should also be communicated to users. Third, improve coordination between institutions. Local work units should maintain effective communication with KPPN, regional treasury offices, and central finance directorates. Clear procedures for responding to budget blocking, policy changes, and system problems can improve the alignment between central requirements and operational needs at the work-unit level. Fourth, reinforce a supportive digital work culture. Institutional leaders should communicate the importance of accurate and timely reporting, clarify the responsibilities of operators, validators, and approvers, and encourage staff to discuss implementation problems. Regular interdepartmental forums and mentoring can help employees adapt to new procedures and build confidence in using digital tools. Fifth, establish internal support capacity. Developing internal SAKTI resource persons or designated user champions can provide immediate assistance, facilitate peer learning, and improve communication with technical support teams. Such arrangements are particularly relevant where the number of finance personnel is limited. Sixth, strengthen monitoring and evaluation. Institutions should regularly assess system accessibility, training coverage, data entry errors, reporting timeliness, and the operational effects of maintenance disruptions. Monitoring should distinguish application-related improvements from changes arising from budget policies or other external factors.

These measures should be implemented collaboratively and evaluated using documented operational indicators. Their effectiveness should not be assumed in advance; subsequent monitoring can determine whether they improve system use and financial administration.

4.2.5. Integration with the Research Gap

The literature review identified a need for a context-specific understanding of the challenges associated with implementing SAKTI in government work units. The findings address this gap by documenting implementation experiences at Rudenim Makassar and identifying the interaction of human resource limitations, technical disruptions, organizational adaptation, and policy constraints.

The study also demonstrates why an assessment of digital financial systems should extend beyond their intended technological benefits. Although integration can facilitate reporting and monitoring, actual implementation depends on user competency, adequate infrastructure, leadership support, and the ability to respond to external policy changes.

By examining these conditions together, the study provides an institution-specific account of the factors that influence the practical use of SAKTI in an immigration detention center. Its contribution lies in connecting the identified challenges with concrete institutional responses, including training, infrastructure improvements, interagency coordination, and ongoing monitoring.

4.2.6. Acknowledgement of Study Limitations

The findings should be interpreted in light of the study's focus on a single institution and a small group of personnel involved in financial management. The results provide contextual insights into Rudenim Makassar rather than a basis for

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statistical generalization to all government work units.

The quantitative information presented in the manuscript also contains inconsistencies. In particular, the reported 2024 budget realization of 97.49% differs from the 99.49% absorption rate reported elsewhere. The separate figures of 81.5% for 2022 and 89.4% for 2023 also differ from the annual absorption series. These discrepancies limit the extent to which budget performance trends can be interpreted without further verification.

Additionally, some national percentages and reported effects are cited without complete descriptions of their original samples, measurement procedures, or source documents. They should therefore be verified before being used to support broader claims. These limitations do not negate the qualitative insights from interviews, but they underscore the need for careful interpretation of the numerical evidence.

5. Conclusion

5.1. Summary of Key Findings

This study examined the challenges associated with implementing the SAKTI application for budget management at Rudenim Makassar. The findings indicate that SAKTI has facilitated the integration of financial applications, supported digital reporting, and reduced reliance on physical administrative procedures. Nevertheless, its implementation continues to face several interconnected challenges. The principal challenges involve limited human resource capacity, insufficient formal training, unstable internet connectivity, system maintenance disruptions, organizational adaptation, and external budgetary policies. The finance unit consisted of three personnel, of whom only one had received formal SAKTI training. This limited training coverage highlights the need to strengthen user competencies and ensure that all personnel involved in electronic approvals understand their responsibilities. The findings also show that technical readiness alone is insufficient to ensure effective implementation. Leadership support, a supportive digital work culture, reliable infrastructure, and coordination with central financial authorities are necessary to address operational and policy-related barriers.

5.2. Theoretical Contributions

The study contributes to the literature on digital transformation in public financial management by highlighting the interdependence of technological integration, human resource competencies, infrastructure reliability, and organizational readiness. It demonstrates that the practical benefits of integrated financial systems depend on the institutional conditions under which the systems are implemented and used. The findings also emphasize the importance of distinguishing technology-related challenges from external policy constraints. Budget realization cannot be attributed exclusively to system implementation because expenditure restrictions and changes in budget ceilings may also influence financial outcomes. The study's contribution is contextual and exploratory. It provides an empirical basis for further investigation into digital financial management in immigration detention centers and other public institutions with similar operational constraints.

5.3. Practical and Policy Implications

Several actions are recommended to improve SAKTI implementation at Rudenim Makassar. First, the Ministry of Law and Human Rights, in collaboration with the Ministry of Finance, should establish structured and periodic training and financial certification programs. These programs should cover the application's principal modules and prioritize work units with limited financial personnel. Second, digital infrastructure should be strengthened by improving internet stability, ensuring adequate computer specifications, establishing appropriate backup arrangements, and providing timely notifications of system maintenance and updates. Third, interagency coordination should be strengthened to address technical difficulties and align central policy requirements with operational conditions at the work-unit level. Fourth, institutional leaders should promote a digital work culture through clear communication, administrative discipline, mentoring, and accountability at every stage of financial management.

Finally, regular monitoring and evaluation should be implemented to assess training effectiveness, infrastructure reliability, reporting timeliness, and the operational consequences of system disruptions. These measures can help institutions identify persistent problems and make evidence-based adjustments to implementation

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strategies.

5.4. Limitations of the Study

This study focuses on Rudenim Makassar and therefore provides context-specific findings that may not apply directly to institutions with different staffing structures, technological resources, or administrative arrangements. Its qualitative design supports an in-depth understanding of implementation experiences but does not establish statistical relationships or causal effects. The numerical information reported in the manuscript also requires further verification because some budget realization figures are inconsistent across sections. In addition, the completeness of the supporting documentation for several national statistics needs to be confirmed. These issues should be considered when interpreting the reported budget performance and the broader applicability of the findings.

5.5. Directions for Future Research

Future research could examine SAKTI implementation across multiple immigration detention centers or other government work units to identify similarities and differences in implementation challenges. Comparative studies could investigate how staffing levels, infrastructure, leadership practices, and institutional coordination affect the use of integrated financial management applications.

Further studies could also employ mixed-methods designs to combine qualitative accounts of user experiences with verified administrative data on reporting timeliness, system disruptions, error rates, training participation, and budget realization. Such research would help distinguish the contribution of digital financial systems from the effects of policy changes and other external conditions.

Finally, future research could examine the effectiveness of specific interventions, including competency-based training, peer mentoring, system-update notifications, and internal user-support teams. Evaluating these measures over time would provide stronger evidence for developing sustainable implementation strategies and improving accountable public financial management.

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