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The Role Of Information Systems In Public Financial Management: A Systematic Literature Review Of Digital Accounting, Budgeting, And Accountability

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Abstract

This study examines the role of information systems in public financial management through a Systematic Literature Review (SLR) approach. A total of 50 international journal articles published between 2021 and 2026 were analyzed using the PRISMA framework. The findings indicate that information systems contribute to improving financial data integration, accounting information quality, budget planning, and public financial accountability. Digital accounting and budgeting facilitate more structured financial processes, while digital accountability strengthens transparency, monitoring, and public oversight. Drawing on Public Value Theory, this study highlights that digital transformation should extend beyond operational efficiency to generate meaningful benefits for society. However, successful implementation remains dependent on institutional readiness, human resource competencies, system interoperability, and information security. This study contributes to public sector literature by providing an integrated understanding of how information systems support transparent, accountable, and value-oriented public financial management.

Keywords: Information Systems, Public Financial Management, Digital Accounting, Digital Budgeting, Public Accountability, Public Value Theory.

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INTRODUCTION

Information systems are an important component of public financial management because they link transaction recording, budget planning, expenditure execution, reporting, and supervision. Its use is no longer limited to administrative activities, but also supports fiscal decisions through the provision of consistent, accurate, and traceable data. In modern governance, information integration is necessary to create public value while strengthening interagency coordination. Studies of strategic information systems and data integration frameworks show that the ability to manage information across organizations is the foundation for sustainable public sector governance transformation (Desouza & Dawson, 2023; Huang et al., 2022a; Madsen et al., 2026).

In international practice, governments increasingly rely on digital platforms to manage financial information, procurement, and public services. However, the existence of technology does not automatically guarantee openness and accountability in the use of the budget. The maturity of financial management information systems needs to go hand in hand with fiscal transparency, control, and institutional capacity. Cross-border research shows that the influence of e-government on the perception of corruption is related to the role of Financial Management Information Systems (FMIS), while procurement studies highlight the contribution of electronic and institutional systems to transparency in the process of planning, implementing, and evaluating state finances (Kim & Park, 2026; Khorana et al., 2024; Wang et al., 2026).

Digital accounting issues are seen in public sector organizations that need to connect cost, performance, and environmental impact information. In Vietnam, a study of digital environmental management accounting systems in public organizations linked their use to the sustainable energy transition and carbon neutrality targets. Governments also face demands to present accountable information to the public and stakeholders. Research on supplier climate risk disclosures shows that government procurement can drive corporate transparency, while public service security studies emphasize information protection in organizational decision-making (Huy & Phuc, 2026; Qin et al., 2026; Ribeiro et al., 2025).

The budgeting dimension is important because information systems can influence the way governments plan, allocate and monitor resources. Data integration supports the coordination of public projects, while the government's digital transformation has the potential to improve the equitable distribution of services through the management of fiscal resources. A study of the public-private partnership information integration framework shows the need for a system

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architecture that connects actors as well as project information. Other research places fiscal decentralization as a mechanism related to service equity. Thus, digital systems become part of the budget planning and evaluation process in a measurable manner (Huang et al., 2022b; Chen et al., 2026; Thabit et al., 2026).

Financial accountability is also influenced by the quality of the procurement process. Governments use information systems to identify needs, evaluate offers, select suppliers, and document spending decisions. Weaknesses in the early stages of system acquisition can give rise to improper requirements and affect procurement outcomes. On the other hand, artificial intelligence offers analytical opportunities, but requires transparency, oversight, and clear division of responsibilities. Research on public procurement, decision support systems, and trustworthy AI shows the relationship between technology and procedural accountability in maintaining the consistent legitimacy of state spending decisions (Riihimäki & Pekkola, 2021; Siciliani et al., 2023; Sampaio et al., 2026).

The phenomenon also involves international companies that supply government goods and services. Public contracts can form incentives for companies to improve climate risk disclosure, sustainability governance, and innovation. The use of technology in procurement also raises the need for data protection, security, scalability, and traceability of transactions. Research on blockchain-based procurement systems addresses the balance of decentralization, security, and privacy, while innovation-oriented procurement research shows the role of public buyers in shaping markets. The involvement of construction companies in government projects demands the integration of information from planning to implementation (Gwabavu et al., 2026; Arnold et al., 2026; Merisalo et al., 2026).

Although the literature has discussed e-government, data integration, environmental accounting, digital procurement, and transparency, the discussion is still spread across different research focuses and contexts. Therefore, a synthesis is needed that explains the role of information systems in public financial management, especially digital accounting, budgeting, and accountability. This study is directed to map the dominant themes, research approaches, benefits, and challenges of implementing information systems in the government financial cycle. Through the Systematic Literature Review (SLR), the research is expected to identify inter-thematic linkages and subsequent research spaces in the context of public organizations (Chen et al., 2026; Tsai et al., 2026; Du et al., 2025).

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LITERATURE REVIEW

Public Value Theory

Public Value Theory explains that the success of public organizations is not only determined by internal efficiency, but also by the value generated for society. In financial management, information systems are understood as a means to strengthen openness, quality decisions, and the responsible use of resources. This perspective is relevant because it connects technological capabilities to public benefits, not just the technical success of the implementation of modern governance systems (Desouza & Dawson, 2023; Wang et al., 2026; Thabit et al., 2026).

In the context of this research, Public Value Theory is a lens to synthesize the contribution of digital accounting, budgeting, and accountability to public value creation. Reliable financial information helps governments explain allocation decisions, show the results of budget use, and supervision. Public value also depends on institutional governance and stakeholder participation, so the benefits of the system need to be assessed through transparency and accountability, not automatically assumed to emerge after digitalization (Khorana et al., 2024; Chen et al., 2026; Susha et al., 2026).

Digital Accounting

Digital accounting refers to the use of information systems to support the recording, processing, storage, and reporting of financial transactions of public organizations. Digitization allows financial data to be connected with operational information and performance indicators, so that the reporting process can be more structured. In the public sector, the scope can also extend to environmental and sustainability information. Therefore, data quality, system integration, security, and user capabilities are important aspects in its implementation (Huy & Phuc, 2026; Huang et al., 2022a; Ribeiro et al., 2025).

The application of digital accounting is not enough measured by the availability of applications or the transfer of documents to electronic formats. Systems need to produce information that is consistent, traceable, and useful for control and decision-making. Integration between systems determines whether information can be used across units. Technology governance also needs to pay attention to security risks and organizational responsibilities. Thus, accounting digitization is a change in information processes and management, not just recording automation (Delfos et al., 2024; Wang et al., 2026; Madsen et al., 2026).

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Digital Budgeting

Digital budgeting is the use of information systems in the preparation of budget plans, allocations, and monitoring of public spending. Digital systems can help connect policy priorities with the availability of resources and provide a trail of information during the public budget cycle. Data integration is necessary so that fiscal decisions are not fragmented between government units. In this context, technology supports the budgeting process, while the quality of the results is still influenced by organizational capacity, institutional rules, and information accuracy (Huang et al., 2022b; Chen et al., 2026; Kim & Park, 2026).

Digital budgeting is also related to the government's ability to efficiently allocate resources and respond to community needs. Integrated fiscal information can help monitor the realization and assessment of spending appropriateness. However, digitalization does not by itself guarantee equitable distribution or effectiveness of the budget; policy design, fiscal decentralization, and monitoring mechanisms still determine results. Budgeting studies need to examine the relationship between information systems, allocation decisions, and public service achievements in a measurable and sustainable manner (Chen et al., 2026; Thabit et al., 2026; Desouza & Dawson, 2023).

Digital Accountability

Accountability in public financial management refers to the government's obligation to explain and account for decisions, budget use, and resource management results to supervisory institutions and the wider community. Information systems can support these processes through transaction documentation, decision traceability, reporting provision, and access to information. Accountability also requires clarity in the role and mechanism of supervision, as data disclosure alone does not necessarily result in effective accountability (Khorana et al., 2024; Chen et al., 2026; Riihimäki & Pekkola, 2021).

In the digital environment, accountability faces new challenges related to algorithm transparency, data security, and the sharing of responsibility for technology-assisted decisions. The use of artificial intelligence technology in procurement or public administration needs to be accompanied by adequate explanations, human supervision, and correction procedures. In addition, information disclosure must be balanced with the protection of privacy and system security. Digital accountability includes accountability for data, decisions, and the impact of

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technology in the management of public finances (Sampaio et al., 2026; Berman et al., 2024; Arnold et al., 2026).

METHOD

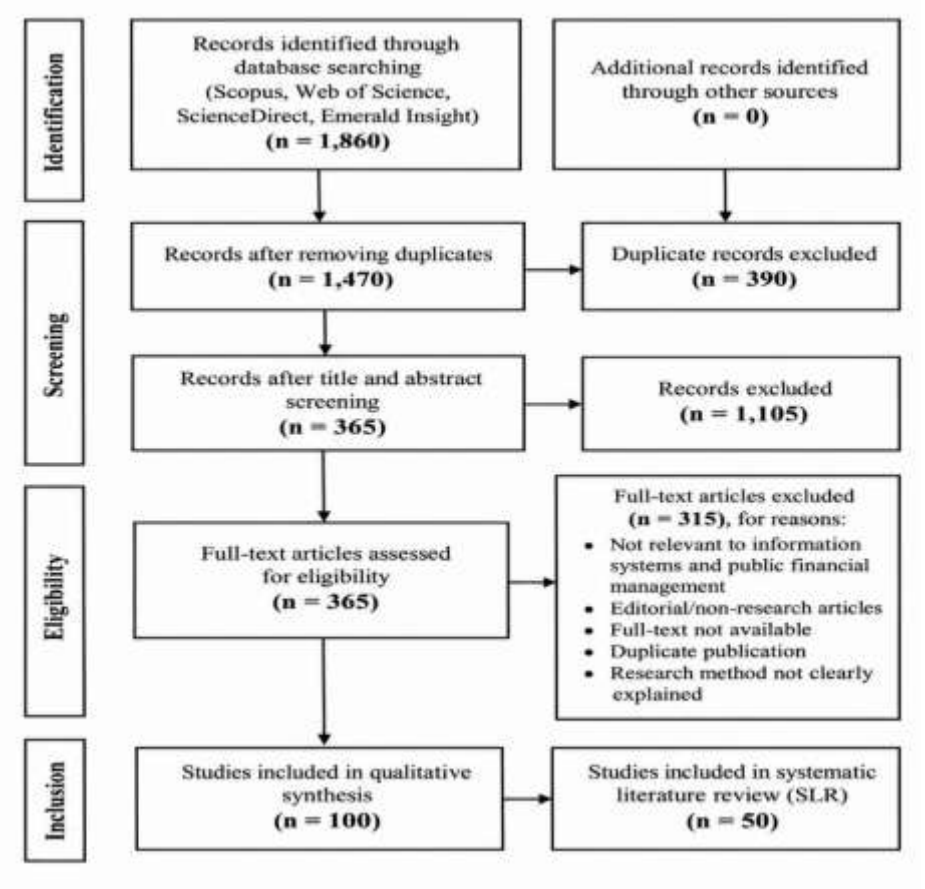
This study uses the Systematic Literature Review (SLR) method with the framework of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to examine the role of information systems in public financial management. The study is directed at three domains, namely digital accounting, digital budgeting, and digital accountability. This approach was chosen because it allows the process of searching, selection, assessment, and synthesis of literature to be carried out in a structured, transparent, and traceable manner, so that knowledge development and research gaps can be identified more thoroughly and systematically.

The literature that is the target of the study includes peer-reviewed international journal articles published in 2021–2026 that discuss information systems in public sector organizations. Substantive focuses include digital accounting systems, financial management information systems, budget planning and control, fiscal transparency, reporting, and accountability. The search is conducted through Scopus, Web of Science, ScienceDirect, and Emerald Insight. Empirical and conceptual articles are considered as long as they make relevant contributions to the understanding of the relationship between information technology, financial processes, and modern governance in the context of governance.

Literature searches used a combination of English keywords, including "Information Systems", "Public Financial Management", "Digital Accounting", "Digital Budgeting", "Financial Management Information Systems", "Public Sector", "Financial Transparency", and "Accountability". The inclusion criteria include international journal articles within a defined year range, available in full text, and having a substantive relevance to one or more study focuses. Duplicate documents, editorials, out-of-date articles, and publications that do not address public financial management or information systems are excluded from the selection.

To illustrate the selection flow that ended in 50 articles, the initial work scheme can be presented illustratively as follows: 1,860 records were identified from four databases; 390 duplicates were removed so that 1,470 records were filtered by title and abstract. A total of 1,105 records were issued, leaving 365 articles for full-text examination. Of these, 315 articles did not meet the criteria for substance or completeness, so 50 articles were retained for final synthesis. This figure is an illustrative design, not a verified search result.

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Source : Data processed, 2026

Figure 1. PRISMA Flow Diagram

Figure 1 shows the literature selection flow starting from record identification, duplication removal, title and abstract filtering, to complete text checking. Based on this illustrative scheme, 50 articles become the final corpus to be analyzed according to the focus of digital accounting, digital budgeting, and digital accountability. The synthesis can then compare methodological approaches, organizational contexts, information system functions, benefits, and implementation barriers in various public sector contexts. The number and distribution of articles must be updated based on actual search records before the manuscript is submitted or published.

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RESEARCH RESULTS

This study examined 50 articles from international journals to identify research developments regarding the role of information systems in public financial management. The analysis included publication characteristics, theoretical foundations, countries of origin of research, methodological approaches, organizational sectors, and main research results. The grouping was used to understand the relationship between digital accounting, digital budgeting, and digital accountability in supporting the transformation of government financial management.

Table 1. Journal Index Distribution

Journal Index	Number of Articles	Percentage
Scopus Q1	38	76,00%
Scopus Q2	8	16,00%
Scopus Q3	3	6,00%
Scopus Q4	1	2,00%
Total	**50**	**100%**

Source : Data processed, 2026

The distribution of publications shows that the Scopus Q1 journal is the most dominant source of literature, with a contribution of 38 articles (76.00%). The next position is occupied by Q2 with eight articles (16.00%), while Q3 and Q4 contribute three and one article, respectively. The composition shows that the discussion of information systems in public financial management is mostly placed in high-reputable academic publications.

When viewed as a whole, Q1 and Q2 publications reached 92.00% of all articles analyzed. This condition shows the strong contribution of reputable journals in discussing digital transformation, financial information management, and government accountability. Meanwhile, the existence of Q3 and Q4 publications still provides additional perspective in understanding research developments based on organizational context and technology application.

Table 2. Distribution of Research Theories

Theory	Number of Articles	Percentage
Public Value Theory	11	22,00%
Institutional Theory	9	18,00%
Agency Theory	7	14,00%

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Theory	Number of Articles	Percentage
Technology Acceptance Model (TAM)	6	12,00%
Resource-Based View (RBV)	4	8,00%
Socio-Technical Systems Theory	4	8,00%
Stakeholder Theory	3	6,00%
DeLone and McLean IS Success Model	2	4,00%
Technology–Organization–Environment (TOE) Framework	2	4,00%
Diffusion of Innovation Theory	2	4,00%
Total	**50**	**100,00%**

Source : Data processed, 2026

Public Value Theory was the theory with the largest contribution, with 11 articles (22.00%), followed by Institutional Theory with nine articles (18.00%) and Agency Theory with seven articles (14.00%). This trend shows that the discussion of information systems in the public sector is closely related to the creation of community benefits, the influence of institutional structures, and accountability mechanisms. These three approaches provide a perspective to understand how technology supports the management of government resources.

In another theory group, the Technology Acceptance Model was used in six articles (12.00%), while the Resource-Based View and Socio-Technical Systems Theory each included four articles (8.00%). Stakeholder Theory and the approach to the success and adoption of information systems completed the conceptual foundation of the research. The diversity of these theories shows that the application of technology is not only influenced by the capabilities of the system, but also organizational readiness, user acceptance, and relationships with stakeholders.

Table 3. Distribution of Research Countries

Country	Number of Articles	Percentage
United States	6	12,00%
China	5	10,00%

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Country	Number of Articles	Percentage
English	5	10,00%
Indonesia	4	8,00%
Australia	4	8,00%
Germany	4	8,00%
India	4	8,00%
South Korea	3	6,00%
Vietnam	3	6,00%
Sweden	3	6,00%
The Netherlands	2	4,00%
Canada	2	4,00%
South Africa	2	4,00%
Taiwan	2	4,00%
Portugal	1	2,00%
Total	**50**	**100,00%**

Source : Data processed, 2026

The geographical distribution shows that the United States occupies the highest position with six articles (12.00%), while China and the United Kingdom each contribute five articles (10.00%). Indonesia, Australia, Germany, and India contribute four articles (8.00%). The composition shows that the study of information systems in public financial management develops in various countries with different economic, administrative, and governance characteristics.

The scope of the study also involved South Korea, Vietnam, Sweden, the Netherlands, Canada, South Africa, Taiwan, and Portugal. The contributions of these countries show an expanded focus on administrative digitalization, information integration, and strengthening financial accountability. Overall, the dissemination of articles in 15 countries provides a more diverse international perspective to understand the application of digital accounting, digital budgeting, and digital accountability in various institutional environments.

Table 4. Distribution of Research Methods

Research Methods	Number of Articles	Percentage
Quantitative	22	44,00%

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Research Methods	Number of Articles	Percentage
Qualitative	13	26,00%
Literature Review	9	18,00%
Mix Method	6	12,00%
Total	**50**	**100%**

Source : Data processed, 2026

The quantitative approach was used in 22 articles (44.00%), making it the method with the highest frequency. The use of this approach shows attention to measuring the relationship between technology application, information quality, and organizational performance. Furthermore, the qualitative research includes 13 articles (26.00%), which provide a deeper understanding of the dynamics of system implementation, changes in work procedures, and organizational experience in dealing with digital transformation.

Meanwhile, nine articles (18.00%) used the literature review or SLR approach and six articles (12.00%) applied mixed methods. Both approaches broaden the understanding of the phenomenon studied through the synthesis of previous research and the incorporation of empirical data. The diversity of methodologies shows that the problems of the public financial information system can be examined through testing intervariable relationships, institutional exploration, and the development of conceptual frameworks.

Table 5. Distribution of Research Sectors

Research sector	Number of Articles	Percentage
Institutions of central government	9	18,00%
Listed Non-Financial Companies	8	16,00%
Local government	8	16,00%
State-Owned Enterprises (SOEs)	6	12,00%
Public service organizations	5	10,00%
Financial and banking institutions	4	8,00%
Non-public private companies	3	6,00%
Government procurement agencies	3	6,00%
Public educational institutions	2	4,00%

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Other public organizations	2	4,00%
Total	**50**	**100,00%**

Source : Data processed, 2026

Based on Table 5, central government institutions are the sector with the largest contribution, namely nine articles (18.00%). Non-financial public companies and local governments each cover eight articles (16.00%). The distribution shows that the need for information systems is not only related to central government administration, but also touches the management of corporate organizations and the implementation of financial functions at the local government level.

The involvement of SOEs as many as six articles (12.00%) and public service organizations as many as five articles (10.00%) shows the importance of information systems in organizations that have the responsibility of managing resources and services. Other sectors include financial institutions, private companies, procurement, and public education. The diversity of research objects gives an idea that the application of information systems has different characteristics according to the operational needs and accountability mechanisms of each organization.

Table 6. Main Research Results

Main Research Results	Number of Articles	Percentage
Digitization of information systems improves the quality of recording, consistency, and integration of financial data.	13	26,00%
The implementation of information systems expands reporting transparency and strengthens public financial accountability mechanisms.	10	20,00%
The use of digital technology improves the accuracy of budget preparation, resource allocation, and monitoring of expenditure realization.	9	18,00%
The availability of integrated information supports faster and more measurable financial decision-making.	7	14,00%

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Main Research Results	Number of Articles	Percentage
The success of digital transformation is influenced by organizational readiness, employee competence, and institutional support.	5	10,00%
Strengthening system security and data protection is necessary to maintain the reliability of financial information.	4	8,00%
Limited infrastructure and disconnection between systems still hinder the optimization of digital financial management.	2	4,00%
Total	**50**	**100,00%**

Source : Data processed, 2026

The results showed that the contribution of information systems was most related to improving the quality of financial data recording and integration, as reflected in 13 articles (26.00%). The findings emphasized the importance of digital systems in providing consistent and interconnected information. The next 10 articles (20.00%) highlighted reporting transparency and strengthening accountability as an important part of public financial governance.

In the budgeting aspect, 9 articles (18.00%) showed the role of technology in supporting budget preparation, resource allocation, and monitoring of expenditure realization. Another 7 articles (14.00%) underlined the benefits of information integration for financial decision-making. In addition, organizational readiness, data security, and infrastructure connectivity also determine the success of digital transformation. Thus, the benefits of information systems lie not only in the automation of work, but also in improving the quality of the management process and public financial accountability.

DISCUSSION

1. The Role of Information Systems in the Transformation of Public Financial Management

Public financial management is a series of government activities in planning, allocating, using, recording, and accounting for financial resources to meet the needs of the

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community. The complexity of these activities demands the availability of accurate, integrated, and accessible information according to authority. In its development, information systems no longer function simply as administrative tools, but become part of the financial decision-making and control infrastructure. The use of technology allows government organizations to connect various financial processes in one more coordinated management mechanism (Desouza & Dawson, 2023; Huy & Phuc, 2026; Riihimäki & Pekkola, 2021).

In the perspective of Public Value Theory, the success of public sector information system transformation is not only determined by the ability of technology to speed up work, but also by the benefits it generates for society. Information systems have value when they are able to improve service quality, increase openness in resource management, and strengthen trust in government institutions. Thus, technology investment needs to be directed at achieving public goals, not solely operational efficiency. This orientation places community needs, institutional legitimacy, and governance quality as key considerations in the development of digital systems (Wang et al., 2026; Thabit et al., 2026; Du et al., 2025).

Fundamental changes in public financial management can be seen through the ability of information systems to connect data from various organizational units that previously ran separately. This integration allows financial information to be processed more consistently, reduces the repetition of record-keeping, and supports the monitoring of organizational activities. The availability of interconnected data also helps governments gain a more comprehensive picture of financial conditions when determining budget usage priorities. Therefore, interoperability and suitability of information structures are essential requirements in building an integrated financial administration system (Huang et al., 2022a; Huang et al., 2022b; Holmström, 2026).

In addition to improving internal processes, information system transformation also changes the pattern of relationships between the government, supervisory institutions, and the community. The availability of digital information opens up wider supervisory opportunities because the financial management process can be documented and traced systematically. However, information disclosure must be accompanied by access arrangements, data protection, and clarity of responsibilities for each party. Without adequate governance, increased connectivity can actually pose new risks to the security and

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reliability of government financial information (Khorana et al., 2024; Ribeiro et al., 2025; Madsen et al., 2026).

Overall, the transformation of information systems in public financial management needs to be understood as a comprehensive change in the process, institutional relationships, and orientation of the use of government resources. The success of the transformation is not measured by the number of applications implemented or the speed of transaction processing, but also by improving the quality of information, coordination skills, and the benefits generated for the public interest. Thus, the development of digital systems requires alignment between technology, organizational capacity, and oversight mechanisms so that financial management is more effective and accountable (Berman et al., 2024; Chen et al., 2026; Arnold et al., 2026).

2. Digitizing Accounting and Budgeting in Improving the Quality of Public Financial Information

Accounting and budgeting are two main components in public financial management that are interrelated in producing government financial information. Accounting functions to record, classify, and present financial transactions, while budgeting is the basis for planning and allocating resources based on priority needs. The integration of digital technology in both processes allows financial information to be managed more systematically, from the preparation of budget plans to realization reporting. The quality of this integration is an important basis in supporting the accuracy of information and controlling the use of public funds (Huy & Phuc, 2026; Huang et al., 2022a; Huang et al., 2022b).

In the perspective of Public Value Theory, the digitization of accounting and budgeting needs to be directed to generate real benefits for society through transparent, efficient, and responsible management of resources. The quality of the financial system is not only assessed based on its ability to generate reports quickly, but also its contribution to the accuracy of budget allocation and government information disclosure. Trustworthy information allows stakeholders to assess the use of public funds as well as understand the policy priorities set. This public value creation orientation places information quality as an important part of governance (Wang et al., 2026; Desouza & Dawson, 2023; Chen et al., 2026).

In the accounting aspect, the use of digital systems provides an opportunity to improve the consistency of recording and the interconnectedness of financial information between organizational units. Electronically documented transaction data can support the

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process of searching, auditing, and preparing more structured reports. In addition, the use of information systems allows organizations to strengthen control over data access and processing. However, these benefits still depend on the accuracy of system design, data quality, and institutional readiness to manage information. The relationship between technology and data governance is an important concern in the development of digital administration (Holmström, 2026; Madsen et al., 2026; Ribeiro et al., 2025).

In the budgeting process, information technology plays a role in supporting the preparation of financial plans, the determination of spending priorities, and the monitoring of budget utilization. The availability of integrated information helps organizations understand financing needs and connect resource allocation decisions with public service objectives. Digitalization also opens up opportunities for coordination between agencies so that the planning process does not depend solely on the information of each unit. Thus, the quality of budgeting is not solely determined by the accuracy of calculations, but also the ability of the system to provide relevant information for decision-making (Chen et al., 2026; Du et al., 2025; Kim & Park, 2026).

Overall, digitization of accounting and budgeting is an integral part of building the quality of public financial information. Both need to be developed in an integrated manner so that transaction recording, budget planning, realization monitoring, and reporting can form a consistent set of information. Challenges such as differences in data standards, limited infrastructure, and organizational readiness still require attention in the implementation process. Therefore, the success of digitalization needs to be seen from its ability to strengthen transparency, accuracy of resource management, and government accountability to the community (Arnold et al., 2026; Khorana et al., 2024; Thabit et al., 2026).

3. Information System and Strengthening Public Financial Transparency and Accountability

Transparency and accountability of public finances are important principles in ensuring that the entire process of managing government resources can be known, supervised, and accountable to the public. Transparency is related to the disclosure of information regarding budget planning, use, and reporting, while accountability emphasizes the obligation of institutions to explain financial management decisions and results. In the context of digitalization, information systems provide a means to document transactions, present information, and expand access to financial data. Such disclosure requires trustworthy data management (Khorana et al., 2024; Ribeiro et al., 2025; Susha et al., 2026).

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From the perspective of Public Value Theory, transparency and accountability are part of the creation of public value through the implementation of open, responsive, and responsible government. The use of information systems is not enough to be judged from the success of providing digital services, but needs to be seen from its benefits in strengthening public trust in state financial management. Easy-to-trace information provides opportunities for the public and stakeholders to understand the use of public resources. Thus, technology becomes an instrument to strengthen the legitimacy of government and public interests (Wang et al., 2026; Thabit et al., 2026; Desouza & Dawson, 2023).

Financial information disclosure through digital systems allows the public to gain an overview of budget policies and the implementation of government programs. The provision of structured information can reduce the information gap between government administrators and stakeholders. In addition, the integration of data between institutions opens up opportunities for the formation of a broader monitoring mechanism for financial management activities. However, openness still requires regulation of information validity, access authority, and data protection so that the information submitted does not cause misunderstanding or misuse (Holmström, 2026; Huang et al., 2022b; Madsen et al., 2026).

Strengthening accountability is also related to the ability of information systems to provide a documentation trail that can be used to trace the decision-making process and the implementation of organizational activities. Documented information allows supervisory agencies to evaluate the appropriateness between planning, realization, and accountability for budget use. In public procurement, the use of technology can even help identify transaction patterns that require further examination. However, the effectiveness of such mechanisms still requires human supervision, clarity of responsibility, and the application of ethical principles in the use of technology (Siciliani et al., 2023; Sampaio et al., 2026; Chen et al., 2026).

Overall, information systems play a role in linking data disclosure with accountability mechanisms so that public financial management can take place in a more measurable manner. Transparency provides access to information, while accountability ensures that the information can be used to assess government decisions and actions. Both require the support of a system that is secure, reliable, and supported by adequate institutional capacity. Therefore, digital transformation needs to be directed at the formation of governance that is

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not only oriented towards administrative efficiency, but also trust and benefits to society (Berman et al., 2024; Arnold et al., 2026; Kim & Park, 2026).

4. Challenges of Implementation and Direction of Public Financial Information System Development

The implementation of a public financial information system is a process of organizational change that involves adjusting technology, administrative procedures, human resources, and supervisory mechanisms. Its implementation requires not only the availability of digital devices, but also the ability of institutions to integrate various financial management functions into interconnected systems. Differences in infrastructure, data quality, and organizational readiness can affect the success of the transformation. Therefore, the development of information systems needs to consider institutional conditions so that technology can be used optimally and sustainably (Riihimäki & Pekkola, 2021; Madsen et al., 2026; Delfos et al., 2024).

From the perspective of Public Value Theory, the challenges of information system development need to be understood based on the ability of technology to generate benefits for society and strengthen government legitimacy. The success of digitalization is not solely determined by the modernization of devices or the speed of administrative services, but also by the creation of transparent, secure, and accountable financial management. Technology investment must contribute to the quality of services and public trust. Thus, the direction of digital transformation needs to be aligned with the needs of the community, institutional capacity, and the purpose of government administration (Lock, 2023; Alharmoodi et al., 2024; Wang et al., 2026).

One of the important problems in the implementation of information systems is the limited integration and interoperability between systems that can cause information to be scattered across various organizational platforms. This condition has the potential to hinder data exchange, slow down administrative processes, and make it difficult to consolidate financial information. In addition, the increased use of digital technology also expands the need to protect against unauthorized access, information leakage, and system security disturbances. Infrastructure development needs to be accompanied by data exchange standards and adequate security controls (Ribeiro et al., 2025; Arnold et al., 2026; Fontes et al., 2022).

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In addition to technical issues, the success of digital transformation is greatly influenced by the organization's ability and the competence of human resources in operating the system. Changes in work procedures require adjustment of responsibilities, skill improvement, and coordination between financial management units and information technology managers. Organizations also need to ensure that the use of digital systems does not create technology dependency without adequate supervision. Institutional capacity building is important so that innovation can be applied consistently and according to the needs of public financial management (Berman et al., 2024; Gwabavu et al., 2026; Du et al., 2025).

Overall, the development of public financial information systems needs to be directed at the formation of an integrated, adaptive, and community-oriented digital ecosystem. Development priorities include increasing interoperability, strengthening information security, developing apparatus competencies, and improving technology governance. The use of innovations such as artificial intelligence and blockchain can also be considered based on the suitability of needs, risks, and institutional readiness. With this approach, digital transformation is expected not to stop at administrative automation, but to be able to strengthen the quality of government financial management and accountability (Sampaio et al., 2026; Siciliani et al., 2023; Wang et al., 2026).

CONCLUSION

Based on the results of the Systematic Literature Review (SLR) of 50 scientific articles on the role of information systems in public financial management, this study concludes that digital transformation is an important part of improving the quality of government financial governance. Information systems contribute to data integration, improve the quality of financial records, budget planning effectiveness, and strengthen transparency and accountability. The integration of digital accounting, digital budgeting, and digital accountability forms a more structured, informative, and public-interest-oriented financial management mechanism.

The results of the synthesis also show that the success of the implementation of information systems does not only depend on technological sophistication, but is also determined by institutional readiness, human resource competence, information security, and the ability to integrate between systems. Through the perspective of Public Value Theory, the use of technology needs to be directed at creating benefits for the community, increasing public

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trust, and strengthening the quality of government services. Thus, information systems have a strategic role in building effective, transparent, and sustainable public financial management.

RESEARCH LIMITATIONS

This research has limitations that need to be considered in interpreting the results of the synthesis. First, the use of the SLR approach causes the scope of discussion to depend on the availability, quality, and relevance of the articles that have been successfully collected. Therefore, the results of the study do not necessarily represent the entire practice of implementing public financial information systems in various countries. In addition, the difference in research focus and publication characteristics causes the depth of discussion on digital accounting, digital budgeting, and digital accountability to be not always balanced.

The next limitation is related to differences in the institutional environment, regulations, technological infrastructure, and the level of digital maturity in each country. This condition causes the results of the research to not be generalized directly to all government organizations. In addition, the grouping of theories, methods, sectors, and main findings involves an interpretation process based on the characteristics of the article. This study also does not conduct direct empirical testing on the implementation of information systems in certain government institutions so that the effectiveness of its implementation cannot be measured through field data.

SUGGESTIONS

Further research is suggested to develop an empirical study on the application of information systems in public financial management by paying attention to the differences in the characteristics of government organizations. Future research can examine the relationship between information system quality, data integration, accounting digitization, budgeting, and financial accountability using quantitative approaches and mixed methods. In addition, the expansion of research objects in the central government, local governments, and public service organizations can provide a more comprehensive understanding of the effectiveness of digital transformation.

For government institutions, the development of information systems needs to be accompanied by increasing the competence of apparatus, improving digital infrastructure, and strengthening coordination between financial management units. The government also needs to

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pay attention to interoperability, information security, and consistency of data management standards so that various applications can work in an integrated manner. The use of new technologies such as artificial intelligence, data analytics, and blockchain can be developed based on organizational needs and institutional readiness. This step is expected to strengthen information quality and public financial accountability.

PRACTICAL AND THEORETICAL IMPLICATIONS

Practically, this study implies that information system transformation needs to be placed as part of a strategy to improve the quality of public financial management. The government and public sector organizations need to develop systems that are able to connect the process of recording transactions, budget planning, monitoring realization, and preparing financial statements. Strengthening integration needs to be supported by data security policies, improving human resource competencies, and adequate supervision mechanisms so that the use of technology provides optimal results.

Theoretically, this study contributes to the development of public sector information system literature through the use of Public Value Theory to explain the relationship between digital transformation and the creation of benefits for society. This study shows that the success of information systems is not only related to operational efficiency, but also information quality, transparency, and accountability in public resource management. Thus, this study expands the understanding that digital accounting, digital budgeting, and digital accountability are interrelated dimensions in realizing public financial governance oriented to public value.

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