

## The Double-Edged Sword: Government Officials' Perceptions of AI and its Impact on Efficiency, Accountability, and Transparency

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### Abstract

Artificial Intelligence (AI) is increasingly transforming governance by enhancing efficiency, accountability, and transparency in public administration. This study explores MDAs employees' perceptions of AI's impact on efficiency, accountability, and transparency in public administration. The study adopted a survey research design. A sample of 300 government employees was surveyed, and the data were analyzed using Pearson correlation and simple linear regression. The results showed that AI significantly enhances government efficiency ( $r = .765, p < 0.05$ ), accountability ( $r = .653, p < 0.05$ ), and transparency ( $r = .776, p < 0.05$ ). Despite these benefits, challenges such as algorithmic bias, regulatory gaps, and data privacy concerns persist. The employees also identified the need for regulatory frameworks, ethical governance, and periodic investment in training to ensure responsible AI use. However, strengthening institutional capacities and fostering public trust through transparency measures are critical for AI's effective implementation in governance. The study contributes to the ongoing discourse on AI's role in governance and administration with empirical findings to inform policy development and governance reforms. Addressing identified barriers will be essential for maximizing AI's potential while ensuring equitable and accountable governance practices.

**Keywords:** Artificial Intelligence, Governance, Public Administration, Accountability, Transparency

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### Introduction

Recent technological breakthroughs have seen a tremendous growth in the application of Artificial Intelligence (AI) and Machine Learning (ML). Both are rapidly transforming various sectors (Espina-Romero et al., 2023), e.g., marketing (Sarkar & De Bruyn, 2021), finance (Gavurova et al., 2022), health care (Zou & Li, 2022) and governance is no exception (Renda, 2019; Salam et al., 2023). The intersection of AI and governance represents a transformative yet precarious frontier (Margetts, 2022). AI has the potential of enhancing administrative efficiency, streamlining decision-making, and expanding the reach of public services through predictive analytics and automation (Batool et al., 2025). Hence, the utilization of AI technologies in data processing, automation, and service

customization (Hassan et al., 2024; Pulijala, 2024), presents significant opportunities for enhancing efficiency, transparency, and service delivery in public administration. AI has the potential to optimize government processes across various sectors, which can lead to improved decision-making and resource allocation, thereby fostering a more responsive and accountable public administration (Coelho & Silva, 2024; Shaikh et al., 2024).

AI technologies, particularly in the form of Narrow AI and chatbots, offer practical solutions for automating routine tasks and enhancing citizen engagement. Damar et al. (2024) discuss the transformative impact of AI on public services, noting that these technologies can streamline processes and improve access for citizens. AI can facilitate faster response to citizens' inquiries, hence establishing citizen satisfaction and trust in MDAs. AI has the potential to enhance transparency in the revelation of key indicators and making them comparable, hence forging a stronger democratic connection between citizens, governments, and the international community. Transparency creates enhanced citizen trust and perception of security (Rodríguez et al., 2015).

Despite the growing prevalence of AI, there remains a significant gap with regards to the challenges, including technical, ethical, and regulatory hurdles etc. as well as opportunities (Amankwah-Amoah & Lu, 2022). Damar et al. (2024) opined that the implementation of AI must be approached with cautiousness, particularly with regards to concerns on data privacy and security.

The ethical issues mentioned with the application of artificial intelligence in public administration are also examined by Wang (2024), suggesting that decisions made by algorithms are actual policy decisions where government structures need to be reconsidered. AI systems are quickly developed and applied, but without proper supervision, thereby developing concerns regarding accountability and transparency. Wang submits that the distinctive features of algorithmic decision-making, including their speed and opacity, call ahead of time for a multi-level response to governance using different types of social control mechanisms. The viewpoint calls for comprehensive regulatory structures to guarantee accountable and transparent deployment of AI technologies within public administration. Boudershem (2024) covers the regulatory and ethical concerns within the healthcare field, where applications of artificial intelligence have the potential to greatly improve patient care along with streamlining operational processes. The author notes, however, that the absence of definite regulations and the intricacy of AI implementation present enormous obstacles to effective monitoring. The research accentuates the importance of global cooperation and the implementation of harmonized guidelines to reduce risks linked with AI throughout the healthcare domain. This is used to underscore the larger issue of making sure that artificial intelligence technologies are both efficient and fair in their application to various segments of the public domain. In addressing the accountability of AI systems in the public sector. Kim et al. (2024) proposes a framework that categorizes the sources of control and the discretion of agencies in adopting AI technologies. Their research emphasizes the importance of understanding who holds governments accountable and what types of AI systems should be utilized to enhance accountability. By examining the implications of Symbolic and Connectionist AI systems,

the authors provide insights into how AI can be integrated into public administration while maintaining a focus on accountability and ethical governance. Sattlegger (2024) contributes to the discussion by exploring the role of digital ethics commissions within public sector organizations. These third-party expert commissions attempt to come to terms with the ethical issues of new digital technology, including AI. The research identifies that while these commissions can add legitimacy and provide valuable advice, they must balance formal governance institutions against demands for collaborative and reflexive ethical practice. This is an ongoing task in ensuring ethical issues are an integral part of AI technology governance in public administration. Thus, while AI technologies hold limitless promise for improving administration and governance, they also hold significant challenges related to accountability and transparency. For the incorporation of AI in public administration to be made seamless, the ethical, legal, and regulatory ramifications of AI need to be comprehensively understood, and the creation of efficient frameworks needs to guarantee proper utilization. As researchers persist in studying these dynamics, it is essential that engagement and cooperation between stakeholders be fostered in a way that they can effectively navigate the challenges of AI in the public sector. Africa provides a good setting for this study for several reasons. The continent has experienced a record boom in AI and technology in numerous areas e.g., services, fintechs and supply chain business models (Moharrak et al., 2024).

While AI has the potential to foster inclusivity by providing marginalized populations with access to services and opportunities, it also carries the risk of reinforcing the existing structural technological dominance over the African continent (Ndaka et al., 2024). Moreover, if Africa's active participation and contributions to AI research and applications are considered essential for meaningful global collaboration (Gwagwa, 2020), then it is imperative for scholars and practitioners actively participate in the ongoing AI discourse within the African context (Eke et al., 2023). And, Nigeria presents an interesting field for empirical research with its thriving tech sector, fueled by advancements in internet and mobile technology, marked by the success of startups and established companies like Andela, Interswitch, and Flutterwave, along with tech giants like Google, Microsoft, and Facebook, provides a fertile ground for AI development (Okpanum & Omeihe, 2024).

**Market Size of Artificial Intelligence in Nigeria (2020-2030)**

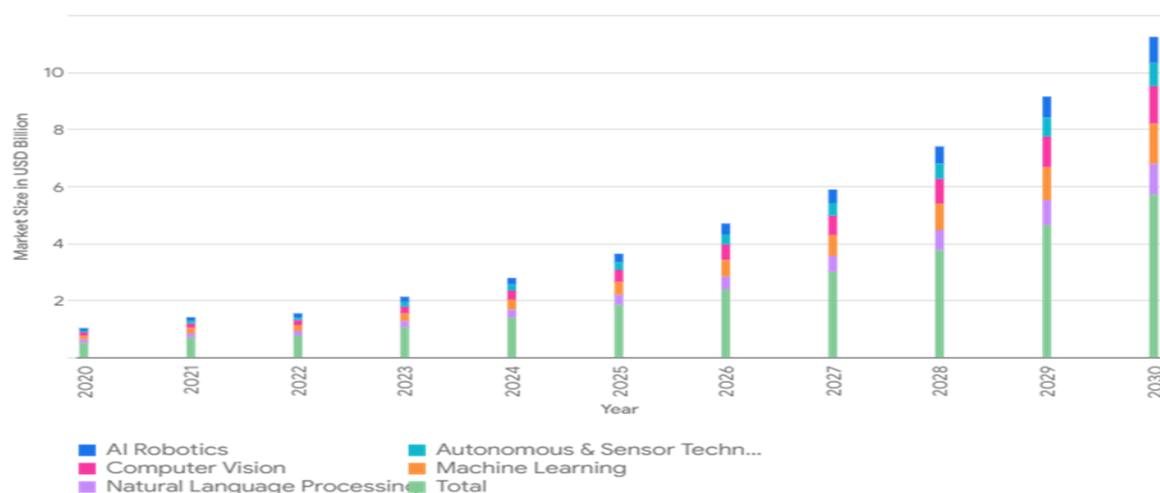


Table 1: AI market size in Nigeria

Year	Total	Computer Vision	Machine Learning	Natural Language Processing	AI Robotics	Autonomous & Sensor Technology
2020	0.51	0.12	0.14	0.11	0.09	0.05
2021	0.7	0.16	0.19	0.14	0.12	0.09
2022	0.77	0.18	0.2	0.16	0.13	0.1
2023	1.06	0.24	0.27	0.21	0.18	0.16
2024	1.4	0.32	0.35	0.27	0.23	0.21
2025	1.84	0.42	0.45	0.35	0.3	0.27
2026	2.38	0.55	0.58	0.45	0.38	0.35
2027	2.99	0.69	0.73	0.56	0.48	0.43
2028	3.77	0.87	0.92	0.7	0.6	0.53
2029	4.64	1.08	1.15	0.87	0.74	0.66
2030	5.71	1.32	1.41	1.07	0.91	0.81

Source: Data curated from Statista (2024)

The table illustrates the longitudinal growth of research contributions across different artificial intelligence (AI) domains from 2020 to 2030. The Total column reflects the overall volume of research activity, while the subcategories capture specific areas including Computer Vision, Machine Learning, Natural Language Processing (NLP), AI Robotics, and Autonomous & Sensor Technology. The data reveal a consistent and substantial upward trend across all categories, indicating both the expansion and diversification of AI-related scholarship during the observed period.

From 2020 to 2030, the Total research volume increased more than tenfold, rising from 0.51 in 2020 to 5.71 in 2030. This exponential growth suggests a sustained acceleration in AI research, driven by technological advancements, increased industry adoption, and rising policy and funding support. Notably, the most pronounced expansions occurred after 2023, when the total value surpassed 1.0, reaching nearly 6.0 by 2030. This inflection point coincides with the maturation of advanced AI systems and the integration of multimodal capabilities that combine vision, language, and decision-making tasks.

Among the subfields, Machine Learning consistently accounted for the largest share of research activity. Its contribution rose from 0.14 in 2020 to 1.41 in 2030, marking more than a tenfold increase. This dominance reflects the foundational role of machine learning algorithms across AI domains, underpinning innovations in vision, language, robotics, and autonomous systems. Similarly, Computer Vision demonstrated remarkable growth, expanding from 0.12 in 2020 to 1.32 in 2030, which underscores the widespread application of vision-based AI in areas such as medical imaging, autonomous vehicles, and industrial automation.

NLP also exhibited robust growth, increasing from 0.11 in 2020 to 1.07 in 2030. This trajectory highlights the increasing importance of language technologies, particularly in large language models and generative AI, which have reshaped human-machine interaction and knowledge processing. Meanwhile, AI Robotics advanced from 0.09 to 0.91, reflecting both research and industrial adoption of intelligent robotic systems across manufacturing, healthcare, and service industries. Lastly, Autonomous & Sensor Technology showed significant progress, moving from 0.05 in 2020 to 0.81 in 2030, emphasizing the critical role of sensor integration and autonomy in enabling next-generation mobility and smart infrastructure.

Importantly, while all subfields grew substantially, their relative shares remained fairly balanced over time, suggesting that AI research is becoming increasingly interdisciplinary. For example, by 2030, machine learning, computer vision, and NLP remained the leading contributors, yet robotics and autonomous systems also gained traction, closing the gap in research intensity. This pattern reflects a convergence of AI technologies, where progress in one domain increasingly complements and accelerates advancements in others.

Overall, the data suggest that AI research within the decade 2020–2030 is characterized not only by rapid quantitative expansion but also by qualitative diversification across domains. The parallel growth of machine learning, vision, language, robotics, and sensor technologies indicates that the future of AI research will likely be shaped by integrated, cross-domain solutions rather than isolated advancements. These findings reinforce the view that AI has evolved into a general-purpose technology with transformative implications across scientific, economic, and social dimensions.

But the use of AI by government also raises critical issues. Abuses of AI, in the form of data breaches or irresponsibility highlight such practice. In most African countries, the greatest challenge is the struggle to balance the use of AI with values of equity, inclusivity, and human rights. Attempts such as the African Union's Data Policy Framework are evidence of the need for ethics and responsible AI management that are in the context of the region. The risks are especially problematic in those countries where institutional capacity for overseeing AI application is weak. Hence, in Africa, where government complains of systemic inefficiencies and lack of resources, AI is championed as savior to close gaps and lead innovation. National governments, such as Rwanda, are exploring the potential of AI for transparent and data-driven governance practices, reflecting the slow pace of AI governance decolonization across the globe. Africa is at a crossroads with plenty of untapped opportunities for technology advancement (Amankwah-Amoah & Lu, 2022).

Conversely, applying AI in governance also poses serious questions regarding accountability, transparency, and vulnerability to bias and discrimination. This paper focuses on potential pros and cons of AI utilization in governance more especially as it affects efficiency, accountability, and transparency. The level of development in Africa risks various national government to utilise AI decision-making in black box-like systems. This has been seen in examples where AI-based tools like facial recognition technologies have amplified social inequalities with biased data sets. Ensuring the

potential of AI to make governance better is balanced with the need to prevent its abuse requires a human-centered approach. This entails embedding AI systems within robust structures of transparency, accountability, and fairness and stimulating local innovation and engagement. The intersection of risk and opportunity leaves AI in governance at a fork as a two-edged sword whose use can either empower societies or cement existing disparities.

## Research Method

This study adopted a survey research design to investigate employees' perceptions of Artificial Intelligence (AI) and its implications for efficiency, accountability, and transparency in governance. The survey approach was deemed appropriate given its effectiveness in collecting standardized data from a relatively large sample and enabling generalization across populations (Creswell & Creswell, 2018; Fowler, 2014). This design facilitated quantitative analysis of responses, thereby allowing the identification of patterns and relationships among the variables under study.

The target population comprised employees working across various Ministries, Departments, and Agencies (MDAs). To ensure representativeness, a stratified random sampling technique was employed, as it enables proportional inclusion of participants from different organizational strata and reduces sampling bias (Saunders, Lewis, & Thornhill, 2019). The final sample consisted of 300 employees who voluntarily agreed to participate in the study.

Primary data were gathered using a structured questionnaire specifically designed for this study. The instrument included both closed-ended questions and Likert-scale items to capture perceptions of AI integration in governance processes. Questionnaire-based instruments are particularly effective in measuring attitudes and perceptions, as they provide consistent and quantifiable data (Bryman, 2016). The questionnaire was divided into sections covering demographic characteristics, awareness of AI applications, perceived benefits, challenges, and the broader impact of AI on efficiency, accountability, and transparency.

The survey was administered in both electronic and paper-based formats to maximize accessibility for the targeted respondents. Clear instructions were provided to guide participants in completing the questionnaire, and anonymity was guaranteed to encourage candid responses. Data collection was conducted over four weeks, a period sufficient to ensure adequate participation while minimizing nonresponse bias (Dillman, Smyth, & Christian, 2014).

The collected data were subjected to statistical analysis using correlation and regression techniques. Correlation analysis was conducted to examine the strength and direction of associations between employees' perceptions of AI and the perceived governance outcomes, while regression analysis assessed the predictive influence of AI perceptions on efficiency, accountability, and transparency. Regression models are particularly suitable for testing predictive relationships between independent and dependent variables in survey-based studies (Tabachnick & Fidell, 2019). Statistical

significance was determined at the 95% confidence level ( $p < 0.05$ ). All analyses were carried out using SPSS software (version 26).

Prior to data collection, ethical clearance was obtained, and informed consent was secured from all participants. The study strictly adhered to the principles of confidentiality and anonymity, ensuring that no personally identifying information was disclosed. Participation was voluntary, and respondents retained the right to withdraw at any stage without penalty. These safeguards were implemented to protect participants' rights and to enhance the credibility and integrity of the research (Resnik, 2018).

## Results and Discussions

The study surveyed 300 government employees across various Ministries, Departments, and Agencies (MDAs). Of the total respondents, 167 were male (55.7%) and 133 were female (44.3%), suggesting a relatively balanced gender distribution. In terms of employment tenure, the majority of respondents ( $n = 195$ , 65%) had worked in government service for less than 10 years, while 87 employees (29%) reported between 11 and 20 years of service. Only 18 participants (6%) had worked for more than 20 years. These findings indicate that the sample included both early-career and experienced employees, offering a diverse perspective on the perceptions of Artificial Intelligence (AI) in governance functions.

### Hypothesis Testing H1

AI positively impacts government efficiency Correlation analysis revealed a strong positive relationship between AI adoption and perceived government efficiency ( $r = 0.765$ ,  $p < 0.05$ ). This finding suggests that employees view AI as a transformative tool capable of streamlining bureaucratic processes, reducing delays, and improving the accuracy of service delivery. Existing research supports these results, highlighting AI's potential to automate administrative tasks and optimize resource allocation (Coelho & Silva, 2024). For example, AI-powered platforms in Bahrain's smart governance initiatives have demonstrated measurable efficiency gains through automated service provision and predictive analytics (Shaikh et al., 2024). Taken together, the evidence underscores the ability of AI to minimize inefficiencies inherent in traditional administrative systems.

### H2: AI enhances government accountability

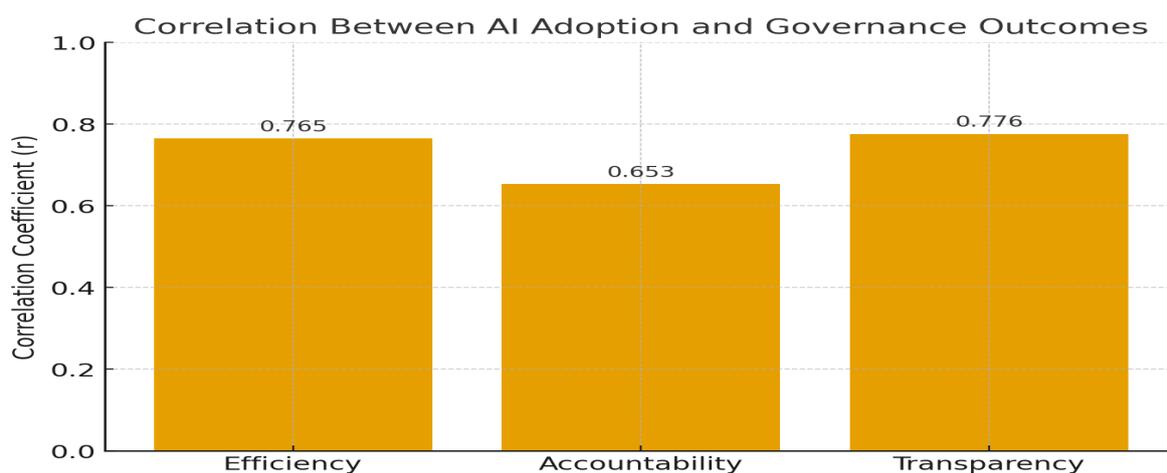
The second hypothesis examined the association between AI and accountability. The results demonstrated a significant positive correlation ( $r = 0.653$ ,  $p < 0.05$ ), indicating that AI contributes to mechanisms of oversight and compliance. AI applications, such as digital monitoring systems and audit trails, have the potential to hold public officials accountable by providing transparent records of decision-making processes (Kim et al., 2024). Nonetheless, the findings also highlight unresolved challenges. Prior studies emphasize that the presence of algorithmic bias and the absence of

comprehensive regulatory frameworks may limit the extent to which AI can fully enhance accountability, particularly in developing nations (Hassan et al., 2024). Thus, while AI is perceived as beneficial, its effectiveness depends on governance structures and safeguards against misuse.

### H3: AI improves transparency in government functions

The third hypothesis was also supported by the data, which revealed a strong positive correlation between AI and transparency in government functions ( $r = 0.776$ ,  $p < 0.05$ ). This result suggests that AI plays a crucial role in enabling real-time information disclosure and improving the traceability of government operations. Global experiences further validate this finding. For instance, Sattlegger (2024) reported that AI-driven governance platforms enhance transparency by detecting fraudulent activities and providing open data access to citizens. Similarly, in Nigeria, AI applications have been identified as tools for improving citizen engagement by expanding public access to government information (Rodríguez et al., 2015). By making decision-making processes more visible and traceable, AI contributes to building public trust and fostering participatory governance.

The statistical analysis confirmed all three hypotheses, demonstrating that AI is positively and significantly associated with efficiency, accountability, and transparency in government functions. The strong correlation values particularly for efficiency ( $r = 0.765$ ) and transparency ( $r = 0.776$ ) highlight the transformative potential of AI in reshaping public administration. At the same time, the relatively lower, yet still significant, correlation with accountability ( $r = 0.653$ ) indicates that institutional, legal, and ethical frameworks must evolve alongside technological adoption to fully realize AI's benefits.



It highlights that AI has the strongest positive relationship with transparency ( $r = 0.776$ ), followed closely by efficiency ( $r = 0.765$ ), while accountability ( $r = 0.653$ ) shows a positive but comparatively weaker correlation.

The findings of this study underscore the multifaceted nature of Artificial Intelligence (AI) adoption in governance, revealing both significant opportunities and critical challenges. Consistent with global trends, government officials perceived AI as a transformative tool that can enhance

efficiency, accountability, and transparency. However, the results also demonstrate the inherent tensions that make AI a double-edged sword in the public sector.

### **AI and Efficiency in Governance**

The strong positive correlation between AI and efficiency ( $r = 0.765$ ) highlights the extent to which government officials recognize AI's potential to streamline bureaucratic processes. This aligns with prior studies demonstrating that AI applications, such as robotic process automation and predictive analytics, can reduce administrative burdens, minimize human errors, and improve service delivery speed (Coelho & Silva, 2024). Officials' perceptions resonate with real-world initiatives, such as Bahrain's smart governance projects, where AI has shortened response times and improved citizen satisfaction (Shaikh et al., 2024). Nonetheless, while efficiency gains are evident, the discussion must account for the resource-intensive nature of AI implementation. Infrastructure costs, workforce training, and maintenance requirements often place pressure on public budgets, particularly in developing economies. Therefore, although AI improves efficiency, governments must carefully evaluate the trade-offs between technological investment and fiscal sustainability.

### **AI and Accountability in the Public Sector**

The findings also reveal a positive association between AI and accountability ( $r = 0.653$ ). AI-driven systems provide monitoring tools, digital footprints, and automated reporting mechanisms that can enhance oversight and reduce opportunities for corruption (Kim et al., 2024). Government officials acknowledged these benefits, reflecting optimism that AI could strengthen compliance with established policies. However, the relatively lower correlation compared to efficiency and transparency suggests lingering scepticism. Concerns revolve around algorithmic bias, opaque decision-making processes, and the absence of robust legal frameworks regulating AI use (Hassan et al., 2024). In this respect, AI can paradoxically undermine accountability if citizens or oversight bodies cannot interpret or challenge automated decisions. Thus, while AI is seen as an enabler of accountability, its success depends heavily on the existence of strong institutional frameworks, regulatory clarity, and mechanisms for human oversight.

### **AI and Transparency in Governance**

Transparency emerged as the strongest domain influenced by AI, with the correlation coefficient reaching 0.776. Officials perceived AI as instrumental in making government operations more visible and traceable, particularly through real-time data sharing and fraud detection systems. These findings are consistent with Sattlegger (2024), who argued that digital governance platforms improve transparency by enabling open access to government information. Similarly, Rodríguez et al. (2015) observed that AI-facilitated platforms in Nigeria expanded public access to government records, thereby enhancing citizen trust. However, transparency gains may not be uniformly distributed. The

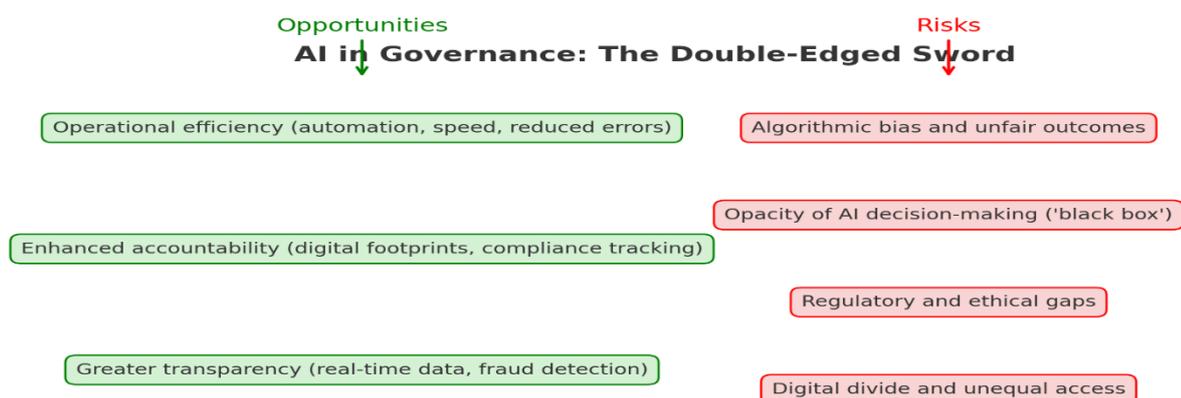
digital divide can limit citizens' ability to access and interpret AI-driven outputs, reinforcing existing inequalities. Moreover, governments may strategically withhold or manipulate AI-generated insights, thereby compromising the intended openness. Consequently, transparency remains contingent not only on the technology itself but also on political will and equitable access to digital infrastructure.

### The Double-Edged Nature of AI in Governance

Taken together, these findings affirm that AI is simultaneously a driver of positive change and a source of potential risks. On the one hand, it can streamline operations, enhance monitoring, and open government activities to public scrutiny. On the other hand, issues such as algorithmic opacity, bias, regulatory gaps, and unequal access can hinder its effectiveness. Government officials' perceptions thus reflect a pragmatic recognition of AI's dual role: it offers unprecedented opportunities for reform but also introduces ethical, technical, and institutional challenges.

### Implications for Policy and Practice

For AI to fulfil its promise, policymakers must adopt a balanced approach that maximizes benefits while mitigating risks. This requires sustained investment in digital infrastructure, the establishment of comprehensive regulatory frameworks, and the promotion of AI literacy among both officials and citizens. Moreover, embedding human oversight in AI processes is essential to safeguard accountability and trust. By addressing these issues, governments can transform AI from a double-edged sword into a sustainable tool for enhancing governance outcomes. It can see to conceptual figure below:



### Conclusion

AI has the potential to make vast improvements in governance and public administration, by driving efficiency, decision-making and revolutionizing service delivery. But we still must struggle with bias, transparency, data privacy and ethical issues to responsibly deploy AI in the public sector. This requires strong regulatory structures by the government that provide clear direction on AI deployment and inculcate the ethical standards and mechanisms of accountability. Transparency is also a crucial factor in building public trust in AI-informed governance. Setting up the means for

explainable AI and open decision making is about defeating skepticism and enhancing citizen involvement. Bias in AI models is an ethical issue that can be addressed by including broader range of data, conducting audits and continuously monitoring the performance of AI systems.

And delivering appropriate data privacy protections will protect individuals' rights while enabling governments to use AI to improve decision making and the delivery of services. Investments into R&D will be needed to tackle these continuous challenges in an efficient way. Advances in AI governance, ethical deployment, and ongoing monitoring can improve the incorporation of AI into public administration. Building institutional capacities with tailored training for government staff will boost AI implementation. Cooperation among policymakers, tech specialists, and civil society can promote an efficient, transparent, and accountable AI-powered public sector. Governments tackling these challenges proactively will be well-equipped to leverage AI's transformative power for building a fairer and more responsive society.

## References

- Adeyeye, B. G., & Otusanya, J. O. (2015). The impact of taxpayers' perception of government's accountability, transparency and reduction in fiscal corruption on voluntary tax compliance in Nigeria. *International Journal of Economics and Accounting*, 6(3), 276-299. <https://doi.org/10.1504/IJEA.2015.071817>
- Al-Abdullatif, A. M. (2024). Modeling teachers' acceptance of generative artificial intelligence use in higher education: The role of AI literacy, intelligent TPACK, and perceived trust. *Education Sciences*, 14(11), 1209. <https://doi.org/10.3390/educsci14111209>
- Amankwah-Amoah, J., & Lu, Y. (2022). Harnessing AI for business development: a review of drivers and challenges in Africa. *Production Planning & Control*, 35(13), 1551-1560. <https://doi.org/10.1080/09537287.2022.2069049>
- Azis, F., Annafiah, N., Fadhilatunisa, D., Mazidan, A. Y., & Junian, S. B. (2024). Merevolusi E-commerce dengan AI: Studi Penerimaan AI Ecommerce dengan TAM. *Jurnal Pendidikan Terapan*, 104-116. <https://doi.org/10.61255/jupiter.v2i2.216>
- Bouderhem, R. (2024). Shaping the future of AI in healthcare through ethics and governance. *Humanities and Social Sciences Communications*, 11(1), 1-12. <https://doi.org/10.1057/s41599-024-02894-w>
- Coelho, M. R., & Silva, M. R. (2024). Artificial intelligence as a tool for efficiency in public administration. *Ciências Sociais Aplicadas*, 29(140). <https://doi.org/10.69849/revistaft/ch10202411122213>
- Damar, M., Özen, A., Çakmak, Ü. E., Özoğuz, E., & Erenay, F. S. (2024). Super AI, Generative AI, Narrow AI and Chatbots: An Assessment of Artificial Intelligence Technologies for The Public Sector and Public Administration. *Journal of AI*, 8(1), 83-106. <https://doi.org/10.61969/jai.1512906>
- Ejiogu, A., Ejiogu, C., & Ambituuni, A. (2019). The dark side of transparency: Does the Nigeria extractive industries transparency initiative help or hinder accountability and corruption control?. *The British Accounting Review*, 51(5), 100811. <https://doi.org/10.1016/j.bar.2018.10.004>
- Eke, D. O., Wakunuma, K., & Akintoye, S. (2023). Responsible AI in Africa: challenges and opportunities. Palgrave Macmillan. <https://doi.org/10.1007/978-3-031-08215-3>
- Espina-Romero, L., Noroño Sánchez, J. G., Gutiérrez Hurtado, H., Dworaczek Conde, H., Solier Castro, Y., Cervera Cajo, L. E., & Rio Corredoira, J. (2023). Which industrial sectors are affected by artificial intelligence? A bibliometric analysis of trends and Perspectives. *Sustainability*, 15(16), 12176. <https://doi.org/10.3390/sul151612176>

- Gavurova, B., Jencova, S., Bacik, R., Miskufova, M., & Letkovsky, S. (2022). Artificial intelligence in predicting the bankruptcy of non-financial corporations. *Oeconomia Copernicana*, 13(4), 1215-1251.
- Gwagwa, A., Kraemer-Mbula, E., Rizk, N., Rutenberg, I., & De Beer, J. (2020). Artificial Intelligence (AI) deployments in Africa: benefits, challenges and policy dimensions. *The African Journal of Information and Communication*, 26, 1-28. <https://doi.org/10.23962/10539/30361>
- Hassan, S., Asad, S. M. N., Eslami, M., Mattei, N., Culotta, A., & Zimmerman, J. (2024, October). PACE: Participatory AI for Community Engagement. In *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing* (Vol. 12, pp. 151-154). <https://doi.org/10.1609/hcomp.v12i1.31610>
- Hermosa, P. M., Jorge, S., Urquía-Grande, E., & del Campo, C. (2023). Transparency in South American Central Governments. In *Global Encyclopedia of Public Administration, Public Policy, and Governance* (pp. 12892-12907). Cham: Springer International Publishing. [https://doi.org/10.1007/978-3-030-66252-3\\_4130](https://doi.org/10.1007/978-3-030-66252-3_4130)
- Kim, D. E., Lee, H., Lee, S. K., & Eom, S. J. (2024, June). Conditions for AI systems adoption in public sector: From an accountability perspective. In *Proceedings of the 25th Annual International Conference on Digital Government Research* (pp. 42-51). <https://doi.org/10.1145/3657054.3657060>
- Liu, Q. (2024). Research on the impact and improvement path of artificial intelligence on government regulation efficiency. *Journal of Computer Technology and Electronic Research*, 1(1). <https://doi.org/10.70767/jcter.v1i1.58>
- Madupati, B. (2024). The Role of AI in the Public Sector: A Technical Perspective. Available at SSRN 5076600. <http://dx.doi.org/10.2139/ssrn.5076600>
- Margetts, H. (2022). Rethinking AI for good governance. *Daedalus*, 151(2), 360-371. [https://doi.org/10.1162/daed\\_a\\_01922](https://doi.org/10.1162/daed_a_01922)
- Moharrak, M., Nguyen, N. P., & Mogaji, E. (2024). Business environment and adoption of AI: Navigation for internationalization by new ventures in emerging markets. *Thunderbird International Business Review*, 66(4), 355-372. <https://doi.org/10.1002/tie.22384>
- Ndaka, A., Lassou, P. J., Seny Kan, K. A., & Fosso-Wamba, S. (2024). Toward response-able AI: A decolonial perspective to AI-enabled accounting systems in Africa. *Critical Perspectives on Accounting*, 99, 102736. <https://doi.org/10.1016/j.cpa.2024.102736>
- Ng, Y. L. (2024). A longitudinal model of continued acceptance of conversational artificial intelligence. *Information Technology & People*. <https://doi.org/10.1108/ITP-06-2023-0577>
- Okpanum, I., & Omeihe, K. O. (2024). Artificial Intelligence in nigeria: How ready are we? *Businessday NG*. Available at: <https://businessday.ng/opinion/article/artificial-intelligence-in-nigeria-how-ready-are-we/> (Accessed: 17 January 2025).
- Pulijala, S. K. (2024). Artificial intelligence in governance: opportunities, challenges, and ethical implications for public administration. *International Journal for Multidisciplinary Research*, 6(6). <https://doi.org/10.36948/ijfmr.2024.v06i06.29990>
- Renda, A. (2019). Artificial Intelligence. Ethics, governance and policy challenges. CEPS Centre for European Policy Studies.
- Salam, R., Sinurat, M., Yasin, A., & Sapiro, R. (2023). Implementation of Artificial Intelligence in Governance: Potentials and Challenges. *Influence: international journal of science review*, 5(1), 243-255.
- Sattlegger, A. (2024, August). Ethical Governance of Emerging Digital Technologies in the Public Sector: Insights from Dutch Digital Ethics Commissions. In *International Conference on Electronic Participation* (pp. 131-146). Cham: Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-70804-6\\_9](https://doi.org/10.1007/978-3-031-70804-6_9)
- Shaikh, Z. H., Irfan, M., Nomran, N. M., & Ratnakaram, S. P. K. (2024). Unlocking the Potential of AI for Efficient Governance: Innovative Approaches of Bahrain. In *AI-Driven Decentralized Finance and the Future of Finance* (pp. 112-138). IGI Global. <https://doi.org/10.4018/979-8-3693-6321-8.ch005>
- Statista (2024). Artificial Intelligence – Nigeria. Available [Online] at: <https://www.statista.com/outlook/tmo/artificial-intelligence/nigeria>

- Vasconcelos, E. S., & dos Santos, F. A. (2024). Inteligência artificial na gestão pública brasileira: desafios e oportunidades para a eficiência governamental. *OBSERVATÓRIO DE LA ECONOMÍA LATINOAMERICANA*, 22(6), e5017-e5017. <https://doi.org/10.55905/oelv22n6-020>
- Wang, Y. (2024). Algorithmic decisions in education governance: implications and challenges. *Discover Education*, 3(1), 229. <https://doi.org/10.1007/s44217-024-00337-x>
- Zou, K. H., & Li, J. Z. (2022, October). Enhanced patient-centricity: how the biopharmaceutical industry is optimizing patient care through AI/ML/DL. In *Healthcare* (Vol. 10, No. 10, p. 1997). MDPI. <https://doi.org/10.3390/healthcare10101997>