International Journal of Business and Quality Research

https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

Digital Transformation in Public Sector Accounting: The Role of Big Data Analytics and Artificial Intelligence in Improving the Quality of Reporting, Auditing, and Government Accountability

Siti Luthfiah[1], Mukhtaruddin[2], Rina Tjandrakirana dp[3], Umi Kalsum[4]

[1,2,3,4] Department of Accounting, Sriwijaya University, Indonesia

*Corresponding author: sitiluthfiah03@gmail.com

Abstract

Digital transformation has significantly changed public sector accounting practices, particularly in financial data management, financial reporting, auditing, monitoring, and public accountability. The development of technologies such as Big Data Analytics (BDA), Artificial Intelligence (AI), accounting information systems, cloud computing, and e-government provides opportunities for government organizations to improve the efficiency of financial information management while strengthening transparency and public accountability. This study aims to analyze the role of digital transformation in public sector accounting by focusing on the utilization of Big Data Analytics and Artificial Intelligence to improve financial reporting quality, auditing, fraud detection, transparency, and government accountability. This study employs a Systematic Literature Review approach by examining scientific articles published between 2022 and 2026. The literature is analyzed thematically based on digital transformation, accounting information system quality, BDA in public sector auditing, AI in government financial management, financial reporting quality, fraud detection, and public accountability. The findings indicate that BDA can expand auditors' ability to analyze large datasets, identify transaction patterns, and detect potential irregularities. Meanwhile, AI has the potential to support reporting automation, financial prediction, fraud detection, and data-driven decision-making. However, the success of digital transformation is strongly influenced by data quality, infrastructure, human resource competencies, information system quality, system integration, data security, algorithmic transparency, and technology governance. Therefore, digital transformation in public sector accounting should integrate technology with human competencies, internal controls, professional judgment, and governance mechanisms.

Keywords: Public Sector Accounting, Digital Transformation, Big Data Analytics, Artificial Intelligence, Financial Reporting, Auditing, Public Accountability.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

INTRODUCTION

Public sector accounting has an important role in providing information regarding the management of public resources. The information generated through the government accounting process is used to support planning, budgeting, control, performance evaluation, supervision, and accountability to the community. The development of information technology then causes this function to change because government financial information is no longer only processed manually, but increasingly relies on integrated information systems and data-based technology. Research Alawiyah et al. (2025) shows that the application of public sector accounting is related to the quality of local government financial statements, while Rahman et al. (2026) shows that the use of information technology can strengthen the relationship between human resource capacity and internal control systems with the value of local government financial reporting information.

Digital transformation is also becoming increasingly important because the government produces large amounts of data through various activities, such as budgeting, procurement of goods and services, payments, regional revenues, public services, and asset management. This data has the potential to be used as a basis for more in-depth analysis if supported by appropriate technology. Handarini et al. (2025) explains that the development artificial intelligence, blockchain, Big Data Analytics, and Cloud Computing has created opportunities to improve the quality, transparency, and accountability of government financial reporting. However, the study also shows that the adoption of digital technology still faces challenges in the form of organizational readiness, human resources, infrastructure, and regulations.

The need for the use of technology is also increasingly visible in public sector audit activities. Government auditors must examine transactions and information in large quantities so that the use of data-based audit techniques can help increase the effectiveness of audits. Dharma & Hendri (2022) explained that technological developments and the increasing volume of financial and non-financial data encourage Supreme Audit Institutions to use Big Data Analytics as part of an audit transformation strategy. The use of BDA allows auditors to analyze data on a broader scale and identify patterns, trends, and anomalies that potentially pose risks.

In the Indonesian context, this development has been seen through the use of BDA technology in government audits. Saud et al. (2025) conducted a study of 126 Indonesian government auditors and found that Performance expectancy, effort expectancy, as well as social Influence have a positive effect on the auditor's intention to adopt the BDA. The intention to adopt is then related to the actual use of the BDA and the improvement of

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

auditor performance. These findings suggest that technology can provide benefits to public sector audits if auditors understand the benefits and are able to use them effectively.

Research Sofyani et al. (2025) It also provides empirical evidence on the relationship between the quality of the BDA system and the results of public sector audits. Using 137 Indonesian government auditors, the study found that the adoption of BDA-based audits was influenced by the quality of the system and the use of BDA in relation to performance audits, audit judgments, and audits Quality. Audit Judgment It was also found to act as a mediator between the use of BDA and audit quality.

Further technological developments do not stop at BDA, but move towards the use of Artificial Intelligence. AI has the ability to perform pattern recognition, classification, prediction, automation, and analysis of large amounts of data. Aldemir & Uysal (2025) demonstrate that AI can be used to support Predictive analytics, fraud detection, automated reporting, operational efficiency, and decision-making in the public sector. However, the use of AI also poses challenges in the form of algorithmic bias, data privacy, as well as the need for ethical guidelines and Governance strong.

In public sector accounting, the use of AI has an increasing relevance as the technology can be applied to government accounting and analysis systems. Larikova et al. (2025) discuss the possibility of integrating AI in the system Accounting and Analytical Support on public sector entities, including the use of Cloud Technologies and Automation. The findings show that AI can be part of the development of government accounting systems, but the integration of technology must be tailored to the needs of organizations and the characteristics of public sector data.

On the other hand, digital transformation does not automatically produce quality financial reports. The quality of information remains influenced by systems, people, internal controls, accounting standards, and Governance. Diah et al. (2026) found that IT capability affects Accounting Information System quality and Financial Reporting Quality in Indonesia's local governments. The study used data from 735 public sector employees and showed that AIS quality is an important mechanism that links technological capabilities with the quality of financial reporting.

These issues show that digital transformation in public sector accounting needs to be looked at more comprehensively. Technology is not only a tool to speed up administrative processes, but is part of changes in the public information management system. Therefore, this article aims to analyze the role of Big Data Analytics and Artificial Intelligence in the transformation of public sector accounting, especially on the quality of financial reporting, auditing, fraud detection, transparency, and government accountability.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

LITERATURE REVIEW

Public Sector Accounting

Public sector accounting is a system used by governments and public organizations to identify, record, classify, summarize, and report transactions and financial conditions of organizations to interested parties. In the context of local governments, the information is used to show how public resources are obtained and used. Azzahra & Kurniawan (2025) It shows that the implementation of the public sector accounting system has a relationship with the quality of local government financial statements. The findings show that the accounting system not only has an administrative function, but also becomes an important instrument in creating accountable information.

The implementation of the government accounting system is also related to compliance with accounting standards. Biyantoro (2022) shows that the implementation of Government Accounting Standards affect the quality of local government financial statements in Central Java, while the influence of information technology in the study is not directly significant. This finding is important because it shows that the existence of technology cannot replace the need for correct accounting standards and procedures.

Muhtar (2022) It also shows that weaknesses in internal control systems can be related to non-compliance with Government Accounting Standards. Thus, digital transformation must remain placed within the framework of control and compliance. Good technology but not supported by internal control and compliance with standards still has the potential to result in poor quality financial information.

Digital Transformation of Public Sector Accounting

Digital transformation is an organizational change process that utilizes digital technology to change processes, systems, and the way organizations produce and use information. In the public sector, digital transformation is related to the digitization of services, e-government, financial information systems, cloud computing, data analytics, artificial intelligence, and other technologies.

Irmawati et al. (2025) Explains that digital transformation in public sector accounting creates opportunities to improve the quality of reporting, transparency, and accountability. However, technology implementation also faces gaps in infrastructure, competencies, and organizational readiness. These findings show that digital transformation is not only a matter of providing software, but requires overall organizational readiness.

Fathiya & Viani (2025) also shows that digital readiness is an important aspect in the transformation of public sector accounting based on Cloud Accounting. Digital infrastructure, human resource capacity, and regulatory framework are factors that need to

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

be considered in the implementation of cloud-based systems in government financial management.

Digital transformation can also increase government transparency. Octavio & Urumsah (2024), through a study of 541 local governments in Indonesia, found that E-Government Maturity, the quality of financial statements, and the local government accountability system have a positive effect on digital transparency. The findings show that digitalization can be a means to expand public access to government financial and non-financial information.

Big Data Analytics

Big Data Analytics is the use of technology and analysis techniques to process large and complex amounts of data to obtain information that can be used for decision-making. In public sector audits, BDA can be used to analyze transactions, compare data patterns, identify anomalies, conduct risk assessments, and help auditors determine areas of examination that require further attention.

Dharma & Hendri (2022) explains that BDAs are becoming increasingly relevant to public sector audits as auditors face large volumes of data as well as increasingly diverse data sources. BDAs can help auditors broaden the scope of analysis and improve their ability to identify risks.

Novita & Anissa (2022) provide empirical evidence that the use of data Analytics has a positive effect on the ability of public sector auditors to detect indications of fraud. The study uses data from Indonesian public sector auditors and shows that the data Analytics It can be used to help with data analysis, audit evidence collection, risk prediction, and detection of fraud indications.

Artificial Intelligence in Public Sector Accounting

Artificial Intelligence is a technology that allows computer systems to perform activities that require analytical skills, such as pattern recognition, prediction, classification, and data-based decision-making. In public sector accounting, AI can be used for data processing automation, transaction analysis, receipt and expense prediction, fraud detection, and reporting system development.

Larikova et al. (2025) demonstrate that the integration of AI into the system accounting and analytical support The public sector has the potential to increase Automation and information processing. The use of such technology can help organizations reduce manual work and speed up the analysis process, although its implementation still requires system and user readiness.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

Aldemir & Uysal (2025) demonstrate that AI can be used to improve efficiency, transparency, fraud detection, predictive analytics, and Decision-making in the public sector. However, the use of AI also carries risks such as algorithmic bias, data privacy, and the need for Ethical Guidelines.

Agostino et al. (2026) emphasizes that the data Science and AI provides benefits in the form of Efficiency and Reliability in the public sector reporting and auditing process, but there is a risk to transparency and Accountability if the user does not understand how technology produces information. Therefore, the use of technology must be accompanied by Regulatory Oversight and Governance adequate.

Quality of Government Financial Reporting

The quality of government financial statements is related to the ability of the report to provide relevant, reliable, timely, comparable, and understandable information by users. Government financial statements have an important function in showing government accountability for the management of public resources.

Pratiwi et al. (2022) It was found that the capacity of human resources and internal control systems had a positive effect on the value of local government financial reporting information, while the use of information technology was able to moderate the relationship. These results show that technology provides benefits when it goes hand in hand with human competence and internal control.

Fattah et al. (2023) found that human resource competence, the implementation of accounting information systems, and internal control systems have a positive effect on the quality of local government financial statements. Marfuah et al. (2023) It was also found that human resource competence, internal control system, implementation of government accounting standards, information technology, and financial supervision had a positive effect on the quality of the Gunungkidul Regency government's financial statements.

These results are reinforced by Rofika et al. (2024) which found that the competence of human resources, the use of information technology, and the application of Government Accounting Standards had a positive effect on the quality of local government financial statements. Annisa et al. (2025) also found that the implementation of Government Accounting Standards and Accounting Information Systems contributed positively to the quality of local government financial statements, while the competence of human resources did not show a significant influence in the study.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

Technology-Based Public Sector Audit

Public sector audits aim to provide confidence and information to stakeholders regarding the management of public resources. Technological developments are changing the way auditors obtain, process, and evaluate audit evidence.

Saud et al. (2025) found that the adoption of BDA can improve the performance of Indonesian government auditors. The findings show that technology can support auditors in conducting audits with larger and more complex data.

Sofyani, Rohman, et al. (2025) shows that the quality of the BDA system and audit judgment have an important relationship in improving audit performance. Thus, technology is not a substitute for auditors, but rather a tool that expands auditors' ability to process information.

The research of Sofyani et al. (2026) further strengthens this evidence by showing that system quality affects perceived ease of use and perceived usefulness, which in turn is related to the adoption of BDA. The use of BDA is then related to performance audits and quality audits.

RESEARCH METHODS

This study uses the Systematic Literature Review approach to identify, review, and synthesize the results of previous research on digital transformation in public sector accounting. This approach is used because technological developments such as Big Data Analytics and Artificial Intelligence in the public sector are taking place quickly and producing an increasingly extensive literature.

The literature used comes from journal articles and scientific publications published in the 2022–2026 period. The literature search was conducted using keywords such as public sector accounting, digital transformation, Big Data Analytics, Artificial Intelligence, public sector auditing, government financial reporting, financial reporting quality, fraud detection, e-government, and public accountability. Articles were selected based on suitability with the theme, year of publication, relevance to public sector accounting, and the availability of article metadata, DOIs, or official journal pages.

The articles that have been obtained are then grouped based on the main theme. The first theme is digital transformation and accounting information systems. The second theme is the use of Big Data Analytics in public sector audits. The third theme is the use of Artificial Intelligence in accounting and public financial management. The fourth theme is the quality of government financial reporting. The fifth theme is fraud detection, transparency, and public accountability. Furthermore, the results of the research are compared to find patterns of relationships, similarities, differences, benefits, challenges, and research gaps.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

RESULTS AND DISCUSSION

Digital Transformation Increases Government Information Management Capacity

The results of the study show that digital transformation has expanded the function of the government's accounting system. Information systems are no longer only used to record transactions, but also to integrate data, speed up the reporting process, provide information for decision-making, and support supervision. Diah et al. (2026) provide evidence that IT capability affect the quality of AIS and Financial Reporting Quality in local governments of Indonesia. The quality of AIS also acts as a mechanism that connects technological capabilities with the quality of financial statements.

The findings are in line with Pratiwi et al. (2022) which shows that the use of information technology can strengthen the influence of human resource capacity and internal control systems on the value of financial reporting information. This shows that technology provides benefits when used in organizational systems that have adequate human resources and control.

However, not all research shows that technology automatically improves the quality of financial statements. Biyantoro (2022) For example, it was found that information technology does not have a direct influence on the quality of local government financial statements in the context of its research, while the application of Government Accounting Standards has a positive effect. This finding shows that the existence of technology alone is not enough if it is not accompanied by compliance with appropriate accounting standards and processes.

Thus, digital transformation needs to be understood as an integration between technology, people, systems, standards, and controls. Government organizations are not enough to just provide digital applications or devices, but must ensure that the technology is used in a structured process and can generate accountable information.

Big Data Analytics Improves the Effectiveness of Government Audits

BDA provides a great opportunity for government auditors because it allows the analysis of much larger amounts of data than manual audits. Dharma & Hendri (2022) explained that the increasing number and diversity of data is encouraging public sector auditors to adopt BDAs as part of audit quality improvement strategies.

Saud et al. (2025) provides empirical evidence that BDA can improve the performance of Indonesian government auditors. The research shows that the perception of benefits and ease of use is a factor that drives auditors to adopt technology. When auditors use BDA in actual practice, the technology can contribute to audit performance.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

Sofyani, Rohman, et al. (2025) also found that the quality of the BDA system was related to the audit Performance and audits Judgment. This shows that the benefits of BDA are not only determined by the existence of the technology, but also the quality of the system and the auditor's ability to interpret the results of the analysis.

The findings suggest that the implementation of BDA can change the government's audit approach to be more data-driven. Auditors can use analysis to identify high-risk areas so that audit procedures can be directed more effectively. However, the results of the BDA analysis still require an auditor's evaluation because an anomaly does not necessarily indicate errors or fraud.

BDA and Fraud Detection

One of the important benefits of analytics technology in audits is the ability to help detect indications Fraud. Novita & Anissa (2022) found that data usage Analytics have a positive and significant effect on fraud indications that can be found by Indonesian public sector auditors. Data analytics allows auditors to analyze data, collect audit evidence, predict risks, and identify unusual transaction patterns.

Sidauruk (2024) also shows that the use of data Analytics by The Government Internal Supervisory Apparatus is related to the effectiveness of internal audits in fraud prevention and detection. The research uses the mixed-method and emphasizing the importance of using Data Analytics in government supervision activities.

However, the use of BDA in fraud detection does not mean that the system can automatically declare a transaction as fraud. The system only provides indications based on data patterns or characteristics. Auditors still need to carry out follow-up examination procedures to determine whether the indication is really a deviation. Therefore, the use of BDA needs to be combined with professional skepticism and professional judgment.

Artificial Intelligence and Government Financial Reporting

AI has broader potential than conventional data analysis because the system can be used to perform predictions, classification, and automation. Aldemir & Uysal (2025) shows that AI can support Predictive analytics, fraud detection, automated reporting, and Decision-making in the public sector.

In public sector accounting systems, AI can be used to automate certain jobs such as transaction classification, anomaly identification, data matching, and the preparation of initial information for reporting. Larikova et al. (2025) demonstrate that the integration of

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

AI in the system accounting and analytical support The public sector has the potential to improve the automation and analytical capabilities of organizations.

AI also has the potential to improve the efficiency of government financial reporting if integrated with a good quality information system. However, Purwono (2025) shows that the application of AI in government financial reporting still faces challenges in the form of infrastructure, regulation, and system integration. Thus, the government needs to ensure that the digital systems used can provide consistent and reliable data.

AI and Accountability Risks

While AI provides benefits, it also creates new risks to accountability. When decisions or recommendations are generated by algorithms, users can have difficulty understanding the reasons behind those outcomes. Agostino et al. (2026) shows that the benefits Data Science in the public sector needs to be balanced with the risks to transparency and Accountability. They also emphasized the need for Regulatory Oversight to anticipate these risks.

Aldemir & Uysal (2025)) also identifies Algorithmic bias, data privacy, and the need Ethical Guidelines as the main challenge of using AI in the public sector.

In the context of government accounting, this issue is very important because financial information is directly related to the use of public funds. If an algorithm produces incorrect classifications or predictions, the government must still have mechanisms in place to conduct examinations, corrections, and accountability.

Therefore, the application of AI should use a human-in-the-loop approach. AI systems can provide analysis or recommendations, but humans still have the responsibility to evaluate results, consider context, and make final decisions.

Quality of Human Resources

Digital transformation cannot be separated from the competence of human resources. A digital system will only produce benefits if employees have the ability to operate the system and understand the information produced.

Mediaty et al. (2025) Find that good governance, regional financial accounting systems, internal control systems, organizational commitment, and Information Technology Utilization has a positive effect on Financial Reporting Quality. The study also showed that human resource competencies moderate the relationship between Internal Control System and organizational commitment with quality financial reporting.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

Rakhman and Wijayana (2024) show that human development in local governments is related to the quality of financial reporting. The study used thousands of financial statements of Indonesian local governments and found that regions with higher levels of human development were more likely to obtain better audit opinions, although the quality of human resources may also be related to the use of judgment in accounting estimation.

The findings show that technology investment must go hand in hand with investment in humans. The government needs to provide training on the use of information systems, data analytics, AI, information security, data interpretation, and technology use ethics.

Accounting Information System and Financial Statement Quality

The quality of an accounting information system is one of the important elements in producing quality government financial reports. An accurate, reliable, easy-to-use, and timely system that can help reduce errors and improve the efficiency of the reporting process.

Diah et al. (2026) found that AIS quality is an important mechanism that connects IT Capability with Financial Reporting Quality. Thus, improving the government's technological capabilities is not enough if it is not translated into an effective accounting information system.

Fattah et al. (2023), Marfuah et al. (2023), and Rofika et al. (2024) It also provides evidence of the importance of information systems, competencies, technology, and internal control in improving the quality of government financial statements.

The results of the study show that the quality of financial statements is the result of the interaction of various factors. Technology can speed up processes, but information quality still requires accounting standards, internal control systems, user competence, and supervision.

Digitalization and Government Transparency

Transparency is one of the important goals of the digital transformation of the public sector because people need access to information about the management of public resources. Digitalization allows the government to provide financial information through websites, e-government platforms, and public information systems.

Octavio & Urumsah (2024) found that e-government maturity, financial report quality, and accountability systems have a positive effect on digital transparency in Indonesian local governments. However, the study also found that some local government websites are not fully accessible, which can hinder the public from obtaining information.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

Saputri et al. (2024)It also shows that the transparency of local government financial statements is still a problem because not all local governments provide financial statements openly. The research places transparency as an important part of e-government and local government governance.

Badewin et al. 2025) It shows that the e-government system can improve transparency and timeliness in local government reporting, but there are differences in technical capabilities and leadership commitment between regions.

Thus, digitalization can expand transparency, but information disclosure is not only determined by the existence of a website or digital system. The information provided must be easily accessible, complete, timely, relevant, and understandable to the public.

Internal Control in the Digital Age

Digital transformation does not eliminate the need for internal controls. Conversely, the more complex the digital systems used, the more important the control mechanisms are to ensure data integrity, system security, and compliance with procedures.

Rahmawati et al. (2022) It shows that the internal control system has a relationship with the quality of local government financial statements and the competence of human resources is an important factor in this relationship.

Nisa et al. (2026) found that Regional Government Information System and Government Internal Control System related to the quality of financial statements and Fraud Prevention. However, the study also shows that the quality of financial statements is not always able to mediate between information systems and internal control with fraud prevention. The findings show that the use of digital systems alone is not enough to eliminate the risk of fraud.

Thus, the government still needs segregation of duties, authorization, access control, monitoring, trail audits, and periodic evaluations. Technology should strengthen control, not replace it.

Research Gap

Based on the 2022–2026 research synthesis, there are several research gaps that can still be developed. First, research on BDA and AI in the public sector still tends to develop in separate paths. Research Saud et al. (2025) focuses on the adoption of BDAs by Indonesian government auditors, while research on AI is more about automation, Fraud detection, predictive analytics, and governance.

Second, research on the quality of government financial statements still focuses on traditional factors such as human resource competence, accounting standards, internal

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

control systems, and information technology. Research Diah et al. (2026) Start integrating IT capability, AIS quality, and Financial Reporting Quality, but there is still an opportunity to connect it with more advanced technologies such as AI and BDA.

Third, there is still a need to understand the relationship between technology and accountability. Agostino et al. (2026) shows that the literature Data Science In public sector accounting, there is still room to deepen discussions about transparency, Accountability, Governance, and the human relationship with AI-based systems.

Fourth, research on the use of AI in public sector accounting still requires more empirical evidence from Indonesia. Some of the existing research is still in the form of literature reviews or conceptual studies, while empirical research on the impact of AI on the quality of financial statements, audit judgments, fraud detection, and public accountability is still relatively limited.

Fifth, research that combines technology and human factors is still needed. Technology can improve analytical skills, but professional judgment, professional skepticism, competence, integrity, and ethical awareness remain important factors. Therefore, future research can develop models that link AI readiness, BDA adoption, IT capability, AIS quality, professional judgment, audit quality, financial reporting quality, and public accountability.

IMPLICATIONS

Digital transformation has important implications for governments. First, governments need to develop an integrated digital infrastructure so that data from budgeting, procurement, payments, assets, and reporting systems can be used consistently. Research Diah et al. (2026) shows that AIS quality is an important mechanism in producing financial reporting quality so that system development must pay attention to information quality, reliability, timeliness, and ease of use.

Second, the government needs to improve employee competence. The use of BDA and AI requires technical skills as well as the ability to interpret the results of the analysis. Saud et al. (2025) demonstrate the importance of perceived benefits and ease of use in the adoption of BDA by government auditors.

Third, the use of AI must be accompanied by human governance and supervision. Aldemir & Uysal (2025) demonstrate the risk of algorithmic, privacy, and ethical bias in the use of public sector AI.

Fourth, the government needs to strengthen data governance. The data used by AI and BDA must be accurate, complete, consistent, secure, and traceable. Data errors can lead to wrong conclusions even though the algorithms used have high analytical capabilities.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Business and Quality Research
https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

Fifth, the use of technology needs to remain linked to the main goal of public sector accounting, which is to provide information that can be used for public accountability. Thus, the success of digital transformation is not only measured by how much technology is used, but also by the extent to which it is able to improve information quality, audit effectiveness, transparency, and government accountability.

CONCLUSION

Digital transformation has transformed public sector accounting practices by improving the government's ability to manage, process, and use financial information. Big Data Analytics provides an opportunity to improve auditors' ability to analyze large amounts of data, conduct risk assessments, find transaction patterns, and detect indications of fraud. Research on Indonesian government auditors shows that the use of BDA can be related to improved performance, audit judgment, and audit quality.

Artificial Intelligence also has great potential in public sector accounting. AI can be used for process automation, predictive analytics, fraud detection, and the provision of information for decision-making. However, these benefits must be balanced with the risk of algorithmic bias, data privacy, security, algorithm transparency, and accountability.

The quality of government financial reporting is not only determined by technology. Human resource competence, internal control systems, the implementation of government accounting standards, information system quality, organizational commitment, and governance remain important factors. Recent research shows that IT capability can improve the quality of AIS and financial reporting quality, so technology and people must be developed simultaneously.

Thus, digital transformation in public sector accounting should not be understood as a process of replacing humans with technology. A more appropriate approach is to build synergy between technology and humans. BDA and AI can be used to expand analytical capabilities, while auditors, accountants, and government officials remain responsible for interpretation, professional judgment, and decision-making.

Ultimately, the success of digital transformation can be achieved if the government is able to integrate technology, data quality, human resource competence, internal control, governance, and ethical oversight. This approach will allow technology to not only improve administrative efficiency, but also contribute to the quality of financial reporting, audit quality, transparency, and accountability in public financial management.

REFERENCES

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

Agostino, D., Lourenço, R., Jorge, S., Bracci, E., & Cruz, I. (2026). Public Money & Management Data science and public sector accounting: Reviewing impacts on reporting , auditing , and accountability practices. *Public Money & Management*, *46*(6), 690–699. https://doi.org/10.1080/09540962.2025.2529266

Alawiyah, K., Raymon, M., Pasaribu, P., & Feny, S. (2025). The Effect of Public Sector Accounting Implementation on the Quality of Government Financial Statements. *JLEB: Journal of Law Education and Business*, *3*(1), 378–383.

Aldemir, C., & Uysal, T. U. (2025). Artificial Intelligence for Financial Accountability and Governance in the Public Sector : Strategic Opportunities and Challenges. *Administrative Sciences*, *15*(2), 58.

Annisa, Syamsudin, S., & Rusli, A. (2025). The Effect Of The Implementation Of Government Accounting Standards And Human Resource Competence On The Quality Of Financial Statements. *Indonesian Journal Of Accounting Education, 23*(1), 12–23.

Azzahra, S. F., & Kurniawan, A. (2025). The Influence of Local Government Accounting Systems and Performance-Based Budgeting on the Performance Accountability of Local Government in Bandung Regency. *Journal of Management and Accounting Research (JURIMA), 5*(71), 141–150.

Badewin, Elizabeth, R., Rusmardiana, A., Rely, G., & Judijanto, L. (2025). Accountability and Transparency in Local Government Financial Reporting : An Empirical Study in Indonesia. *Scientific Journal of Unitary Accounting*, *13*(4), 831–842. https://doi.org/10.37641/jiakes.v13i4.3642

Biyantoro, A. (2022). Local Government Financial Reports: Utilization Of Information Technology And Implementation Of Government Accounting Standards. *Journal of Contemporary Accounting Research*, *15*(2), 241–251. https://doi.org/https://doi.org/10.23969/jrak.v15i2.7616

Dharma, A., & Hendri, N. (2022). The Urgency of Using Big Data Analytics in Public Sector Audits. *ACQUISITION: Journal of Accounting*, *18*(02), 107–120.

Diah, A. M., Hasiara, la ode, Lesmana, D., Raharjo, S., Aprianti, Y., & Yudaruddin, R. (2026). Information technology capability and financial reporting quality in local governments : the mediating role of accounting information system quality. *Cogent Business &*

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

Management, *13*(1). https://doi.org/10.1080/23311975.2026.2654816

Fathiya, D. N., & Viani, A. M. (2025). Public Sector Accounting Transformation in Indonesia : Measuring Cloud Accounting-Based Digitalization Readiness. *Accounting and Financial Analysis Journal*, *1*(2), 57–62.

Fattah, N. W., Damayanti, R. A., & Idris, M. I. U. (2023). Analysis of factors affecting the quality of local government financial statements. *APSSAI Accounting Review*, *3*(1), 66–83. https://doi.org/https://doi.org/10.26418/apssai.v3i1.70

Handarini, D., Anugrah, S., Suyono, W. P., & Puspa, E. S. (2025). Financial Accounting in the Digital Era: The Role of Blockchain Technology and AI in Transparency and Accountability. *Scientific Journal of Accounting Forum*, *19*(2), 1–14.

Irmawati, Haliah, & Nirvana. (2025). Digital Transformation of Public Sector Accounting: A Literature Review on Technology Adoption in Government Financial Reporting. *Journal of Accounting Sciences*, *7*(2), 228–241.

Larikova, T., Ivankov, P., Novichenko, L., & Kydysiuk, K. (2025). Possibilities Of Integrating Artificial Intelligence Technologies Into The System Of Accounting And Analytical Support. *Eastern-European Journal of Enterprise Technologies*, *13*(132), 88–97. https://doi.org/10.15587/1729-4061.2024.319051

Marfuah, Istiqomah, E. N., Ayuntari, C. G., & Prasetyo, P. P. (2023). Determinants of quality of the financial statements of Gunung Kidul Regency Government. *Journal of Contemporary Accounting*, *5*(1), 12–27. https://doi.org/10.20885/jca.vol5.iss1.art2

Mediaty, Pontoh, G. T., Nagu, N., Hs, R., Mas'ud, A. A., & Aziz, R. H. A. (2025). Human Competencies : Amplifying Financial Reporting Quality in Indonesian Local Government. *Journal of Risk and Financial Management*, *18*(8), 424. https://doi.org/https://doi.org/10.3390/ jrfm18080424

Muhtar, M. (2022). Non-compliance to SAP on local governments in Indonesia: The impact of internal control weaknesses in internal control in accounting and financial reporting and regional complexity. *Journal of Research*, *19*(1), 11–22. https://doi.org/https://doi.org/10.26905/jp.v19i1.8261

Nisa, A. R., Zuhroh, D., & Cahyaningsih, D. S. (2026). Effects of regional information and

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

internal control systems on financial report quality and fraud prevention. *Journal of Contemporary Accounting*, *8*(1), 1–12. https://doi.org/10.20885/jca.vol8.iss1.art1

Novita, N., & Anissa, A. I. N. A. (2022). The role of data analytics for detecting indications of fraud in the public sector. *Research in Business & Social Science*, *11*(7), 218–225.

Octavio, M. F. R., & Urumsah, D. (2024). Exploring Factors Influencing Digital Transparency in Local Governments : Practices in Indonesia. *Journal of Accounting and Business Dynamics*, *11*(2), 279 – 296.

Pratiwi, M. E., Din, M., Masdar, R., Amir, A. M., Zahra, F., Kahar, A., & Meldawati, L. (2022). Utilization of Information Technology to Increase Human Resources Capacity and Internal Control Systems on Local Government Financial Reporting Information. *Universal Journal of Accounting and Finance*, *10*(1), 191–199. https://doi.org/10.13189/ujaf.2022.100120

Purwono, A. Y. (2025). Implementation of Artificial Intelligence in the Practice of Financial Application Systems at the Agency Level (SAKTI). *EKOMA: Journal of Economics, Management, Accounting*, *4*(3), 5160–5169.

Rahman, Y., Fakhri, & Indriyanti, N. (2026). The Effect Of Human Resource Capacity, It Utilization, And Internal Control System On The Quality Of Local Government Financial Statements Of North Hulu Sungai Regency. *Kindai*, *22*(2), 50–64.

Rahmawati, E., Sonita, S., Wahyu, A., Kholid, N., & Sofyani, H. (2022). Human Resource Competence And Quality Of Local Government Financial Statements: The Role Of The Internal Control System As A Mediator. *Journal of Accounting and Finance Review*, *12*(2), 346–359. https://doi.org/10.22219/jrak.v12i2.21791

Rofika, R., Ratnawati, V., Suci, H. M., & L, A. A. (2024). Determinant Factors That Influence Local Government Financial Report Quality. *Current: Journal of Accounting and Business Studies*, *5*(1), 137–149.

Saputri, D. R., Pujiningsih, S., & Utami, H. (2024). Determinants of Transparency of Local Government Financial Reports in Indonesia Детермінанти прозорості фінансових звітів органів місцевого самоврядування в Індонезії. *Accounting and Finance*, *3*(105), 120–131.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

Saud, I. M., Sofyani, H., Utami, T. P., Haq, M. M., & Fathmaningrum, E. S. (2025). Big data analytics-based auditing adoption in public sector : Indonesian evidence. *Cogent Business & Management*, *12*(1). https://doi.org/10.1080/23311975.2025.2454320

Sidauruk, D. L. (2024). Data Analytics in Fraud Prevention and Detection by Government Internal Supervisory Apparatuses at Ministries/Institutions/Local Governments: A Mixed-Method Study. *Asia Pacific Fraud Journal*, *9*(2), 241–260. https://doi.org/10.21532/apfjournal.v9i2.340

Sofyani, H., Rohman, W. M., Della, K., Efsari, A. N., & Muhammadiyah, U. (2025). Big Data Analytics-Based Audit System Quality and Public Sector Audit Performance: Audit Judgment as Mediator. *Journal of Accounting and Finance Review*, *15*(01), 165–182. https://doi.org/10.22219/jrak.v15i1.36375

Sofyani, H., Saud, I. M., Amalia, R., & Irawan, D. (2025). The Determinant and Impact of Big Data Analytics Adoption on Public Sector Audit Outcomes. *Journal of Accounting Research Organization and Economics*, *8*(1).

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.