JIRRS
Journal International Review of Research Studies

Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Key Concepts Regarding the Ethical Implications of Artificial Intelligence: A Review

Oluwatosin ADEMIJU [1]

[1]Bayero University Kano, Nigeria; https://orcid/0009-0009-3166-1710

Corresponding author: Oluwatosin ADEMIJU

Abstract

This study presents a review of relevant literature on key concepts related to the ethical implications of artificial intelligence (AI). It explores the historical evolution, conceptual foundations, classifications, and ethical frameworks. Furthermore, it adopts the Responsible AI Framework, which emphasises fairness, accountability, transparency, and human-centred design as articulated by global institutions such as the Organisation for Economic Co-operation and Development (OECD), United Nations Education Scientific Cultural Organization (UNESCO), and the European Commission. These frameworks were found to integrate ethical theory and policy and governance perspectives. Finally, the concepts reviewed provide the analytical foundation for understanding the ethical implications of AI in public policy decision-making, particularly within the Nigerian context.

Keywords: ***Artificial Intelligence, Ethics, Ethical implications, Public policy***.

1. Introduction

Artificial intelligence (AI) has become ubiquitous in contemporary society, with applications spanning multiple sectors worldwide. Different stakeholders and professionals employ AI to improve services, enhance operational efficiency, increase productivity, boost accuracy, and drive profitability (Sifgrids, Nieminen, et al., 2022; Datta, 2024; Maphosa, 2024; Adeniran, Olaleye & Gbadegesin, 2026). Governments, industries, and professionals are core users of AI in their operations and service delivery.

In governance, AI is increasingly used to enhance public service delivery (Olaniyi, Bamise, et al., 2026). The automation of routine administrative tasks enables government organisations to focus on strategic and citizen focused projects. Machado, Silva, and Neiva (2023) explain that chatbots and virtual assistants improve citizen interactions by providing prompt responses, reducing waiting times, and enhancing user satisfaction. Datta (2024) further notes that predictive analytics

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

helps governments anticipate challenges such as traffic congestion and disaster relief, enabling proactive responses rather than reactive ones. These developments enhance operational efficiency and promote public trust in government institutions (Omigbodun & Akinloye, 2026).

AI's growing importance in governance extends beyond efficiency; it also plays a crucial role in fostering transparency and accountability (Akinloye 2025). By monitoring processes and detecting anomalies, AI can reduce corruption and ensure compliance with laws and regulations. However, concerns have emerged about the impersonal nature of AI-based interactions, potential job displacement, and increasing unemployment due to automation (Akinloye, 2024a).

Businesses and professionals in sectors such as financial services also use AI to improve service delivery. For example, chatbots provide automated responses to clients, saving time, increasing customer satisfaction, boosting productivity, and reducing overhead costs (Sifgrids et al., 2022; Maphosa, 2024; Olorunfemi, Adeniran, & Amoako Sakyi, 2024). Despite these benefits, AI introduces ethical challenges that can undermine transparency and accountability in public policy decision-making (Ilugbami, Omigbodun *et al*., 2025; Olorunfemi & Adeniran, 2020).

This study is purposed at exploring the ethical implications inherent in the use of Artificial Intelligence for public policy decision-making, while balancing the need for innovation and accountability.

---

2. Literature Review

Historical evolution of artificial intelligence

The concept of Artificial Intelligence (AI) emerged from early philosophical inquiries into the nature of reasoning and cognition. Its roots can be traced to classical works on logic and computation, particularly Aristotle's contributions to deductive reasoning. The modern foundation for AI was laid in Alan Turing's (1950) seminal paper Computing Machinery and Intelligence, which introduced the Turing Test as a measure of machine intelligence. This intellectual momentum culminated in the 1956 Dartmouth Conference, where John McCarthy, Marvin Minsky, Nathaniel Rochester, and Claude Shannon formally established AI as a field of study (McCarthy et al., 1956).

AI research has since passed through multiple phases such as initial optimism driven by symbolic reasoning, periods of stagnation known as AI winters, and a resurgence driven by advances in machine learning, statistical modelling, and neural networks. Contemporary breakthroughs in deep learning and large-scale data analytics have enabled transformative applications in robotics, generative AI, autonomous systems, and decision-support technologies (LeCun, Bengio, & Hinton, 2015; Russell & Norvig, 2021). This historical trajectory shows how AI evolved from theoretical speculation into a pervasive technological force shaping modern society.

Artificial intelligence as a concept

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Classical scholars provide foundational definitions of AI. McCarthy (1956) defined AI as "the science and engineering of making intelligent machines." Minsky (1967) similarly described it as "the ability of machines to perform tasks that would require intelligence if done by humans." Nilsson (1998) further conceptualised AI as the study of agents capable of perceiving and acting upon their environment.

Although philosophical precursors exist, the formal birth of AI occurred at the 1956 Dartmouth Conference. Early efforts centred on symbolic reasoning, but the field was profoundly transformed by machine learning and neural network breakthroughs at the end of the 20th century (Russell & Norvig, 2021). AI is now broadly defined as the development of computer systems capable of performing tasks that typically require human intelligence such as learning, reasoning, perception, and decision-making (Omigbodun, Akinsola & Familusi, 2026; Akinloye, 2024b; Ogunode, Edinoh, & Okolie, 2023).

The European Commission (2021) defines AI as "systems that display intelligent behavior by analysing their environment and taking actions, with some degree of autonomy, to achieve specific goals." These systems encompass machine learning algorithms, deep learning networks, natural language processing models, and computer vision technologies.

AI development has progressed in waves: symbolic AI, statistical learning, deep learning, and now generative AI (e.g., ChatGPT, Gemini, DALL·E). These systems drive automation, predictive analytics, and decision-support across governance, health, finance, education, and transportation. However, the increasingly autonomous and influential nature of AI has magnified concerns around ethics, accountability, bias, fairness, and governance (Floridi et al., 2023; Novelli, Taddeo, & Floridi, 2023).

Within public policy, AI supports data analysis, policy simulations, and predictive modelling to improve efficiency and transparency. Yet scholars warn that overreliance on AI can delegate excessive discretion to automated systems, producing accountability gaps and ethical dilemmas (Morley, Floridi et al., 2019). For this reason, AI must be seen as a complementary tool that augments human decision-making while retaining human oversight.

Concept of innovation in AI

Innovation in Artificial Intelligence (AI) refers to the continuous development and refinement of AI technologies, resulting in new applications, improved performance, and enhanced problem-solving capabilities. Holm, Hain et al. (2023) describe innovation in AI as an interaction between technological advancement and organisational transformation, through which AI enables new capabilities across economic, social, and governance domains. This innovation drives progress across multiple sectors by increasing productivity, creating new opportunities, and fostering creativity (Edim, Gbadegesin, *et al*., 2025).

Recent developments in AI innovation include advances in deep learning, reinforcement learning, and large language models, which have significantly

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

reshaped automation and creative processes. Generative AI systems are now capable of producing text, images, music, and designs that closely resemble human creativity. In healthcare, AI technologies improve diagnostic accuracy; in finance, they enhance fraud detection and risk management; and in public administration, they support predictive policymaking and improved service delivery. These developments have been widely documented (Morley et al., 2019; Adeniran, Olorunfemi & Njoku, 2022; Holm et al., 2023; Olorunfemi & Adeniran, 2024).

Innovation in AI has also led to increased efficiency in systems and processes. Through automation, faster and more precise data analysis, and process optimisation, AI contributes to higher productivity and operational efficiency across various industries. Bianchini, Müller, and Pelletier (2022) emphasise that AI-driven automation enhances organisational performance, while Bahoo, Cucculelli, and Qamar (2023) highlight its role in improving decision-making and cost efficiency. These efficiency gains enable organisations to reduce costs, improve decision-making speed, and enhance overall performance.

Furthermore, AI innovation has been strengthened through its integration with other emerging technologies such as the Internet of Things (IoT) and quantum computing. This convergence amplifies AI's transformative potential by enabling real-time data processing, intelligent automation, and advanced predictive capabilities (Olaniyi, Ilugbami, Olorunfemi & Ojo, 2024). In the financial sector, for example, AI algorithms are increasingly used to analyse large volumes of data for fraud detection, risk assessment, and personalised financial services (Bahoo, Cucculelli, & Qamar, 2023; Holm, Hain, et al., 2023).

In addition, the growing role of AI in innovation processes is reshaping human–machine interaction and necessitating new approaches to collaboration, management, and governance. As noted by Bianchini, Müller, and Pelletier (2022), this transformation requires new organisational structures that integrate human and machine intelligence. This shift is particularly evident in generative AI models such as ChatGPT, Grok, and DALL·E, which are capable of producing novel content across multiple domains, including text, images, and music.

Looking ahead, innovation in artificial intelligence is expected to continue transforming industries and social systems through ongoing research and development in areas such as natural language processing, deep learning, and reinforcement learning. The potential for AI to revolutionise critical sectors such as healthcare, energy, transportation, and public administration remains substantial, underscoring its growing importance in contemporary technological and policy environments.

Concept of accountability in AI

In artificial intelligence (AI), accountability refers to the processes and mechanisms that ensure individuals or organisations are held responsible for the design, development, deployment, and outcomes of AI systems. As defined by Cooper, Moss, et al. (2022), accountability involves the clear definition of roles and responsibilities, the promotion of transparency, and the establishment of procedures

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

to address potential biases, risks, and harms associated with AI systems. Accountability in AI encompasses responsibility assignment, transparency, risk management, oversight and auditing, stakeholder engagement, regulatory compliance, as well as remediation and redress mechanisms (Adeniran, Adeniran, Ogieva et al., 2026).

A central aspect of accountability in AI is the clear assignment of responsibility. It should be possible to identify the individual, group, or institution accountable for the decisions, actions, and consequences of AI systems (Cooper et al., 2022; Novelli, Taddeo, & Floridi, 2023). This is particularly critical when AI systems malfunction or produce harmful outcomes. Accountability also requires transparency in AI processes and outputs. The design, development, and operational logic guiding AI decisions should be explainable and open to scrutiny, thereby fostering trust and confidence among stakeholders.

Proactive risk management is another essential component of accountability in AI. Novelli,Taddeo, and Floridi (2023) emphasise that this involves the systematic identification, assessment, and mitigation of risks, including bias, discrimination, and unintended social impacts. Complementing risk management are mechanisms for auditing and oversight, which ensure that AI systems function as intended and that corrective actions are taken when deviations or failures occur.

Accountability in AI also entails compliance with applicable laws, regulations, and ethical standards governing AI development and use. Stakeholders are expected to adhere to established norms and legal requirements to ensure responsible AI practices (Novelli, Taddeo, & Floridi,2023). Closely related to compliance is the availability of remediation and redress mechanisms. When harm results from AI systems, affected individuals or groups should have access to effective and transparent avenues for complaint, correction, and compensation.

Overall, accountability in artificial intelligence seeks to ensure that AI systems are developed, deployed, and used in a responsible and ethical manner. Effective accountability mechanisms contribute to building public trust in AI technologies, reducing misuse and abuse, and minimising bias and harm associated with AI-driven decision-making.

Key dimensions of accountability in AI include responsibility assignment, which clarifies who is answerable when AI systems fail or cause harm; transparency and explainability, which make AI decision-making processes understandable and subject to scrutiny; risk management and auditing, which involve continuous assessment and monitoring of potential harms; and compliance and redress mechanisms, which ensure adherence to ethical standards and provide remedies when harm occurs. Accountability frameworks play a critical role in promoting ethical conduct, institutional integrity, and public trust, particularly in public sector applications where AI increasingly influences policymaking, data management, and service delivery.

Concept of AI governance

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Artificial Intelligence (AI) governance refers to the frameworks, institutions, rules, and processes through which the development, deployment, and use of AI systems are directed, controlled, and held accountable within a society. As noted by Floridi et al. (2018) and the OECD (2019), AI governance encompasses legal, ethical, technical, and institutional arrangements designed to ensure that AI technologies serve public interest objectives while minimising risks and unintended consequences. In the public sector, AI governance is particularly concerned with transparency, accountability, institutional responsibility, and policy coherence.

A central dimension of AI governance is state capacity and regulatory authority, which incorporates the principles of AI sovereignty. Within this framework, AI sovereignty is understood as the ability of a state to exercise control over AI-related data, infrastructure, and regulatory decision-making in line with national values and development priorities (Mugge, 2023). Rather than existing as a separate concept, sovereignty functions as a governance concern that reflects how states assert authority over AI systems operating within their jurisdiction.

One key aspect of AI governance is control over data and digital infrastructure. Governments are increasingly required to establish data governance regimes that regulate data collection, storage, processing, and cross-border flows. Bianchini and Christou (2022) emphasise that this includes data residency requirements, privacy safeguards, and oversight mechanisms that protect sensitive public data used in AI systems. Effective governance in this area enhances trust in AI-enabled public services and reduces dependency on foreign-controlled platforms.

AI governance also entails the development of ethical and regulatory frameworks that guide AI deployment. These frameworks address issues such as fairness, bias, transparency, explainability, and accountability, ensuring that AI systems align with societal values and human rights norms (Floridi, Cowls, & Taddeo, 2020). Clear regulatory standards help define the responsibilities of public institutions, private developers, and users of AI technologies, thereby strengthening institutional accountability.

Another important element of AI governance is its strategic and developmental dimension. AI is increasingly treated as a strategic asset with implications for economic competitiveness, public sector efficiency, and national security. Governments therefore adopt governance strategies that support domestic innovation, skills development, and public–private collaboration while safeguarding national interests. Calderaro and Blumfelde (2022) argue that this approach reflects the integration of AI governance into broader digital transformation agendas, while Mugge (2023) highlights its implications for sovereignty and state control.

In practical terms, AI governance requires coordinated institutional arrangements, capacity-building within public institutions, and mechanisms for monitoring and evaluation. Without strong governance structures, the deployment of AI particularly in policymaking and service delivery risks exacerbating inequality, bias, and institutional opacity. In developing-country contexts such as Nigeria, effective AI governance is therefore closely tied to broader challenges of institutional capability, regulatory enforcement, and policy implementation.

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

By integrating sovereignty concerns within AI governance, this approach avoids conceptual fragmentation while providing a comprehensive framework for understanding how states regulate, control, and harness AI technologies. AI governance thus offers a holistic lens for examining the interaction between technological innovation, ethical oversight, institutional capacity, and national development objectives in the use of artificial intelligence.

Conceptual anchor of the study

Although this study reviews several interrelated concepts, including Artificial Intelligence, Innovation in Artificial Intelligence, and Accountability in Artificial Intelligence, it is principally anchored on the concept of Artificial Intelligence Governance. This is because the study is concerned not merely with the existence of AI technologies, but with the frameworks, institutions, and ethical principles through which such technologies are regulated, deployed, and controlled in public policy decision-making.

Artificial intelligence governance provides the most suitable conceptual lens for the study because it integrates issues of transparency, accountability, ethical oversight, institutional responsibility, and regulatory coordination. It also accommodates concerns relating to innovation, state capacity, and public interest, all of which are central to the deployment of AI in governance. Within the Nigerian context, this concept is particularly relevant because the use of AI in public policy requires not only technological capability but also effective governance mechanisms to ensure that innovation does not undermine ethical standards or public trust.

Accordingly, while Artificial Intelligence, Innovation, and Accountability remain important supporting concepts in the study, Artificial Intelligence Governance serves as the main conceptual anchor through which the ethical implications of AI in public policy decision-making are interpreted and analysed.

---

3. Empirical Review

Artificial intelligence in public policy decision-making

Artificial Intelligence (AI) represents a transformative technological paradigm that enables systems to perform tasks traditionally requiring human intelligence, including learning, reasoning, pattern recognition, and decision-making. As observed by Maphosa (2024), AI systems function by identifying patterns within large datasets, thereby enabling predictive and prescriptive analytics at unprecedented speed and scale. In the context of public governance, this capability positions AI as a critical tool for enhancing policy formulation, implementation, and evaluation.

In contemporary governance systems, AI is increasingly deployed to improve administrative efficiency, optimise service delivery, and enhance decision-making processes. According to Datta (2024) and Maphosa (2024), AI enables

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

governments to transition from reactive governance models to proactive and predictive systems. For instance, predictive analytics can be used to anticipate infrastructure failures, disease outbreaks, or security threats, thereby enabling early intervention. Similarly, AI-powered chatbots and virtual assistants enhance citizen engagement by providing real-time responses to public inquiries, reducing bureaucratic delays, and improving service accessibility (Fadare & Adeniran, 2018; Machado, Silva & Neiva, 2023; Datta, 2024; Olaniyi, Adeniran, Ogieva & Ogwuche, 2026).

In Nigeria, the application of AI in governance remains at a nascent stage, with emerging efforts led by institutions such as the National Information Technology Development Agency (NITDA) and related digital transformation initiatives. However, challenges such as fragmented data systems, limited interoperability, and weak institutional coordination continue to constrain the effective deployment of AI in public policy processes.

Beyond efficiency, AI also holds significant potential for improving transparency and accountability in governance. Through anomaly detection and automated monitoring systems, AI can identify irregularities in procurement processes, financial transactions, and public service delivery, thereby reducing opportunities for corruption (Ayomide, Olaniyi, et al., 2024). However, this potential is contingent on the quality, integrity, and governance of data systems. In Nigeria, where public sector data infrastructure remains fragmented and often unreliable, the effectiveness of AI-driven governance is significantly constrained (Adeniran & Gbadamosi, 2017; Datta, 2024; Huang et al., 2024).

From a socio-technical perspective, AI in governance cannot be understood purely as a technological intervention. Rather, it operates within a complex system of institutional structures, human actors, regulatory frameworks, and socio-political dynamics. As such, the deployment of AI in public policy decision-making in Nigeria must be viewed as an interaction between technological capabilities and institutional realities. This includes issues such as bureaucratic capacity, political will, digital literacy, and public trust.

While AI offers immense opportunities, it also introduces structural risks. These include algorithmic opacity, over-reliance on automated systems, and the potential erosion of human discretion in policy decisions. Herrmann and Pfeiffer (2022) argue that AI systems must remain subject to human oversight to prevent the delegation of critical governance responsibilities to opaque systems. This position is reinforced by Guest, Knox and Warhurst (2022), who emphasise that technological systems must be embedded within human-centred institutional frameworks to ensure accountability.

In the Nigerian context, these challenges are amplified by weak institutional capacity, regulatory gaps, and uneven technological adoption. Consequently, while AI holds transformative potential for governance, its deployment must be carefully managed to avoid reinforcing existing institutional weaknesses.

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Empirical studies also reinforce the importance of trust in AI-driven systems. Zhang, Liu et al. (2022) demonstrate that user trust in technological systems is largely influenced by confidence in system outcomes, which has direct implications for the acceptance of AI in governance contexts.

Ethical and responsible use of AI in public policy

The integration of AI into public policy processes introduces a complex set of ethical challenges that extend beyond technical considerations. Central among these are issues of fairness, transparency, accountability, privacy, and human autonomy. As Awad et al. (2020) and Huang etal. (2024) argue, AI systems are not neutral; they reflect the biases embedded in their training data and design processes. This raises significant concerns in public policy contexts where decisions can have far-reaching societal consequences.

One of the most critical ethical concerns is algorithmic bias. AI systems trained on historical data may replicate and even amplify existing social inequalities. In Nigeria, where socio-economic disparities are pronounced, the use of biased data in AI systems could lead to discriminatory outcomes in areas such as resource allocation, law enforcement, and social welfare distribution. This underscores the need for robust ethical frameworks that ensure fairness and inclusivity in AIdriven decision-making.

Transparency and explainability also remain fundamental ethical requirements. Public policy decisions must be justifiable and open to scrutiny. However, many AI systems operate as “black boxes,” making it difficult to understand how decisions are made. This lack of transparency undermines public trust and complicates accountability mechanisms. As Diallo, Shults and Wildman (2021) note, the opacity of AI systems poses a significant challenge to democratic governance.

In the Nigerian context, these concerns are particularly significant given the evolving nature of data protection frameworks such as the Nigerian Data Protection Regulation (NDPR). While the NDPR provides a foundation for data privacy, enforcement challenges and limited institutional capacity raise concerns about the adequacy of safeguards in AI-driven governance systems (Adeniran & Olorunfemi, 2020).

From a governance perspective, ethical AI requires a shift from reactive regulation to proactive design. This involves embedding ethical principles into the development and deployment of AI systems is a concept often referred to as “ethics by design.” Sartori and Theodorou (2022) emphasise that responsible AI must incorporate governance mechanisms, stakeholder participation, and continuous monitoring to ensure compliance with ethical standards.

Empirical evidence further supports these concerns. For instance, Sartori and Bocca (2023) found that public perceptions of artificial intelligence are significantly shaped by concerns about accountability, transparency, and ethical uncertainty, particularly in contexts where AI systems influence decision-making processes.

Innovation and accountability in AI-driven governance

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Artificial Intelligence is a key driver of innovation in public policy, enabling governments to leverage data for more informed and effective decision-making. However, this innovation introduces a fundamental tension between efficiency and accountability. While AI systems can enhance speed and accuracy, they may also obscure responsibility and reduce human oversight.

Innovation in governance is often associated with increased automation and data-driven decision-making. As Roberts et al. (2021) argue, AI enables governments to process complex datasets and generate insights that would be impossible through traditional methods. This has significant implications for policy areas such as urban planning, healthcare, and national security (Adeniran, Olorunfemi & Akanmu, 2025).

However, the integration of AI into decision-making processes raises critical accountability concerns. Who is responsible when an AI system makes a flawed decision? Is it the developer, the policymaker, or the institution deploying the system? These questions highlight the need for clear accountability frameworks that define roles and responsibilities within AI-enabled governance systems.

In Nigeria, where institutional accountability mechanisms are often weak, the adoption of AI could either improve or further complicate governance structures. On one hand, AI can enhance transparency by providing audit trails and real-time monitoring. On the other hand, it can create new forms of opacity if not properly regulated.

This tension is consistent with empirical findings by Yu, Xu and Ashton (2023), who demonstrate that the outcomes of AI adoption are shaped by the interaction of technical subsystems, organisational structures, and environmental conditions, highlighting the importance of aligning innovation with institutional capacity.

The challenge, therefore, lies in ensuring that innovation does not outpace accountability. This requires the development of regulatory frameworks, institutional capacity, and governance structures that can effectively manage AI systems.

This tension underscores a fundamental governance dilemma: while artificial intelligence enhances decision-making capacity, it simultaneously redistributes accountability in ways that may obscure responsibility within public institutions.

Innovation and ethical considerations

The relationship between innovation and ethics in AI is inherently complex. While innovation drives progress, it also introduces new risks and uncertainties. As Vesnic-Alujevic, Nascimento and Pólvora (2020) observe, technological advancements often outpace regulatory and ethical frameworks, creating governance gaps.

In the Nigerian context, this challenge is particularly pronounced. The push for digital transformation and innovation must be balanced with the need to protect societal values and public interest. Without adequate safeguards, AI-driven innovation could exacerbate existing inequalities and undermine public trust.

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Ethical considerations must therefore be integrated into the innovation process. This involves not only regulatory oversight but also institutional culture and professional ethics. Machado, Silva and Neiva (2023) argue that ethical AI requires a multidisciplinary approach that incorporates technical, legal, and social perspectives.

In Nigeria, the ethical implications of AI-driven innovation are further complicated by socioeconomic inequalities and uneven access to digital infrastructure. Without deliberate safeguards, AI systems risk reinforcing existing disparities by privileging populations with greater access to data and digital resources, thereby raising concerns about inclusivity and social justice in public policy outcomes.

This concern aligns with empirical findings by Kolade and Owoseni (2022), who highlight that technological advancements, particularly artificial intelligence, can exacerbate inequality and labour displacement if not accompanied by appropriate institutional and policy responses.

AI adoption and sovereignty in Nigeria

The adoption of artificial intelligence (AI) in public policy and governance has accelerated globally, with governments increasingly integrating AI-driven systems into decision-making, service delivery, and administrative processes. In Nigeria, AI adoption remains at an emerging but rapidly evolving stage, driven by digital transformation initiatives across sectors such as finance, identity management, security, and public administration. Government agencies and institutions are beginning to deploy AI-enabled tools for data analysis, automation, and citizen engagement, particularly within e-governance platforms and digital public services.

The growing adoption of AI in Nigeria is closely linked to broader digital transformation efforts aimed at improving efficiency, transparency, and service delivery. For instance, the expansion of digital identity systems, FinTech innovations, and data-driven governance initiatives reflects the increasing reliance on algorithmic systems to support policy implementation and administrative processes. These developments indicate a shift toward data-centric governance, where decision-making is increasingly informed by automated systems and predictive analytics. However, while AI adoption presents significant opportunities for innovation, it also raises critical concerns regarding control, ownership, and governance of technological systems.

Central to this discourse is the concept of AI sovereignty, which refers to the capacity of a state to exercise control over its AI infrastructure, data systems, and regulatory frameworks in alignment with national priorities and values (Mugge, 2023). AI sovereignty extends beyond mere adoption; it encompasses the ability of a country to design, deploy, regulate, and govern AI systems without excessive dependence on external actors. In the Nigerian context, this issue is particularly significant, as much of the AI infrastructure such as cloud computing platforms, data storage systems, and advanced machine learning models is developed and controlled by foreign technology firms.

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

This dependence on external technologies introduces several challenges. First, it raises concerns about data governance and control, particularly regarding where data is stored, how it is processed, and who has access to it. When public sector data is hosted on foreign platforms, issues of data privacy, security, and national interest become more pronounced (Bianchini & Christou, 2022). Second, reliance on externally developed AI systems may limit regulatory effectiveness, as governments may lack full visibility into the operational logic of proprietary algorithms. This creates potential accountability gaps, especially when AI systems are used in sensitive areas such as public policy decision-making, resource allocation, and citizen services.

Furthermore, the lack of indigenous AI development capacity can constrain Nigeria's ability to align AI systems with local socio-cultural, economic, and political realities. AI systems trained on data from different contexts may produce biased or inappropriate outcomes when applied within the Nigerian environment. This reinforces concerns about fairness, inclusivity, and ethical use of AI in governance. As scholars have argued, the governance of AI must reflect contextual realities and local institutional dynamics to ensure legitimacy and effectiveness (Floridi, Cowls & Taddeo,2020).

The issue of AI sovereignty also intersects with broader questions of innovation and accountability, which are central to this study. While the adoption of AI can drive innovation in governance by improving efficiency and enabling data-driven decision-making, excessive dependence on external systems may undermine accountability. When governments rely on opaque, externally controlled AI technologies, it becomes more difficult to ensure transparency, assign responsibility, and implement effective oversight mechanisms. This creates a tension between the pursuit of innovation and the need to maintain institutional control and accountability in public policy processes.

From a policy perspective, achieving AI sovereignty in Nigeria requires deliberate efforts to strengthen local capacity in AI development, data governance, and digital infrastructure. This includes investing in human capital, supporting research and development, promoting public– private partnerships, and establishing clear regulatory frameworks for AI deployment. It also involves developing data governance policies that ensure data localisation, privacy protection, and secure data management practices.

In addition, there is a need for institutional frameworks that can effectively regulate AI systems and ensure their alignment with national development objectives. Agencies such as the National Information Technology Development Agency (NITDA) play a critical role in shaping Nigeria's AI governance landscape, but their effectiveness depends on adequate resources, technical expertise, and enforcement capacity. Without strong institutional mechanisms, the adoption of AI risks exacerbating existing governance challenges rather than addressing them.

In conclusion, while the adoption of artificial intelligence offers significant opportunities for enhancing public policy decision-making in Nigeria, it also raises important concerns about sovereignty, control, and accountability. AI sovereignty

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

provides a critical lens for understanding these challenges, emphasising the need for a balanced approach that promotes innovation while safeguarding national interests and institutional integrity. The ability of Nigeria to navigate this balance will ultimately determine the extent to which AI contributes to sustainable and responsible governance outcomes.

Balancing innovation and accountability in Nigeria

Balancing innovation and accountability remains the central challenge in the adoption of artificial intelligence in public policy decision-making. While AI offers significant benefits in improving efficiency, enhancing service delivery, and enabling data-driven governance, its deployment must be guided by ethical principles and supported by robust governance frameworks to prevent misuse and unintended consequences.

From a socio-technical perspective, achieving this balance requires more than technological advancement; it demands the alignment of technological capabilities with institutional structures, regulatory systems, and societal values. As Diallo, Shults and Wildman (2021) and Ireni-Saban and Sherman (2021) argue, effective AI governance must integrate technical innovation with ethical oversight and institutional accountability. This implies that the success of AI in governance is not determined solely by the sophistication of the technology, but by the strength of the systems that guide its use.

In the Nigerian context, this balance is particularly critical given existing challenges related to institutional capacity, regulatory enforcement, and digital infrastructure. Ensuring accountability in AI adoption requires strengthening regulatory frameworks that can guide the ethical use of AI, while also building the capacity of public institutions to understand, manage, and oversee AI-driven systems. At the same time, transparency and public engagement must be promoted to enhance trust and legitimacy in AI-enabled governance processes. Developing local AI capabilities is equally important, as it reduces dependency on external technologies and ensures that AI systems are better aligned with Nigeria's socio-economic realities.

Ultimately, the responsible use of artificial intelligence in public policy decision-making depends on the ability of the Nigerian state to integrate innovation with accountability in a manner that promotes public trust, equity, and sustainable development. This balance is not static but requires continuous adaptation as both technological capabilities and governance systems evolve.

Analytical dimension of the study

This study examines the relationship between artificial intelligence adoption, innovation, accountability, and ethical considerations in public policy decision-making in Nigeria. Specifically, the study focuses on how the use of artificial intelligence influences innovation in governance processes, and how such innovation interacts with accountability mechanisms and ethical standards.

Artificial intelligence adoption is conceptualised as the primary driver of transformation within public policy systems, while innovation represents the

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

outcome of AI integration in governance processes. Accountability and ethical considerations function as moderating and balancing factors that shape how AI-driven innovation influences governance outcomes.

This analytical focus enables the study to examine not only the benefits of AI in public policy but also the conditions under which such benefits can be realised without compromising transparency, fairness, and institutional responsibility.

---

4. Conclusion

This study examined the ethical implications of artificial intelligence in public policy decision-making, with particular emphasis on balancing innovation and accountability in Nigeria. It explored the role of AI in governance, the ethical challenges associated with its use, and the inherent tension between technological advancement and institutional responsibility. Furthermore, it highlighted the importance of AI governance, sovereignty, and regulatory capacity in shaping policy outcomes.

Anchored on the Socio-Technical Systems theory, the analysis demonstrated that effective AI adoption in public policy requires the alignment of technological systems with social, institutional, and ethical frameworks. Finally, the study, therefore, provides a critical foundation for understanding how artificial intelligence can be deployed in a manner that promotes innovation while safeguarding accountability, public trust, and sustainable governance outcomes in Nigeria.

References

Adeniran, A. O., Adeniran, A. A., Ogieva, M. O., & Ogwuche, G. (2026). Adoption of Intelligent Transport Systems (ITS) in Urban Transportation Planning. Discover Global Society, 4(13), 1-23. https://doi.org/10.1007/s44282-025-00312-3

Adeniran, A. O., & Gbadamosi, K. T. (2017). Concessioning a strategy for enhancing Nigeria's airport operational efficiency - lessons from developed countries. *International Journal of Research in Industrial Engineering,* 6 (3), 228-245.

Adeniran, A. O., Olaleye, G., & Gbadegesin, A. A. (2026). Influence of Online Reviews on Customer Satisfaction in E-Commerce Logistics Firm: Evidence from TEMU Nigeria. Journal International Review of Research Studies, 1(4), 1-27. https://doi.org/10.66104/vth40547

Adeniran, A. O., & Olorunfemi, S.O. (2020). The Essence of Knowledge Management in the Air Transportation Sector. *International Journal of Human*

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Capital and Urban Management, 5(2): 175-186. https://doi.org/10.22034/IJHCUM.2020.02.08

Adeniran, A. O., Olorunfemi, S.O., & Akanmu, A. A. (2025). Exploring Sustainable E-Commerce Logistics Services for Customer Satisfaction. In: Emmanuel, M. Ogochukwu, U. and Chinebuli, W. (Eds.) *Transport Management Services in Africa*, Vol. 1, Taylor & Francis, Pp. 30. https://doi.org/10.4324/9781003560074-6

Adeniran, A. O., Olorunfemi, S. O., & Njoku, I. (2022). Modelling Minicab Drivers' Disordered Behaviour for Choosing Passenger and Destination In Akure, Nigeria. *International Journal of Advances in Applied Sciences (IJAAS)*, 11(1),19-28 http://doi.org/1010.11591/ijaas.v11.i1.pp19-28

Adetayo, A. O., Njoku, I., & Stephens, M. S. (2023). Factors Influencing Willingness-to-Repurchase Airline Services in Nigeria. In: Crowther, D. and Seifi, S. (Ed.) *Innovation, Social Responsibility and Sustainability (Developments in Corporate Governance and Responsibility,* Vol. 22), Emerald Publishing Limited, Leeds, Pp. 25-64. https://doi.org/10.1108/S2043-052320230000022002

Adetayo, A. O., Muraina, M. J., & Ngonadi, J. C. (2023). Energy Consumption for Transportation in Sub-Sahara Africa. In: Crowther, D. and Seifi, S. (Ed.) Achieving Net Zero (Developments in Corporate Governance and Responsibility, Vol. 20), Emerald Publishing Limited, Leeds, Pp. 203-231. https://doi.org/10.1108/S2043-052320230000020009.

Adetayo, A. O., Olorunfemi, S. O., Akinsehinwa, F. O., & Azrour, M. (2024). Google Trend Analysis of Airport Passenger Throughputs: Case Study of Murtala Muhammed International Airport. In: Azrour, M. Mabrouki, J. Guezzaz, A. and Benkirane, S. (Ed.) *Blockchain and Machine Learning for IoT Security,* Pp. 1-16. https://doi.org/10.1201/9781003438779-1

Akinloye, D. N. (2024a). Grandparent-Grandchild Communication: Synthesis of Integrative Model. Psychology Nexus, 1(1), 1-15

Akinloye, D. N. (2024b). Communication and Online Platforms: Pitfalls, Possibilities, and Pressures. Texas Tech University. Ttu-ir.tdl.org

Akinloye, D. N. (2025). Communication Pattern and the Influence of Social Media Contents on Young Adults' Wellbeing in Texas, United States of America. Journal of Communication, 6(2), 1-22.

Awad, E., Anderson, M., Anderson, S. L., & Liao, B. (2020). An approach for combining ethical principles with public opinion to guide public policy. Artificial Intelligence, 287, 103349.

Axon, S., Lent, T., & Njoku, A. (2023). Shifting Sustainable Lifestyle Practices and Behaviour during Times of Pandemic Disruptive Change: Implications for Ongoing Socio-Technical Transitions. *Energy Research & Social Science*, 100, 103055.

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Ayomide, A. A, Olaniyi, A. A, Familusi, O. B. & Adedayo, O. (2024). The Outlook of Cyber Security in African Businesses: Issues and Way-out. Management Analytics and Social Insights, 1 (2), 260-271.

Bahoo, S., Cucculelli, M., & Qamar, D. (2023). Artificial intelligence and corporate innovation: A review and research agenda. Technological Forecasting & Social Change, 188, 122264.

Basu, P. (2022). Social construction of technology and the question of technological change: Rereading Pinch and Bijker. Social Epistemology, 36(3), 374–389.

Bencherki, N. (2017). Actor–Network Theory. In C. R. Scott & L. K. Lewis (Eds.), The International Encyclopedia of Organizational Communication. Wiley-Blackwell.

Bianchini, M., & Christou, G. (2022). Digital sovereignty and data governance: Understanding EU policy responses. Journal of Cyber Policy, 7(1), 1–20.

Bianchini, S., Müller, M., & Pelletier, P. (2022). Artificial intelligence in science: An emerging general method of invention. Research Policy, 51(10), 104604.

Calderaro, A., & Blumfelde, M. (2022). Digital sovereignty and critical infrastructures in Europe: Governance implications. Journal of Contemporary European Research, 18(4), 512–528.

Chowdhury, S., Budhwar, P., Dey, P. K., Joel-Edgar, S., & Abadie, A. (2022). AI–employee collaboration and business performance: Integrating knowledge-based view, sociotechnical systems and organisational socialisation framework. Journal of Business Research, 144, 31–49.

Cochran, W. G. (1977). Sampling techniques (3rd ed.). John Wiley & Sons.

Cooper, A. F., Moss, E., Laufer, B., & Nissenbaum, H. (2022). Accountability in an algorithmic society: Relationality, responsibility, and robustness in machine learning. In Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency (pp. 864-876). Association for Computing Machinery.

Couldry, N. (2016). Actor network theory and media: Do they connect and on what terms? In A. Hepp & F. Krotz (Eds.), Mediatized worlds: Culture and society in a media age (pp. 93– 108). Palgrave Macmillan.

Datta, K. (2024). AI-driven public administration: Opportunities, challenges and ethical considerations. The Social Science Review, 2(6), 134–139.

Davis, M. C., Challenger, R., Jayewardene, D. N. W., & Clegg, C. W. (2014). Advancing sociotechnical systems thinking: A call for bravery. Applied Ergonomics, 45(2), 171–180.

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Diallo, S. Y., Shults, F. L., & Wildman, W. J. (2021). Minding morality: Ethical artificial societies for public policy modeling. AI & Society, 36, 49–57. https://doi.org/10.1007/s00146-020-01028-5

Edim, E., Gbadegesin, A. A., Omigbodun, O. T., & Adeniran, A. O. (2025). Roles of Digital Transformation on SME's Performance in Nigeria. Transactions on qualitative Finance and Beyond, 2(2), 91-108.

European Commission (2021). Proposal for a regulation laying down harmonised rules on artificial intelligence (Artificial Intelligence Act). European Commission. European Commission (2023). Ethics guidelines for trustworthy AI. European Commission.

Fadare, S. O., and Adeniran, A. O. (2018). Comparative analysis of public operated airport terminal and concessioned airport terminal in Lagos, Nigeria. *Discovery*, 54(272), pp. 304-318.

Floridi, L., Cowls, J., & Taddeo, M. (2020). How to design AI for social good: Seven essential factors. Science and Engineering Ethics, 26(3), 1771–1796.

Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Pagallo, U., Rossi, F., Schafer, B., Valcke, P., & Vayena, E. (2018). AI4People-An ethical framework for a good AI society: Opportunities, risks, principles, and recommendations. Minds and Machines, 28(4), 689–707.

Floridi, L., Morley, J., Taddeo, M., & Mökander, J. (2023). Transparency and accountability in AI systems. SSRN Electronic Journal.

Guest, D., Knox, A., & Warhurst, C. (2022). Humanizing work in the digital age: Lessons from socio-technical systems and quality of working life initiatives. Human Relations, 75(8), 1461–1482.

Hallström, J. (2022). Embodying the past, designing the future: Technological determinism reconsidered in technology education. International Journal of Technology and Design Education, 32(1), 17–31.

Herrmann, T., & Pfeiffer, S. (2022). Keeping the organization in the loop: A socio-technical extension of human-centered artificial intelligence. AI & Society, 38, 1523–1542.

Holm, J. R., Hain, D. S., Jurowetzki, R., & Lorenz, E. (2023). Innovation dynamics in the age of artificial intelligence: Introduction to the special issue. Industry and Innovation, 30(9), 1141–1155.

Huang, C., Zhang, Z., Mao, B., & Yao, X. (2024). An overview of artificial intelligence ethics. IEEE Transactions on Artificial Intelligence, 4(4), 799–819. https://doi.org/10.1109/TAI.2022.3194503

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Ilugbami, O. J., Omigbodun, O. T., Edim, E., Gbadegesin, A. A., & Odeyinka, Y. V. (2025). Cybercrime and Cyber-Security in Nigeria. Management Analytics and Social Insights, 2(3), 230-244.

Ireni-Saban, L., & Sherman, M. (2021). Ethical governance of artificial intelligence in the public sector. Routledge. https://doi.org/10.4324/9781003106678

Jan, F., Khan, A., Naz, A., Khan, B. S., & Qayum, A. (2020). Marshall McLuhan's technological determinism theory in the arena of social media. Theoretical and Practical Research in Economic Fields, 11(2), 133–145.

Kolade, O., & Owoseni, A. (2022). Employment 5.0: The work of the future and the future of work. Technology in Society, 71, 102028.

LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. Nature, 521(7553), 436–444.

Li, Y., Li, X., & Cai, J. (2021). How attachment affects user stickiness on live streaming platforms: A socio-technical approach perspective. Journal of Retailing and Consumer Services, 60, 102478.

Machado, H., Silva, S., & Neiva, L. (2023). Public views on ethical challenges of artificial intelligence: A scoping review. AI and Ethics, 5(1), 139–167.

Maphosa, V. (2024). The rise of artificial intelligence and emerging ethical and social concerns. AI, Computer Science and Robotics Technology, 3(1), 1–20. https://doi.org/10.5772/acrt.20240020

McCarthy, J. (1956). Proposal for the Dartmouth summer research project on artificial intelligence. Dartmouth College.

McCarthy, J., Minsky, M., Rochester, N., & Shannon, C. (1956). A proposal for the Dartmouth summer research project on artificial intelligence. Dartmouth College.

Minsky, M. (1967). Computation: Finite and infinite machines. Prentice-Hall.

Morley, J., Floridi, L., Kinsey, L., & Elhalal, A. (2019). From what to how: An initial review of publicly available AI ethics tools, methods and research to translate principles into practices. Science and Engineering Ethics, 26(4), 2141–2168.

Mügge, D. (2023). EU AI sovereignty: For whom, to what end and to whose benefit? Journal of European Public Policy, 31(8), 2200–2225. https://doi.org/10.1080/13501763.2024.2318475

Münch, C., Marx, E., Benz, L., Hartmann, E., & Matzner, M. (2022). Capabilities of digital servitization: Evidence from the socio-technical systems theory. Technological Forecasting & Social Change, 176, 121361.

JIRRS
Journal International Review of Research Studies

Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Newman, J., & Mintrom, M. (2023). Mapping the discourse on evidence-based policy, artificial intelligence, and the ethical practice of policy analysis. Policy Studies, 44(6), 745–763.

Nilsson, N. J. (1998). Artificial intelligence: A new synthesis. Morgan Kaufmann.

Novelli, C., Taddeo, M., & Floridi, L. (2023). Accountability in artificial intelligence: What it is and how it works. AI & Society, 39(4), 1871–1882.

OECD (2019). OECD Principles on Artificial Intelligence. OECD Publishing.

Ogunode, N. J., Edinoh, K., & Okolie, R. C. (2023). Artificial intelligence and tertiary education management. Electronic Research Journal of Social Sciences and Humanities, 5(4), 18– 31.

Olaniyi, A. O., Adeniran, A. A., Ogieva, M. O., & Ogwuche, G. (2026). Adoption of Intelligent Transport Systems (ITS) in Urban Transportation Planning. *Discover Global Society*, 4(13), 1-23. https://doi.org/10.1007/s44282-025-00312-3

Olaniyi, A. A., Bamise, E. O., Gbadegesin, A. A., & Oloyede, F. S. (2026). Green Practices, Guest Satisfaction and Loyalty in the Hotel Industry. Journal International Review of Research Studies, 01(04), 1-33. https://doi.org/10.66104/cnpnrz31

Olaniyi, A. O., Ilugbami, O. J., Olorunfemi, S. O., & Ojo, T. K. (2024). Analysis of Paratransit Crimes in Akure, Nigeria. *Discover Global Society*, 2:35. https://doi.org/10.1007/s44282-024-00056-6

Olorunfemi, S. O., & Adeniran, A. O. (2024). Impediment to Walking as a Form of Active Mobility in Akure, Nigeria. In: Crowther, D. and Seifi, S. (Eds.) *Society and Sustainability,* Vol. 24, Emerald Publishing Limited, Leeds, Pp. 97-121. https://doi.org/10.1108/S2043-052320240000024005

Olorunfemi, S. O., & Adeniran, A. O. (2020). Influence of Road Transport Quality on Urban Dwellers' Satisfaction. *International Journal of Human Capital and Urban Management,* 5(3): 231-240. https://doi.org/10.22034/IJHCUM.2020.03.05

Olorunfemi, S.O., Adeniran, A. O., & Amoako Sakyi, R. O. (2024). Conflict among the National Union of Road Transport Workers in Akure, Nigeria: Causes, Consequences and Management Strategies. *Discover Global Society*, 2:41. https://doi.org/10.1007/s44282-024-00069-1

Omigbodun, T. O., & Akinloye, D. N. (2026). Context and Application of Agnew's General Strain Theory to Explain Crime. Journal of International Review of Research Studies, 1(06), 1-11. https://doi.org/10.66104/s04mz37

Omigbodun, O. T., Familusi, O. B., Akinsola, S. A., Adeniran, A. A., & Adeniran, A. O. (2026). AI-Powered Workflow Automation in Small Businesses. Open Journal of Economics and Commerce, 7(1): 13-45. https://doi.org/10.22259/2638-549X.0701003

JIRRS
Journal International Review of Research Studies
Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Prell, C. (2017). Embedding social actors in technological systems: A relational approach to socio-technical change. Social Studies of Science, 47(3), 412–435.

Roberts, H., Cowls, J., Casolari, F., Morley, J., Taddeo, M., & Floridi, L. (2021). Safeguarding European values with digital sovereignty: An analysis of statements and policies. *Internet Policy Review,* 10(3). https://policyreview.info/articles/analysis/safeguarding-europeanvalues-digital-sovereignty-analysis-statements-and-policies

Russell, S., & Norvig, P. (2021). Artificial intelligence: A modern approach (4th ed.). Pearson.

Sartori, L., & Bocca, G. (2023). Minding the gap(s): Public perceptions of AI and socio-technical imaginaries. AI & Society, 38(2), 443-458.

Sartori, L., & Theodorou, A. (2022). A sociotechnical perspective for the future of AI: Narratives, inequalities, and human control. Ethics and Information Technology, 24, Article 4. https://doi.org/10.1007/s10676-022-09624-3

Sifgrids, V., Nieminen, M., Leikas, J., & Pikkuaho, T. (2022). Artificial intelligence in service operations: Implications for organisational efficiency, productivity, and customer interactions. Journal of Service Management Research, 6(2), 84–101.

Simoens, M. C., Fuenfschilling, L., & Leipold, S. (2022). Discursive dynamics and lock-ins in socio-technical systems: An overview and a way forward. Sustainability Science, 17(5), 1841–1853.

Turing, A. M. (1950). Computing Machinery and Intelligence. *Mind*, 59(236), 433-460. https://doi.org/10.1093/mind/LIX.236.433

UNESCO (2021). Recommendation on the ethics of artificial intelligence. UNESCO Publishing.

Vesnic-Alujevic, L., Nascimento, S., & Pólvora, A. (2020). Societal and ethical impacts of artificial intelligence: Critical notes on European policy frameworks. *Telecommunications Policy*, 44(6), 101961. https://doi.org/10.1016/j.telpol.2020.101961

Yu, X., Xu, S., & Ashton, M. (2023). Antecedents and Outcomes of Artificial Intelligence Adoption and Application in the Workplace: A Socio-Technical System Theory Perspective. *Information Technology & People,* 36(1), 454-474.

Zhang, M., Liu, Y., Wang, Y., & Zhao, L. (2022). How to Retain Customers: Understanding the Role of Trust in Live-Streaming Commerce with a Socio-Technical Perspective. *Computers in Human Behavior,* 127, 107107.

JIRRS
Journal International Review of Research Studies

Received: 08/24/2026 - **Accepted:** 10/01/2026
Vol: 01.10
DOI: 10.66104/724edx15
Pages: 1-21

Author Responsibility Statement

OA: Conceptualization, Writing - original draft, Introduction, Literature, Conclusion. The author read and approved the final manuscript.