

THE ROLE OF INFORMATION TECHNOLOGY IN IMPROVING ACCOUNTABILITY PUBLIC SECTOR FINANCE: A THEORETICAL PERSPECTIVE

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Abstract

This study aims to analyze the role of information technology in improving public sector financial accountability in Indonesia. The development of digital technology has encouraged the government to implement electronic-based financial information systems to increase transparency, effectiveness, efficiency, and oversight of state and regional budget management. This study employed a qualitative method with a literature study approach through the collection of secondary data from scientific journals, books, official government documents, and academic articles for the 2021–2025 period. The analysis was conducted using thematic techniques. Analysis to identify key themes related to digital transparency, financial information systems, reporting automation, and the challenges of implementing information technology in the public sector. The results of the study indicate that the application of information technology such as SIMDA, SIPKD, SPAN, e-budgeting, e-planning, e-procurement, Ande-reporting can improve the quality of government financial reports through faster, more accurate, relevant, and transparent data presentation. Furthermore, information technology also strengthens internal and external oversight through digital audit trails and real-time access to information. However, the implementation of information technology still faces various obstacles such as limited human resources, uneven technological infrastructure, resistance to organizational change, and data security risks. This research contributes to the development of digital transformation studies in public financial governance and provides recommendations for the government to increase human resource capacity and invest in technological infrastructure to support better public sector financial accountability.

Keywords: Information Technology, Accountability, Public Finance, Transparency, Government Information Systems

INTRODUCTION

The development of information technology in the digital era has brought significant changes to various sectors of life, including the public sector. The government is required to provide more effective, efficient, transparent, and accountable services to the public. Public demands for information transparency and sound financial management have prompted the government to implement bureaucratic reform through the application of information technology in national and regional financial management systems. Public sector financial accountability is an important indicator in realizing good governance (good governance). The government is not only required to manage the budget effectively and efficiently, but also to be accountable to the public for its use. In this context, information technology is a strategic instrument capable of supporting faster and more accurate recording, reporting, monitoring, and evaluation of financial management. The application of information technology in the public sector is realized through various financial information systems such as the Regional Management Information System (SIMDA), Regional Government Information System (SIPD), State Treasury and Budget System (SPAN), e-budgeting, e-planning, e-audit, Ande-procurement. This system enables the government to integrate financial data in real time, thereby improving the quality of financial reports and strengthening oversight of public budget use.

Previous research shows that information technology has a significant influence on improving the quality of governance. Rahayu and Yusniar (2023) explain that the implementation of e-budgeting can increase transparency and accountability in local government financial management. Santoso (2022) also stated that information technology has a positive impact on the quality of government financial reports by increasing the speed and accuracy of information. However, the implementation of information technology in the public sector still faces various challenges. Some frequently encountered obstacles include limited human resource competency, inadequate technological infrastructure, resistance to organizational change, and data security threats. These conditions have resulted in the suboptimal implementation of financial information systems in various government agencies. This research focuses on discussing how technology Information plays a role in improving public sector financial accountability through a literature review approach. This research is expected to provide theoretical and practical contributions regarding the importance of digital transformation in supporting transparent and accountable public financial governance.

LITERATURE REVIEW

Digital Transformation in the Public Sector

Digital transformation in the public sector is the process of shifting from manual administrative systems to information technology-based systems. Digital transformation involves not only the use of technological devices but also changes in organizational culture, work patterns, and more modern governance. Government digitalization aims to improve the quality of public services, accelerate administrative processes, and increase the efficiency and effectiveness of state resource management. Modern governments are required to provide accessible, fast, and transparent services through the use of digital technology. In the Indonesian context, digital transformation is realized through the implementation of e-government which includes various public service systems and information technology-based financial management.

Public Sector Financial Accountability

Public sector financial accountability is the government's obligation to account for the management of state finances to the public in a transparent manner and in accordance with applicable regulations. Accountability is a crucial component of achieving good governance. According to Mardiasmo (2021), public accountability encompasses transparency, effectiveness, efficiency, and regulatory compliance. The government must be able to present accurate and credible financial reports to the public. Financial accountability also plays a role in preventing corrupt practices, budget misuse, and manipulation of financial data through a good monitoring system.

The Role of Information Technology in Public Financial Management

Information technology plays a crucial role in supporting modern, integrated public financial management. The use of financial information systems enables automated and systematic transaction recording. Implementation of systems such as SIMDA, SIPKD, SPAN, and e-budgeting helping the government improve the quality of financial reports through faster, more accurate, and more relevant data. In addition, information technology also increases the efficiency of the audit process because all transactions are recorded digitally, making internal supervision easier both internal and external.

The Relationship Between Information Technology and Accountability

The relationship between information technology and financial accountability can be seen in the technology's ability to improve the quality of financial information. A good information system will produce more transparent and accessible reports. According to the Information Systems Success Model developed by DeLone and McLean, system quality and information quality will affect organizational effectiveness and the benefits obtained by users.

Thus, the better the application of information technology in management public finances, the higher the level of financial accountability that can be achieved.

Theoretical Perspective

Good Governance Theory

Good governance become one of the main foundations in understanding the importance of implementing information technology in public sector financial management. Good governance Public

financial management is a form of governance that emphasizes the principles of transparency, accountability, effectiveness, efficiency, public participation, and the rule of law. In the context of public financial management, the government is required to manage the state budget openly and responsibly to the public. Information technology has a very close relationship with the implementation of good governance principles because digital systems can increase information transparency and strengthen oversight of public budget management. Implementation of e-government, e-budgeting, e-planning, and e-procurement become a real form of digital transformation in supporting more transparent and accountable governance.

According to United Nations E-Government Survey (2022), digitalization of government can improve bureaucratic efficiency and strengthen government-public relations through faster and more transparent access to information. Information technology also supports data-driven decision-making processes, enabling more targeted public policy implementation. In perspective of good governance, public sector financial accountability is not only related to the preparation of financial reports, but also relates to how the government transparently accounts for budget use to the public. With a digital-based financial information system, the public can more easily access various information regarding the use of public funds. This demonstrates that information technology is a crucial instrument in realizing clean governance free from corruption.

Agency Theory

Agency Theory explains the relationship between principals and agents in an organization. In the public sector, the public acts as the principal, while the government acts as the agent authorized to manage state resources and finances. The main problem in Agency Theory is the emergence of information asymmetry, or information inequality, between the government and the public. The government, as the budget manager, has greater access to information than the public, which has the potential to lead to abuse of authority and manipulation of financial reports, and corrupt practices.

The application of information technology can reduce this information gap through a more transparent and real-time digital reporting system. Information technology allows the public to gain more open access to government financial information, enabling more effective public oversight. Furthermore, an integrated financial information system also helps strengthen internal control mechanisms and streamlines the audit process. Thus, information technology can minimize agency problems in public sector financial management.

Institutional Theory

Institutional Theory explains that organizations will tend to follow developments in the external environment to gain legitimacy and maintain their existence. In the context of the public sector, governments are required to keep up with technological developments and public demands for more transparent and accountable public services. The development of digital transformation is encouraging the government to adopt various electronic-based financial information systems as a means of adapting to environmental changes. Implementation of systems such as SPAN, SIPD, and e-government be part of the government's efforts to increase public legitimacy through more modern governance.

Institutional Theory also explained that regulatory pressure and public demand are key driving factors in the implementation of information technology in the public sector. Governments that fail to keep pace with technological developments will be perceived as less responsive to public needs, which can erode public trust. Thus, the use of information technology is not only aimed at increasing administrative efficiency, but also as a form of institutional adaptation to changes in the social, economic and technological environment.

Information Systems Theory

Information systems theory explains that an organization's success in managing information is influenced by system quality, information quality, and service quality. The information systems success model developed by DeLone and McLean explains that a quality information system will increase user satisfaction and provide benefits to the organization. In the public sector, the quality of financial information systems is a crucial factor in improving accountability in state financial management. Systems that are easy to use, integrated, and secure will produce more accurate and relevant financial information.

The quality of information generated by the system also impacts the government's decision-making

process. Fast, precise, and accurate information enables the government to conduct more effective budget oversight. Furthermore, a good information system also assists auditors in conducting audits because all financial transactions are recorded digitally. Through the perspective of information systems theory, it can be understood that the application of technology Information in the public sector is not just about the use of digital devices, but also relates to improving the quality of financial governance as a whole.

Conceptual Framework

The conceptual framework in this study describes the relationship between information technology as an independent variable and public sector financial accountability as a dependent variable. This relationship is explained through a multivariate approach. Information Systems Success Model theory developed by DeLone and McLean. This model states that the success of an information system is determined by several main factors, namely the quality of the system (system quality), information quality (information quality), and quality of service (service quality). These three factors will affect the level of system usage (use) and user satisfaction (user satisfaction), which ultimately has an impact on net benefits (net benefits) for the organization.

In the context of this research, information technology is measured through system quality, ease of use, and financial system integration. Financial accountability is measured through transparency, timeliness of reporting, and reliability of financial information. According to DeLone and McLean (updated model, relevance used until the latest study 2022–2023), a high-quality information system will produce accurate and relevant information, thereby improving organizational performance and accountability. Research by Rahayu and Yusniar (2023) also supports the idea that effective use of information technology will increase transparency and accountability through integrated digital systems. Therefore, it can be concluded that the better the implementation of information technology, the higher the level of public sector financial accountability.

RESEARCH METHODS

This research uses a qualitative approach with a literature review method. This qualitative approach was chosen because it can provide a deep understanding of the phenomenon of information technology use in improving public sector financial accountability. Research data was obtained through secondary data collection from various sources. Scientific journals, books, academic articles, and official government documents relevant to the research topic were used. The literature used was published between 2021 and 2025 to reflect current developments in digital transformation. The data analysis technique used was thematic analysis. Researchers identified key themes related to the use of information technology in public sector financial management and then grouped the data based on these themes. The research stages include literature identification, source selection based on relevance, grouping of research themes, analysis of literature content, and preparation of research conclusions.

RESULTS AND DISCUSSION

Digital Transparency in Financial Management

Information technology increases transparency in financial management of the sector public by providing real-time data access. The public can access information on the budget, spending realization, and implementation of government programs through digital platforms. The implementation of e-budgeting allows for an open and well-documented budget preparation process. This reduces the potential for data manipulation and increases public participation in budget oversight. In addition, the use of official government websites and open data increases the transparency of public information so that the public can exercise social control over the use of public funds.

Utilization of Financial Information Systems

Financial information systems such as SIMDA, SIPKD, and SPAN are the main foundation for modernizing public sector financial management. These systems help the government record transactions automatically and in an integrated manner. Utilizing a financial information system improves the accuracy of financial reports and expedites the reporting process. Furthermore, digitally stored financial data facilitates audits and performance evaluations. Integration between systems also improves coordination between government agencies so that the financial management process becomes more effective and efficient.

Financial Reporting Automation

Automating financial reporting through e-reporting has significantly improved the quality of government financial reports. This speeds up the reporting process and reduces the risk of human error. The automation system also produces a digital audit trail that makes it easier for auditors to examine budget usage. With automatic data synchronization, the government can prepare financial reports in a timely manner and in accordance with government accounting standards.

The Role of Information Technology in Fraud Prevention

Information technology helps prevent fraud and misuse of funds through stricter oversight systems. Every transaction is recorded digitally, making it difficult to manipulate. The implementation of e-procurement reduces the potential for corruption in the procurement process of goods and services because the entire process is carried out electronically and can be monitored openly. In addition, the use of monitoring dashboards and big data analytics helps the government detect potential irregularities more quickly.

Challenges of Information Technology Implementation

While information technology offers numerous benefits, its implementation still faces various challenges. One of the main challenges is the limited competence of human resources in operating financial information systems. Limited technological infrastructure such as internet networks and computer devices is also an obstacle, especially in remote areas. In addition, resistance to organizational change and data security risks are challenges that must be overcome so that information technology implementation can run optimally.

Discussion of Research Results

Research results show that information technology has a significant contribution to improving public sector financial accountability in Indonesia. The implementation of various digital-based information systems such as SIMDA, SIPD, SPAN, e-budgeting, e-planning, e-procurement, and e-reporting able to improve the quality of government financial management in a more effective, efficient, transparent and integrated manner. The findings of this study indicate that the use of information technology has a positive impact on the quality of government financial reports. Digital systems enable the automatic recording of transactions, thereby minimizing human error (human error) in financial data input. Furthermore, real-time data integration helps the government prepare financial reports more quickly and accurately.

The results of this study are in line with the theory Information Systems Success Model developed by DeLone and McLean. This theory explains that system quality and information quality will influence organizational effectiveness. A high-quality information system will produce relevant, accurate, and reliable information, thereby improving organizational performance. In the context of this research, government financial information systems have been shown to improve the quality of accountability in public financial management. Furthermore, this research reinforces the concept of good governance, which emphasizes the importance of transparency and accountability in state financial management. Information technology allows the public to gain more open access to government financial information through digital portals, official government websites, and open data platforms. This transparency of information increases public oversight of state budget use, thereby reducing the potential for misuse of public funds.

Implementation of e-budgeting is a form of digital transformation that has a significant impact on increasing transparency in budget management. With an e-budgeting system, the budget preparation and revision process can be monitored electronically, reducing the opportunity for data manipulation and corruption. This system also increases administrative efficiency because the entire process is digitally executed and well-documented. The research also shows that information technology plays a crucial role in strengthening the government's internal and external oversight systems. A digital audit trail allows auditors to track every financial transaction more easily and systematically. All user activity within the system is automatically recorded, simplifying the audit and evaluation of budget use.

Implementation of e-procurement also proven to reduce the risk of fraud in the government procurement of goods and services. Before the introduction of electronic systems, procurement processes often faced various problems such as tender manipulation, budget markups, and collusion between certain parties. With the e-procurement system, the entire procurement process is conducted openly and digitally, increasing transparency and reducing direct interactions that could potentially lead to corrupt practices. In addition to increasing transparency and oversight, information technology also has a positive impact on the effectiveness

of government decision-making. Real-time financial data helps the government conduct budget evaluations more quickly and accurately. The government can assess budget realization, program effectiveness, and potential irregularities earlier, enabling a more responsive decision-making process. In perspective Agency Theory, information technology is able to reduce information asymmetry between the government and the public. Before digitalization, the public often experienced limited access to information on state financial management. This situation created opportunities for abuse of authority by budget managers. However, with the advent of digital-based information systems, access to information has become more open, enabling the public to exercise more active social control.

This study also found that the success of technology implementation Information is not only determined by system sophistication, but also influenced by human resource readiness and organizational culture. Many government agencies still face limited employee competency in operating financial information systems. Lack of training and low digital skills are major obstacles to the digital transformation process. In addition to human resources, limited technological infrastructure is also a significant challenge, particularly in remote areas with limited internet access. Infrastructure disparities have resulted in the suboptimal implementation of financial information systems across Indonesia. This situation demonstrates that digital transformation requires adequate infrastructure support for equitable implementation.

This research also shows that resistance to organizational change remains a barrier to implementing information technology in the public sector. Some employees are still comfortable using manual systems, making them less prepared to embrace the transition to digital systems. This resistance often results in slow and suboptimal technology implementation. On the other hand, the use of information technology also raises new challenges related to data security and risks.cybercrimeGovernment financial information systems store sensitive data and therefore require robust security. The risks of data leaks, system hacking, and access abuse are threats that the government must address by strengthening its information security system.

Furthermore, the government needs to strengthen regulations and policies related to the digitalization of state financial management to ensure integrated and sustainable implementation of information technology. Support from organizational leaders is also crucial in creating a digital work culture that adapts to technological change. Overall, the results of this study indicate that information technology is a strategic instrument in improving public sector financial accountability. The application of information technology not only improves the quality of financial reports but also strengthens transparency, oversight, decision- making effectiveness, and public trust in government. Therefore, digital transformation needs to be continuously developed as part of efforts to realize good governance (good governance) and more accountable public financial management.

CONCLUSION

Based on the research results, it can be concluded that information technology plays a crucial role in improving public sector financial accountability. The implementation of digital-based financial information systems can improve transparency, efficiency, and the quality of government financial reports. Information technology also strengthens internal and external oversight through digital audit trails and real-time access to information. Utilization of systems such as SIMDA, SIPKD, SPAN,e-budgeting, Ande-procurement assisting the government in managing budgets more effectively and accountably. However, the implementation of information technology still faces various challenges, such as limited human resource competency, inadequate technological infrastructure, resistance to organizational change, and data security risks. This study recommends that the government increase investment in technological infrastructure, strengthening information system security, and improving human resource competency through continuous training to support the success of digital transformation in public sector financial management.

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