



EIXO 3 – ABORDAGENS INOVADORAS NA AUDITORIA DO SETOR PÚBLICO: CASOS E LIÇÕES APRENDIDAS

HARNESSING ARTIFICIAL INTELLIGENCE IN PUBLIC AUDITS: CHALLENGES AND OPPORTUNITIES FOR DEVELOPING COUNTRIES

Adam A. Secka

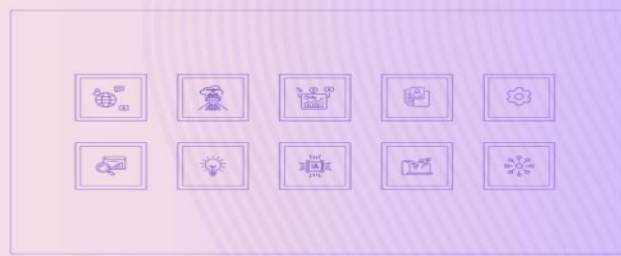
Bachelor of Science in Economics in University of The Gambia. Associate Performance Auditor in National Audit Office, The Gambia. Finance and Admin Officer in Glocal Consulting Ltd. Finance Officer in UTG-UNDP Graduate Scheme Program. Intern Directorate of Internal Audit, Ministry of Finance and Economics Affairs City.

ABSTRACT

Artificial Intelligence (AI) is enhancing public sector activities worldwide, with public auditing being no exception. In developing countries, AI provides greater opportunities to enhance audit efficiency and transparency. This study examines the opportunities, challenges, and organisational readiness for AI integration in public auditing at The Gambia's National Audit Office (NAO). A cross-sectional survey with 26 responses from NAO staff was administered via Google Forms. The survey included closed and open-ended questions on familiarity with AI, prior use, perceived benefits, barriers, readiness and training needs. Data were analysed using descriptive statistics and thematic analysis. 77% of the respondents had encountered or used AI and 70.6% agreed it can make audits faster and more effective. However, only 29.4% believed the NAO is ready to implement AI, 52.9% were unsure. Some respondents cited barriers to using AI in public auditing like, lack of technical expertise (44.4%), resistance to change (22.2%) and absence of a clear policy or roadmap (22.2%). Prioritising targeted upskilling, piloting high-value use cases and developing enabling policies can unlock AI's value for public accountability.

1 INTRODUCTION

Public sector audits play a crucial role in ensuring transparency, accountability and the efficient, economic and effective use of public resources. However, many developing



countries rely on manual audit processes, limiting the scope, depth and timeliness of their work. In The Gambia, the NAO serves as the Supreme Audit Institution (SAI) responsible for overseeing the management of public funds. As the taxpayers' watchdog, it ensures that public resources are used appropriately; therefore, reporting to citizens in a transparent and timely manner is important.

1.1 Methodology

This paper adopted a survey approach to collect both quantitative and qualitative data on staff perceptions and readiness for AI integration. A structured questionnaire with both closed and open-ended questions was developed using Google Forms and distributed to all staff of the National Audit Office. 26 responses were received and the data gathered were analysed descriptively with thematic analysis applied to qualitative responses.

1.2 Objective and Questions

The objectives of the survey included and not limited to, assessing NAO staff familiarity with and use of AI tools, identifying perceived opportunities and barriers to AI use and public auditing, to gauging NAO's readiness to adopt AI and finally, deriving practical recommendations for implementation.

Questions like, what is the current level of awareness and prior exposure to AI among staff, what benefits and risks staff perceive in applying AI in public auditing, NAO's readiness to adopt AI, technically, institutionally and in terms of policies to implement AI and finally, capacity building, governance, change management actions are most needed, were asked.

1.3 Theoretical Framework



Theoretically, this paper is informed by Technology Acceptance Theory (TAM), which explains how individuals adopt and use new technologies. According to TAM, perceived usefulness and perceived ease of use are key determinants of acceptance (Davis, 1989). Applied to public audits, this means that auditors are more likely to embrace AI if they believe it will improve audit effectiveness and if they feel confident in their ability to use it. At the organizational level, Institutional Theory is also relevant, as it highlights how external pressures, internal norms, and resource constraints shape the adoption of new technologies in public institutions (DiMaggio & Powell, 1983).

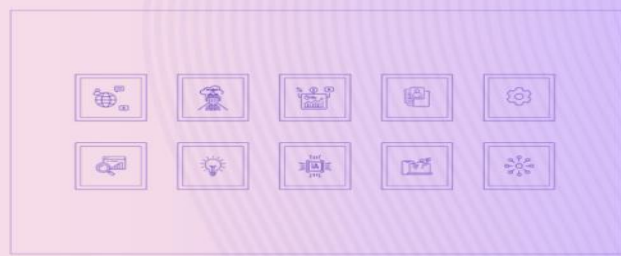
2 RESULTS

The survey revealed that half of the respondents had three to four years of work experience, with 64.7% holding at least a bachelor's degree and 35.3% possessing professional certifications.

Table 1. Summary of Survey Results

Indicator	Response Options	% of Respondents
Prior interaction with AI	Yes / No	76.5 / 23.5
Familiarity with AI	Very familiar / Somewhat / Not very	29.4 / 41.2 / 29.4
Knowledge of AI in auditing	Yes / No / Unsure	64.7 / 29.4 / 5.9
Confidence using AI for audits	Fully / Some extent / Not at all	33.3 / 55.6 / 11.1
NAO readiness to implement AI	Agree / Disagree / Unsure	29.4 / 17.6 / 52.9
Perceived impacts of AI on audits	Faster and more effective, Yes/ unsure /No	70.6 / 23.5 / 5.9
Openness to future AI use	Yes / Maybe / No	76.5 / 17.6 / 5.9
Top barriers	Lack of technical expertise, Resistance to change, No policy or roadmap, Funding, Lack of infrastructure	44.4, 22.2, 22.2, 5.6

1.4 Opportunities of AI in Public Auditing



The survey results show strong optimism about AI's benefits: 70.6% believed it could make audits faster and more effective and 76.5% were open to using AI in future audits. Key opportunities include:

- 1.4.1 Accelerated Audit Processes:** AI can process large volumes of transactions quickly, respondents noted potential time savings in reviewing records and summarising lengthy documents.
- 1.4.2 Enhanced Data Accuracy and Integrity:** AI improves data validation and cross-checking, for example, it can flag duplicate entries in payment records, highlighting potential fraud in social programs.
- 1.4.3 Evidence-Based and Predictive Decision-Making:** Machine learning can identify future risks by analysing historical data. AI also links budget inputs to service outcomes (teacher salaries to student performance), supporting value-for-money analysis.
- 1.4.4 Improved Transparency and Public Accountability:** AI-enabled dashboards and visualization tools present audit findings in accessible formats, for example, maps and graphs, enhancing public understanding and oversight.
- 1.4.5 Professional Development and Skills Enhancement:** Working with AI improves auditors' capacity in data analysis and investigative techniques. AI-based tools and platforms also enhance training in areas like fraud detection and forensic auditing.

1.5 Challenges of Applying AI in Public Audits

Despite the high optimism, there are still concerns that come with the integration of AI in public audits. The most cited barrier was lack of technical expertise (44.4%), followed by



resistance to change (22.2%) and absence of a clear AI policy (22.2%). Other issues include:

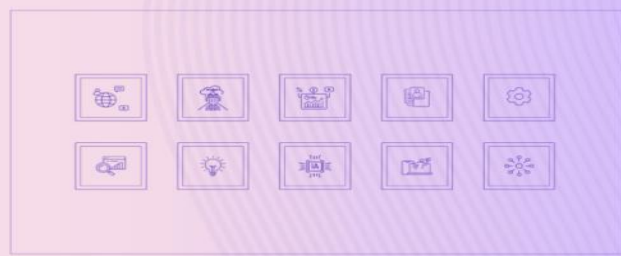
- 1.5.1 Infrastructure and Data Limitations:** Weak internet connectivity, outdated hardware and fragmented public data systems.
- 1.5.2 Skills Gap:** More than half of the respondents (55.6%) indicated that they have not received any formal training on the usage of AI tools, highlighting a skills gap in this area.
- 1.5.3 Financial Constraints:** High costs related to software, training and system upgrades restrict AI investment, especially when national budgets are stretched.
- 1.5.4 Ethical, Legal and Governance Issues:** Gaps in data protection and AI regulation raise risks of bias, privacy violations and reduced accountability.
- 1.5.5 Resistance to Change:** Staff may fear job losses or be sceptical about AI tools and when there is institutional resistance and lack of awareness, it can hinder adoption even when solutions are available.

1.6 Readiness and Awareness

While 64.7% were aware of AI in auditing, only 29.4% believed the NAO was ready for implementation; 52.9% were unsure. This suggests that although knowledge exists, institutional preparedness is limited.

2 DISCUSSION

The results confirm patterns in global research (INTOSAI, 2020; OECD, 2019): AI has the potential to enhance audit effectiveness but requires substantial investment in skills, infrastructure and governance. In NAO Gambia, high familiarity among staff contrasts with



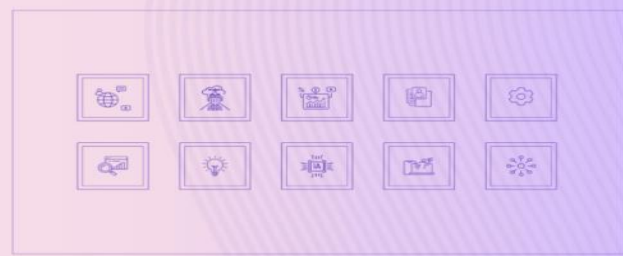
low confidence in institutional readiness, highlighting the gap between individual awareness and organisational capacity.

Opportunities such as predictive analytics, faster audit processing, and improved transparency align with reforms aimed at strengthening public financial management. However, without addressing infrastructure weaknesses, legal frameworks and resistance to change, AI adoption risks being superficial or dependent on external consultants.

3 RECOMMENDATIONS

To move toward effective AI integration in public audits, the NAO should:

- a. **Capacity Building and Knowledge Sharing:** NAO should prioritize investment in digital literacy and technical training for audit professionals. This includes skills in data management, analytics and the use of AI tools.
- b. **Incremental Adoption through Pilot Projects:** AI applications, such as digitizing audit documents or using anomaly detection tools.
- c. **Development of Legal and Ethical Frameworks:** NAO, as a Supreme Audit Institution can advocate for the development of policies on data protection, algorithm transparency and ethical use of AI tools
- d. **Leveraging Regional and International Support:** NAO can benefit from technical assistance, funding and peer learning through partnerships with regional and international bodies such as AFROSAI-E, INTOSAI and the World Bank, etc. These networks also provide platforms for sharing best practices and lessons learned.
- e. **Foster Change Management:** Engage staff early to address fears and encourage adoption.



4 CONCLUSION

Artificial Intelligence offers transformative opportunities for public audits in developing countries, enabling faster, more accurate and more transparent reviews of public resource management. In The Gambia, as in many developing nations, AI have the potential to revolutionize how audits are conducted and how governments are held accountable. However, successful adoption requires investment in infrastructure, legal frameworks, technical capacity, and change management.

By starting with pilot initiatives, engaging with international partners and focusing on their readiness. With these foundations in place, AI can foster public trust, and enhance efficient service delivery in the public sector.

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