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Appraisal of the Legal and Ethical Implications of Artificial Intelligence Adoption in Corporate Decision-Making in Nigeria

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Abstract

The advent of Artificial Intelligence (AI) has revolutionized the decision-making paradigm across various industries, transforming the way businesses operate and make strategic choices. This technological advancement, characterized by machines simulating human cognitive functions, offers numerous benefits, including enhanced efficiency, accuracy and informed decision-making. However, as AI integrates into corporate decision-making processes, its adoption raises significant legal and ethical concerns that warrant critical examination. This paper employed a doctrinal research methodology to appraise the legal and ethical implications of AI adoption in corporate decision-making in Nigeria. The findings of this paper revealed a significant lack of a comprehensive legal and ethical framework to govern AI in Nigerian Corporations, exacerbating the risks associated with AI integration. This paper therefore recommended the enactment of a comprehensive regulatory framework to mitigate the risks and harness the benefits of Artificial Intelligent in corporate decision-making in Nigeria.

Keywords: Appraisal, Legal, Ethical, Implications, Artificial Intelligence, Adoption, corporate decision-making, Nigeria

1. Introduction

The rapid technological advancements of the twenty-first century have resulted in an increasingly digital and interconnected global society. At the forefront of this technological revolution is artificial intelligence [1], a transformative technology that has the potential to revolutionize decision-making processes across diverse industries and domains.[2] As a result, AI has been increasingly integrated into various aspects of business operations[3], including corporate decision making, revolutionizing the way businesses make decisions by transitioning from traditional human-led methods to automated, data-driven ones. This has enabled corporations to analyze vast amounts of data, identify patterns, and make informed decisions swiftly, leading to potential efficiency gains and improved outcomes.[4]

In Nigeria, the adoption of AI in decision-making has gained significant traction, with companies in various sectors leveraging AI-Powered tools to drive growth, improve efficiency and enhance customer experience. However, this reliance on AI in decision-making process raises important questions about the legal and ethical implications of its adoption, such as accountability for detrimental decisions, ensuring algorithms fairness and compliance with existing laws. As AI integrates into critical decision-making process, a profound understanding of its legal and ethical implications becomes imperative. This paper appraises the legal and ethical implications of AI adoption in corporate decision-making in Nigeria, examining the current state of AI usage, legal and ethical considerations to provide insights into responsible AI adoption in the country's business sector.

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[1] Hereinafter referred to as 'AI'.

[2] S Russell, & P Norvig, *Artificial Intelligence: A Modern Approach* (Malaysia:Pearson Education Limited, 2016).

[3] Such as finance, healthcare, and manufacturing.

[4] D Lindebaum, M Vesa, & F Den Hond, 'Insights from "the Machine Stops" to better Understand Rational Assumptions in Algorithmic Decision Making and its Implications for Organizations', (2020) 45 (1) *Academy of Management Review*, 247.

2. The Concept of Artificial Intelligence

Artificial intelligence, also known as machine intelligence, is intelligence demonstrated by machines in contrast to natural intelligence displayed by humans and other animals.[5] This means machines can be made to perform tasks commonly associated with intelligent beings like humans and animals. It is human-produced, machine-assisted, structured, and organized information created using human insight approaches including learning, reasoning, and self-healing.[6] The OECD's Expert Group on Artificial Intelligence defines AI as a machine-based system that infers outputs, such as predictions or decisions from input data to achieve explicit or implicit objectives.[7] Essentially, AI simulates the human mind to make computers think and act like humans by performing tasks like learning and problem-solving.[i]It is considered the science of making machines smart [8] or more formally, the study of the designing intelligent agents that can perceive their environment, reason through information and make decisions to achieve specific goals.[9] AI encompasses a range of technologies and methodologies, including machine learning, natural language processing and robotics, which collectively contribute to the evolution of intelligent systems.[10] These technologies enable computer systems to perform tasks that typically require human intelligence,[11] such as analyzing extensive datasets, detecting patterns, and generating insights to support decision -making.[12]

McKinsey describes AI as the intelligence exhibited by machines and systems, where machines mimic functions typically associated with human cognition. He identifies three basic levels of AI operations: Lower level,[13] General level[14] and Super AI.[15] The Lower level or narrow AI refers to traditionally designed human level activities being automated by state-of-the-art software, outperforming human abilities in specialized areas.[16] These lower level AI applications operate with higher complexity than current available applications.[17] The General AI or Human-level AI involves machines understanding their environment, reasoning and acting as humans in all dimensions. This machine imitation of the human brain encompasses areas like scientific creativity, general knowledge and social skills.[18] The highest level, Super AI, enables machines to make critical deductions about unknown environments.[19]

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[5] N Robinson, 'Artificial Intelligence: Its Importance, Challenges and Applications in Nigeria', <https://directresearchpublisher.org/drjeit/files/2018/12/Robinson.pdf> accessed 14 August 2024

[6] A Prasanth, 'Role of Artificial Intelligence and Business Decision Making', (2023) 14 (6) International *Journal of Advanced Computer Science and Applications*, 965.

[7] L Bertuzzi, 'OECD Updates Definition of Artificial Intelligence 'to Inform EU's AI Act', <http://www.euractiv.com/section/artificial-intelligence/news/oecd-updates-definition-of-artificial-intelligence-to-informeus-ai-act/> accessed 14 August 2024.

[8] F Z Borgesius, 'Discrimination, Artificial Intelligence, and Algorithmic Decision-Making, <https://rm.coe.int/discrimination-artificial-intelligence-and-algorithmic-decisionmaking/1680925d73> accessed 15 August 2024.

[9] Russell & Norvig (n2).

[10] A Rahman, 'AI Revolution: Shaping Industries through Artificial Intelligence and Machine Learning', (2023) 2 (1) *Journal Environmental Sciences and Technology*, 93.

[11] S Shalev-Shwartz, & S Ben-David, *Understanding Machine Learning: From Theory to Algorithms*, (New York: Cambridge University Press, 2014) p 89

[12] M Balbaa and M Abdurashidova, 'The Impact of Artificial Intelligence in Decision Making: A Comprehensive Review',<http:///www. file:///C:/Users/Acer/Downloads/5.MuhammadEid15747.pdf> accessed 12 August 2024

[13] Narrow AI

[14] Human- level AI

[15] C McKinsey, 'Artificial Intelligence – Automative's New Value-Creating Engine', <https://www.mckinsey.com/~/media/mckinsey/industries/automotive%20and%20assembly/our%20insights/artificial%20intelligence%20as%20auto%20companies%20new%20engine%20of%20value/artificial-intelligence-automotives-new-value-creating-engine.pdf > accessed 16 August 2024.

[16] Examples include weather forecasting, sales performance prediction, board games and autonomous driving.

[17] Ibid.

[18] Ibid.

[19] McKinsey,(n 16).

Building on these AI levels, AI decision-making emerges as a process of using machine learning algorithms to make decisions based on input data. These algorithms identify patterns and make predictions, facilitating efficient and accurate decision-making across various AI fields, including corporate sector, healthcare, finance, marketing, and criminal justice.

In sum, Artificial intelligence refers to the simulation of human intelligence in machines that are programmed to think and learn like humans. These machines, software or tools are designed to perform tasks that would normally require human intelligence, such as visual perception, speech recognition, decision-making, and language translation.[20]

3. Benefits of Artificial Intelligence in Decision-Making

The integration of Artificial Intelligence in decision -making has the potential to enhance data analysis and insights, leading to increased efficiency and speed.[21] AI systems can automate decision-making processes, reducing the time and effort required for manual analysis,[22] and enabling the analysis of vast amounts of structured and unstructured data quickly and accurately. This uncovering of patterns, trends, and anomalies that human analysis might miss rationalizes board decisions, which often require large amounts of data especially for complex decisions.[23] However, human directors may struggle to process a plethora of factors to reach optimal market-based decisions, as they are often unfamiliar with analytics, leading to decisions being made with little data analysis and an emphasis on gut feelings.[24] This is where AI shines, providing rapid analysis of large data arrays through its statistical and analytical models,[25] which can detect hidden correlations and patterns in large data sets,[26] ultimately supporting informed decision-making. As a result, AI complements the capabilities and knowledge of the human board members by providing clear analysis of vast data, increasing the pace of difficult decision-making. Research of Rajagopal *et al* confirms the impact of AI systems on business outcomes, particularly in decision making-processes. Their study shows that AI-driven digital frameworks enhance decision-making process, policy formulation innovation, and execution speed.[27] By quickly processing and analyzing vast amounts of data, AI provides valuable insights and patterns, enabling businesses to identify new opportunities, optimize processes, improve forecasting and planning. This informed and swift decision-making maintains a competitive edge in turbulent environments[28]

Moreover, AI plays a crucial role in risk management by continually monitoring and analyzing diverse sources, detecting patterns and anomalies that may indicate potential risks or fraudulent activities. This proactive approach enables companies to respond swiftly and mitigate risks before they escalate. Additionally, AI improves efficiency and productivity by automating routine tasks, freeing human resources for strategic and creative work leading to increased productivity, enhanced efficiency and reduced errors.

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[20] M Inaingo, 'Legal Challenges in the Age of Artificial Intelligence in Nigeria', <https://www.lawglobalhub.com/ legal-challenges-artificial-intelligence-in-nigeria-martha/> accessed 16 Aughust 2024

[21] E Brynjolfsson, & A McAfee, *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, (New York: W. W. Norton & Company, 2014).

[22] Ibid.

[23] T A Liedong, T Rajwani & T C Lawton, 'Information and Nonmarket Strategy: Conceptualizing the Interrelationship between Big Data and Corporate Political Activity', (2020) 157 Technological Forecasting & Social Change, 1.

[24] M R Siebecker, 'Making Corporations More Humane Through Artificial Intelligence', (2019) 45 *The Journal of Corporation Law*,144

[25] M Broussard, *Artificial Unintelligence – How Computers Misunderstand the World*, (Cambridge: MIT Press, 2018) 87.

[26] J Pearl & D Mackenzie, *The Book of Why: The New Science of Cause and Effect*, (New York: Basic Books, 2018) p 418.

[27] N K Rajagopal, *et al*, 'Future of Business Culture: An Artificial Intelligence-Driven Digital Framework for Organization Decision-Making Process', <https://onlinelibrary.wiley.com/doi/10.1155/2022/7796507> accessed 20 August 2024.

[28] C I Prange, 'Strategic Agility–Decision-Making Beyond Speed', <https://journals.aom.org/doi/abs/ 10.5465/AMBPP.2020.12499abstract>accessed 20 August 2024.

Furthermore, AI can automate tasks like data entry, bookkeeping, and customer service, reducing labour costs, improve accuracy and enhance customer experience. AI can also automate various board processes, such as compliance reporting, agenda preparation, scheduling and governance document management, reducing administrative burdens and allowing board members to focus on strategic matters. By streamlining these processes, AI leads to more productive board meetings and optimized use of board members' time.

AI techniques, particularly machine learning algorithms, excel in predictive analytics, analyzing historical data to identify patterns and trends, enabling accurate predictions of future outcomes[29] This capability allows board to leverage AI simulation tools, such as Monte Carlo Simulations,[30] to design and test scenarios informing decision-making with rational and objective analysis of corporate patterns and industry trends, rather than relying on gut feelings.[31]

Moreover, incorporating governance intelligence through AI can help counteract groupthink [32], a psychological mode of thinking that can compromise critical thinking and judgment in highly cohesive groups like board of directors.[33] By evaluating the output of AI systems, unbiased by human cognitive tendencies, board can consider alternative courses of action and aspects of a situation that might have been missed due to groupthink-induced blind spots.[34]This AI-driven approach enables board to make more informed decisions, mitigating the risks associated with groupthink and ensuring a more comprehensive evaluation of relevant information. Perhaps, the theoretical and technological neutrality of AI can strengthen the independence of the board in two ways, provided its training data is unbiased. Firstly, AI support empowers independent board members to challenge each other's opinions in board meetings,[35] as AI machines are impartial and free from conflicts of interest. This unbiased output bolsters independence in decision -making,[36] as long as human directors maintain a critical perspective on AI recommendations.[37] AI's neutral outcomes can counterbalance strong interpersonal relationships between directors, which may have hindered constructive debate.[38] Consequently, AI's role in the board can significantly shift board dynamics, including interpersonal relationships. Secondly, AI augmentation accelerates data processing, benefiting Independent directors who often hold positions on multiple boards

[29] F Provost, & T Fawcett, Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking. (USA: O'Reilly Media, 2013)

[30]See T Vodopivec, S Samothrakis & B Ster, 'On Monte Carlo Tree Search and Reinforcement Learning', (2017) 60 *Journal of Artificial Intelligence Research,* 881.

[31] A Hamdani et *al*, 'Technological Progress and the Future of the Corporation', (2018) 6 *Journal of the British Academy*, 219.

[32] Groupthink is a psychological mode of thinking in highly cohesive groups such as board of directors, where the desire to reach consensus (or majority) by the group members overrides critical thinking and correct judgment. see I L Janis, 'Groupthink', (197) 5 *Psychology Today*, 43.

[33] A Kamalnath, 'The Perennial Quest for Board Independence - Artificial Intelligence to the Rescue?', (2019) 83 *Albany Law Review,* 52.

[34]R J Thomas, R Fuchs and Y Silverstone, 'A Machine in the C-suite', <https://www.ecgi.global/sites/default/files/documents/accenture-strategy-wotf-machine-csuite11.pdf>accessed 23 August 2024.

[35] Kamalnath, (n 34).

[36] Z Lipai, X Xiqiang & L Mengyuan, 'Corporate Governance Reform in the Era of Artificial Intelligence: Research Overview and Prospects Based on knowledge Graph', <https://www.researchgate.net/publication/356396515_Corporate_governance_reform_in_the_era_of_artificial_intelligence_research_overview_and_prospects_based_on_knowledge_graph> accessed 23 August 2024.

[37] S A Gramitto Ricci, 'Artificial Agents in Corporate Boardrooms', (2020) 105 *Cornell Law Review*, 899, arguing that human directors may feel overly compelled to conform to AI output. Should board members disagree with the system, they might feel compelled to explain why they chose to disregard entirely, or deviate from, the output of the system. As a result, the alleged pressure for human directors to explain why they disagree with AI could ultimately affect the directors' ability to exercise independent judgment when making a decision

[38] Kamalnath (n 34).

with tight decision-making deadlines. As outsiders, they may struggle to digest all relevant data in a short timeframe.

Governance intelligence through AI can quickly identify crucial information,[39] leading to an increased board activity and more informed decision-making.[40] By supporting Independence directors in this way, AI enhances the board's overall independence and effectiveness. Ultimately, adopting AI in corporate decision-making provides a competitive advantage, leading to increased market share, improved reputation and revenue growth. This strategic leverage positions businesses for long-term success and sustainability in today-s fast-paced and interconnected market landscape.

4. Utilization of Artificial Intelligence in Nigeria

AI utilization in Nigeria is gaining momentum, with significant developments in recent years. The Nigerian government has shown interest in harnessing AI for economic growth, evident in the commissioning of the National Centre for Artificial Intelligence and Robotics and the launch of the Nigeria Intelligent Research Scheme.[41] This Scheme promised to award N5million each to 45 startups and researchers focusing on AI, aiming to transform Nigeria's digital economy and mainstream AI applications for economic prosperity.[42] The release of AI chatbots like ChatGPT and Bard AI has heightened awareness of generative AI in Nigeria, sparking conversations and attention to AI's potential.[43] These platforms, available on both iOS and Android devices, have the potential to skyrocket in user base, given Android's dominant market share of 78.7% in Nigeria.[44] However, concerns arise as some platforms were trained using internet-scraped data, including personal information.[45] This raises privacy concerns, as individuals may find information about themselves on these platforms. The use of large language models enables AI applications to process massive datasets, generating text, summarizing documents, and engaging in logical conversations with humans. The Nigerian government's efforts to promote AI research and development are crucial in addressing these concerns and ensuring responsible AI utilization.

The NCAIR's focus on AI, robotics and drones, as well as emerging technologies like the Internet of Things, aims to transform Nigeria's digital economy.[46] Furthermore, the availability of AI tools like Adobe's Firefly and Snap Inc's AI-powered instant messaging service indicates a growing interest in AI-powered content creation and conversation.[47] The application of AI systems has penetrated into the business and professional realms in Nigeria. Both the public and private entities are involved in ascertaining the possibilities that abound from utilizing AI for institutional and business purposes.

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[39] Ibid.

[40] Ernst & Young, 'Study on the Relevance and Impact of Artificial Intelligence for Company Law and Corporate Governance",<https://op.europa.eu/en/publication-detail/-/publication/13e6a212-6181-11ec-9c6c-01aa75ed71a1/language-en> accessed 23 August 2024.

[41] National Centre for Artificial Intelligence and Robotics (NCAIR), art%20facility%2C%20along%20with%20its, and%20Digital%20Economy%2C%20Prof.%20Isa%20Ali%20Ibrahim%20 Pantami> accessed 23 August 2024.

[42] Vanguard, 'FG to award N5 million to AI startups in new research scheme – Minister' <https://www.vanguardngr.com/2023/10/fg-to-award-n5-million-to-ai-startups-in-new-research-scheme-minister/ >accessed 24 August 2024.

[43] B Marr, 'A short history of ChatGPT, how we got where we are today', Forbes, accessed 21st July 2023.

[44] Statista, 'Market share of mobile operating systems in Nigeria from January 2018 to April 2023https://www.statista.com/statistics/1063846/market-share-held-by-mobile-operating-systems-in-nigeria>' accessed 21st July 2023.

[45] N Lomas, 'Italy orders ChatGPT blocked citing data protection concerns', <https://techcrunch.com/2023/03/31 /chatgpt-blocked-italy/>, accessed 24 August 2024.

[46] U V Obi, N C Ole and S Uzoigwe, 'Artificial intelligence (AI) systems use in Nigeria: Charting the Course for AI Policy Development,' <https://www.lexology.com/library/detail.aspx?g=600a8ee0-5b28-44da-8415-0e07c7f333fe, >accessed 24 August 2024

[47] Adobe, 'Dream Bigger with Adobe Firefly', https://www.adobe.com/sensei/generative-ai/firefly.html>accessed 24 August 2024.

The healthcare industry is benefitting from AI adoption, with promising applications in medical diagnosis, treatment planning and patient care. AI algorithms are being used to analyse medical images such as X-rays, MRIs, and CT scans. This technology aids healthcare professionals in disease detection and diagnosis. [48] Additionally, AI-based decision support systems provide personalized treatment recommendations based on individual patient characteristics and medical evidence. [49] These AI-driven solutions are augmenting healthcare decision making, leading to improved patient outcomes and more effective disease management.

AI technologies have found extensive use in the financial sector for decision making and risk management. AI algorithms analyze vast amounts of financial data, market trends, and trading patterns to make predictions and support investment decisions. Furthermore, AI-powered chatbots and virtual assistants offer personalized financial advice, enhancing customer experience and building trust. By leveraging AI, financial institutions can make more informed decisions, enhance risk assessment, and optimize portfolio management, ultimately driving business growth and profitability.

AI technologies are transforming customer service in Nigeria, enhancing decision making and customer interactions. Chatbots powered by natural language processing and machine learning provide automated responses, assist customers with inquiries, complaints, and issue resolution.[50]Notably, Nigerian banks are leveraging AI-powered chatbots to revolutionalize customer service. For instance, Zenith Bank launched ZiVA[51], an intelligent chatbot on whatsApp, enabling customers to perform financial transactions and access real-time customer service on their mobile phones.[52]Similarly, Diamond Bank introduced Ada, an AI chatbot that provides human-like interactions and personalized experiences for customers on Facebook Messenger and other messaging platforms.[53]

The Nigerian academic landscape is also witnessing a significant transformation with the integration of AI in teaching and research. AI-based tools are being developed to cater to the unique needs of Nigerian educators, streaming tasks, offering personalized learning experiences and providing valuable insights for research endeavours.[54] For instance, Nigerian institutions, such as the University of Lagos, are pioneering AI applications in education. AI-powered platforms are being used to develop virtual learning Environments, automate grading and enhance student engagement.[55]

5. Artificial Intelligence in Corporate Decision-Making

The integration of AI in corporate decision making is transforming businesses globally, including Nigeria. Governance bodies, such as board of directors, deploy AI to assist in corporate strategy, personnel selection, procurement, sales, marketing and investment decisions.[56] By virtue of its numerous benefits, AI has been widely adopted in corporate governance. A 2024 Mckinsey & Company Survey revealed that

[48]A Esteva *et al,* 'Dermatologist-Level Classification of Skin Cancer with Deep Neural Networks', (2017) 542 *Nature*, 115-118.

[49] E J Topol, Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again Basic Books.

[50] Chatbots are software-based systems designed to interact with humans using natural language. See J Feine *et al*, 'A Taxonomy of social Cues for Conversational Agents', (2019) 132 *International Journal of Human-Computer Studies,*138.

[51] Zenith Intelligent Virtual Assistant.

[52]<https://www.zenithbank.com/ziva> accessed 16 August 2024.

[53] Diamond Bank Launches Artificial Intelligence-powered Chatbot for Millions of Nigerian Customers', <https://techpoint.africa/2018/03/13/diamond-bank-launches-artificial-intelligence-powered-chatbot-millions-nigerian-customers/>accessed 16 August 2024.

[54] K VanLehn, 'The Relative Effectiveness of Human Tutoring, Intelligent Tutoring Systems, and other Tutoring Systems', (2011) 46(4) *Educational Psychologist*, 197.

[55] BN Nwagbara, Use of AI in Nigerian Educational System, <https://www.linkedin.com/pulse/use-ai-nigerian-educational-system-benjamin-ndubuisi-nwagbara-rmcnc/>accessed 16 August 2024.

[56] E Jikenghan, A Kadiri and S Oyekan1, 'The New Rules on Robo-Advisory Services' <https://www.gelias.com/images/Newsletter/The_New_Rules_on_Robo-Advisory_Services.pdf>accessed 16 August 2024.

companies are using AI in more parts of the business, with half of respondents indicating adoption in two or more functions.[57]

Deep Knowledge Ventures, a Hong Kong venture capital firm, pioneered the appointment of an AI system, Vital, as a board member. [58]Vital analyzes financial investments and has a voting right on investment decisions.[59] This innovative move has inspired other companies, such as Tietoevry and Salesforce, to implement AI systems as board members or strategic advisors.[60]

AI is used in various corporate decision-making processes, including algorithmic trading, mergers and acquisitions, investor profiling, risk assessment and due diligence. In Nigeria, some investment firms have incorporated robo-advisory into their service offerings. The Securities and Exchange Commission issued the Rule on Robo-Advisory Services 2021 to regulate AI use by capital market operators, ensuring adequate governance and supervisory arrangements to mitigate algorithmic bias.[61]

The SEC's Rule on Robo-Advisory Services 2021 applies to capital market operators offering digital robo-advisory services,[62] requiring sufficient resources to monitor and supervise algorithm performance.[63]

As AI continues to evolve, its impact on Nigerian corporate governance and decision making will become increasingly significant, necessitating a thorough examination of the legal and ethical implications of adopting AI in corporate decision making in Nigeria to ensure responsible AI adoption.

6. Legal and Ethical Implications of Artificial Intelligence Adoption in Corporate Decision-Making in Nigeria

The adoption of AI in corporate decision-making in Nigeria offers numerous benefits, including enhanced efficiency, improved accuracy, and advanced predictive analytics. However, the adoption also raises significant legal and ethical concerns.

Legal Implications

A. Data Protection and Privacy

The adoption of AI in Nigeria raises significant data protection and privacy concerns, as AI systems often rely on vast amounts of personal data that must be collected, stored and processed in compliance with the country's Data Protection Regulation.[64] The Nigeria Data Protection Act, 2023 restricts the exclusive use of automated decision-making processes for processing personal data, including profiling, that result in legal or similarly significant effects on the data subjects. Exceptions include obtaining the data subject's consent, fulfillment of a legal requirement, or where it is necessary for the performance of a contract

[57]'AI in 2024: Mckinsey Report Reveals Value Generation & AI Adoption Spike, <https://www.switchsoftware. io/post/ai-in-2024-gen-ai-rise-and-business-impact>, accessed 15 August 2024.

[57] R Dube, 'Big Step Forward: AI Takes a Voting Seat on Board of a VC Firm',<https://www.linkedin.com/pulse/ai-makes-big-step-forward-takes-voting-seat-board-vc-firm-roger-dube/>, accessed 15 August 2024.

[58] Ibid.

[59] Ibid.

[60]Tieto, 'Tieto the First Nordic Company to Appoint Artificial Intelligence to the Leadership Team of the New Data Driven Businesses Unit', <https:// www.businesswire.com/news/home/20161016005092/en/Tieto-the-FirstNordic-Company-to-Appoint-Artificial-Intelligence-to-the-Leadership-Team-of-the-New-Data-Driven-Businesses-Unit;> accessed 16 August 2024

[61] Jikenghan (n 58).

[62] Digital robo-advisory services refer to the provision of investment advice using automated, algorithm-based tools which are client-facing, with little or no human adviser interaction in the advisory process. See Rule 1 on Robo-Advisory Services 2021

[63] See Rule 6 (b) on Robo-Advisory Services 2021

[64] A Cavoukian, & J Jonas, 'Privacy by Design in the Age of Big Data' <https://jeffjonas.typepad.com/Privacy-by-Design-in-the-Era-of-Big-Data.pdf> accessed 17 August 2024.

involving the data subject.[65]Section 29 of the NDPA also requires entities to implement technical and organizational measures to protect personal information.

Businesses relying on AI for automated decision-making must do so in compliance with the NDPA, adhering to its principles, including lawfulness, accuracy, purpose limitation, storage limitation and security.[66] To achieve compliance, companies must conduct regular data audits and risk assessments, implement data anonymization policies and provide transparency and information about AI decision-making processes. Additionally, they must establish clear data retention policies, ensuring that personal data is not retained longer than necessary, and ensure that AI systems are designed to protect individuals' rights and freedoms.[67]

The Nigerian Data protection Commission has issued a draft General Application and implementation Directive to regulate the use of AI, requiring data controllers or processors to consider the provisions of the NDPA, the GAID, public policy and other regulatory instruments.[68] The GAID also mandates consideration of the right of data subjects not to be subject to a decision based on automated processes, the right to be forgotten, safeguards for processing personal data and other key considerations.[69] Furthermore, businesses deploying AI for personal data processing are required to conduct a Data Privacy Impact Assessment on such processing activities where the processing of personal data may likely result in high risk to the rights and freedoms of a data subject.[70] By prioritizing data protection and privacy, Nigerian companies can build trust with customers, employees and stakeholders, while minimizing the risk of reputational damage and regulatory penalties. Ultimately, ensuring data protection and privacy in AI adoption is crucial for responsible and sustainable business practices in Nigeria.

B. Intellectual Property Rights

Intellectual property rights play a crucial role in the adoption of Artificial Intelligence in corporate decision-making in Nigeria, as AI systems generate new ideas, products and services, raising questions about ownership and liability for these intellectual creations. AI is closely linked with intellectual property because the algorithms that drive AI and devices or systems that access or utilize AI may be subject to Intellectual Property protection. This raises concerns about the use of materials with intellectual property rights protection to train AI systems, such as when a copyright protected work is used to train an AI model without the authors' authorization and against their interests. Nigerian companies must navigate the complexities of intellectual property law to ensure that AI-generated content is properly protected and attributed, as seen in high-profile cases like Scarlett Johannson's allegation against OpenAI for copying her voice without consent[71] and the New York Times Company's lawsuit against OpenAI for allegedly infringing on their copyright.[72]

The Nigerian Intellectual Property Law recognizes various forms of intellectual property, including patents, trademarks, copyrights and designs with the Copyright Act 2022 playing a crucial role in governing the use of AI, particularly in relation to intellectual property rights. The Copyright Act protects original works, including literary, musical, and artistic works, audio-visual, sound recordings, broadcasts

[65] NDPA, s 37
[66] Ibid, s 24.
[67] Ibid, s 37.
[68] Nigeria Data Protection Act 2023 General Application and Implementation Directive 2024, Art. 44(1),
[69] Ibid, Art. 44(2).
[70] NDPA, s 28.
[71] R Mickle, 'Scarlett Johannson Said No, but OpenAI's Virtual Assistant Sounds Just Like Her' <https://www.nytimes.com/2024/05/20/technology/scarlett-johannson-openai-voice.html> accessed 24 August 2024
[72] C Metz & K Robertson, 'OpenAI Seeks to Dismiss Parts of The New York Times's Lawsuit' < https://www.nytimes.com/2024/02/27/technology/openai-new-york-times-lawsuit.html> accessed 24 August 2024

and copyrighted content used by AI may be eligible for copyright protection if it is original and fixed in a tangible medium of expression.

However, the emergence of AI challenges the concept of human authorship and ownership, raising questions about who owns the copyright to works generated by AI, as the Copyright Act 2022 does not explicitly address AI authorship. This lack of clarity leads to legal uncertainties regarding ownership of AI-generated patents, trademarks or copyrights, with unclear answers about whether the company that developed the AI system, the individual who programmed the AI or the AI system itself holds the rights. Therefore, the law must adapt to fully address the unique challenges posed by AI-generated content and provide clarity on intellectual property rights in Nigeria.

C. Regulatory Framework

The regulatory framework for corporate decision-making in Nigeria remains rooted in exclusively human decision-making, neglecting the role of technology in corporate governance. This leads to inefficient regulatory strategies for AI systems with governance powers, creating uncertainty about the legal permissibility and consequences of AI implementation in the corporate realm. Despite AI's potential to enhance business judgment, this uncertainty may discourage corporations from adopting AI.

Currently, Nigeria lacks specific legislation addressing AI, with the closer laws being the Nigeria Data Protection Act and the Nigeria Data Protection Regulation, which regulate data use but fail to address AI-specific issues like programming errors and testing protocols.[73] The absence of AI precedent in Nigeria highlights the need for laws and regulations to address emerging technologies, similar to those in developed countries like EU and Canada.[74]

Although there is no specific AI legislation, guidelines have been issued by the Nigerian Communications Commission for AI use in telecommunications, and the National Artificial Intelligence Policy is being developed by the Nigerian National Information Technology Development Agency and other stakeholders. The NAIP aims to mitigate AI-driven attacks and minimize breaches.[75]

D. Legal Personality

The legal personality of AI is a topic of controversy in Nigeria, with debate surrounding whether AI can be categorized as a person within the meaning of the law. This raises important question about the role of AI in corporate decision-making, particularly under the CAMA 2020. CAMA regulates the incorporation, management and dissolution of Companies in Nigeria, but it does not address the use of AI in corporate decision-making.

According to Black's Law Dictionary, a legal person is "a human being, naturally born, versus a legally generated juridical person".[76] The Nigerian Court of Appeal has also defined a legal person as either a natural person or an entity created by law, including an incorporated body or special artificial being created by legislation, vested with the capacity to sue and be sued.[77] However, there is no Nigerian Legislation that confers legal personhood to AI, which means AI systems cannot exercise rights and fulfill obligations in the same way as human beings or incorporated bodies.

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[73] NITDA's Data Protection Regulation,2019 provides guidelines for collecting, processing and storing personal data, which is critical for AI systems.

[74] Canada Artificial Intelligence and Data Act, 2022; EU AI Act 2024.

[75] 'Artificial Intelligence (AI) Regulation in Nigeria: Key Considerations, Recommendations, Legal Framework, And Policy Development for Artificial Intelligence (AI) In Nigeria', <https://www.mondaq.com/nigeria/new-technology/1373830/artificial-intelligence-ai-regulation-in-nigeria-key-considerations-recommendations-legal-framework-and-policy-development-for-artificial-intelligence-ai-in-nigeria> accessed 24 August 2024.

[76] The law Dictionary, 'Natural Person definition and legal meaning', <https://thelawdictionary.org/natural-person/> accessed 19 August 2024

[77] *Akas v Manager & Receiver of Estate of Anwadike* (2001) 8 NWLR (Pt 715) 436.

The lack of legal personhood for AI raises important questions about accountability, liability and eligibility. In cases where AI decisions result in harm or damage, responsibility is unclear-whether it lies with the company, AI developer or the AI system itself. Furthermore, CAMA requires companies to have a board of directors composed of persons who make decisions on behalf of the company,[78] a requirement that AI systems cannot meet as they are neither natural persons nor an entities created by law.

Current corporate frameworks in Nigeria appear inadequate for the adoption of autonomous AI in while AI in corporate decision-making, highlighting the need for legislative and regulatory reforms to address these challenges.

Ethical Implications

The adoption of AI in corporate decision-making raises significant ethical implications, including accountancy, transparency and potential bias.

i. Accountability

Accountability is a core pillar of corporate governance, ensuring that boards and managements are answerable for their actions and decisions. However, the appointment of AI systems as directors raises questions about their legal personalities and liability. According to section 269 of CAMA 2020, a director must be a person, leaving doubts about whether AI systems can be held liable and accountable for breaches of fiduciary duty.

In Nigerian law, only natural persons and juristic persons are competent to sue or be sued.[79] This includes human beings, companies incorporated under the CAMA and unincorporated associations like registered trade unions and partnerships. The deployment of AI systems complicates accountability due to involvement of multiple hardware and software development entities, individuals and datasets. Determining accountability in AI systems is challenging, as responsibility extends to developers, organizations deploying AI, policymakers and users interacting with A-generated outputs. Identifying the chain of responsibility and creating frameworks that outline responsibilities and consequences for AI decisions is essential.

ii. Transparency

Transparency in AI involves making the decision-making process understandable and accessible, as Algorithms can be opaque and difficult to understand. [80]This lack of transparency can lead to biases and errors in decision-making, which can have serious consequences for companies. Furthermore, the use of AI in decision-making can make it challenging to identify the responsible parties in case of errors or breaches of fiduciary duty. In Nigeria, CAMA emphasizes the importance of transparency in corporate decision-making. As such, there is a need for clear guidelines and regulations on the use of AI in corporate decision-making to ensure transparency and accountability.

iii. Bias

The adoption of AI in corporate decision-making in Nigeria also raises significant concerns about bias, as AI systems heavily rely on data for training and decision-making. If the data is incomplete, inaccurate or biased, it can lead to erroneous outcomes, perpetuating and amplifying existing inequalities.[81]

AI models undergo training using extensive datasets and if these datasets contain biases or flaws, the AI system has the potential to acquire and propagate the biases inherent in the training data.[82] This

[78] CAMA, s 269

[79]*Fawehinmi v Nigeria Bar Association* (1989) 2 NWLR (pt 105) 595; see also the case of *Management Enterprise Ltd v Otusanya* (1987) 2 NWLR (pt 55) 179, it was held that the plaintiff as well as the defendant should be a juristic person or natural person existing or living at the time of the institution of the action.

[80]A B Brendel, *et al* 'Ethical Management of Artificial Intelligence',(2021) 13 (4) *Sustainability*, 1

[81]C O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy, New York:* Crown, 2016).

perpetuation of bias is another inherent risk present in AI systems, leading to discriminatory decisions against certain individual or groups. When a training data containing societal constructed and systemic biased information or viewpoints is used to train AI systems, decisions made by such AI systems will always be reflective of those biases. This can lead to discrimination against certain individual in its decision-making, particularly in cases where AI systems are used for hiring purposes and are trained on datasets that promote the denigration and relegation of certain ethnic or religious characteristics.

The Constitution prohibits discrimination on grounds of place of origin, sex, religion, state, ethnic or linguistic association[83] and any AI policy must ensure the presence of checks, balances and auditability of AI systems to aid in non-discriminatory decision-making by AI systems regarding Nigerians.

A pertinent case highlighting the urgent need for ethical AI implementation is the recent class-action lawsuit filed against Cigna Healthcare, which exposes the consequences of an AI system replacing human judgment and emphasizes the need for ethical AI implementation.[84]

7. Conclusion and Recommendations

The adoption of AI in corporate decision-making in Nigeria is inevitable, offering benefits such as improved decision-making, operational efficiency, and risk management. However, it raises significant legal and ethical concerns that must be addressed. To address these concerns, robust legal and regulatory frameworks are essential to guide its implementation and maximize its potential, focusing on accountability, human-centered values, data privacy, transparency, and other critical considerations. Establishing a robust data governance framework is crucial to ensure data quality, accuracy and integrity, addressing bias and fairness in data collection. Implementing transparent data handling practices, data anonymization techniques and privacy protection measures can foster trust and confidence in AI-driven decision-making. Continuous monitoring and auditing of AI systems are also essential to ensure their ongoing reliability and fairness. Regular assessments of data sources, algorithm performance, and decision outcomes can help identify biases, errors or unintended consequences, enabling prompt corrective measures. Ultimately, a well-planned AI policy framework can facilitate the responsible adoption of AI in Nigeria's corporate sector.

[82] Alliance Law Firm, 'Artificial Intelligence (AI) Systems Use in Nigeria: Charting the Course for AI Policy Development',<https://www.lexology.com/library/detail.aspx?g=600a8ee0-5b28-44da-8415-0e07c7f333fe>accessed 24 August 2024.

[83] CFRN 1999, s 42.

[84] F Osasona, 'Reviewing the Ethical Implications of AI in Decision Making Processes', <file:///C:/Users/COMM%20&%20PPTY%20LAW%20DEPT/Downloads/REVIEWING_THE_ETHICAL_IMPLICATIONS_OF_AI_IN_DECISI.pdf> accessed 24 August 2024.