REGULATING ARTIFICIAL INTELLIGENCE IN NIGERIA: BALANCING INNOVATION WITH ETHICAL AND LEGAL CONSIDERATIONS

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REG. NO.: 2019/LW/12359

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BEING A PROJECT SUBMITTED TO THE FACULTY OF LAW, ALEX EKWUEME FEDERAL UNIVERSITY, NDUFU ALIKE IKWO, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF LAWS (LL.B)

OCTOBER, 2024.

DECLARATION

I declare that the work in this long essay titled: 'REGULATING ARTIFICIAL INTELLIGENCE IN NIGERIA: BALANCING INNOVATION WITH ETHICAL AND LEGAL CONSIDERATIONS' has been performed by me in the Faculty of Law, Alex Ekwueme Federal University, Ndufu-Alike, Ikwo, Ebonyi State. The information derived from the literature has been duly acknowledged in the text and a list of references provided. The content of this work is original and has not been submitted in part or full for the award of any degree of this or any other institution.

_____ _____

OBIAHU, BLESSING CHIDIEBERE. **DATE**

APPROVAL AND CERTIFICATION

This is to certify that OBIAHU, BLESSING CHIDIEBERE, an undergraduate student in the Faculty of Law at Alex Ekwueme Federal University, Ndufu-Alike, Ikwo, Ebonyi State, with Registration No. 2019/LW/12359, has satisfactorily completed the requirements for the research for the award of the degree of Bachelor of Laws (LL.B). The Long Essay titled "REGULATING ARTIFICIAL INTELLIGENCE IN NIGERIA: BALANCING INNOVATION WITH ETHICAL AND LEGAL CONSIDERATIONS" has been assessed and approved by the Undergraduate Studies Committee of the Faculty of Law.

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DEDICATION

I dedicate this work to The Almighty Jehovah, whose grace has been my guiding light in achieving this, and the numerous milestones I have achieved during the course of this undergraduate journey. I also dedicate this to all who are struggling to find the light at the end of the tunnel; may we find that light someday.

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LIST OF ABBREVIATIONS

AGI - General AI

AI - Artificial Intelligence

API - Application Programming Interface

ASI - Artificial Superintelligence

AU - African Union

CAHAI - Ad Hoc Committee of the Council of Europe on Artificial Intelligence

CAI - Committee on Artificial Intelligence

CAC - Cyberspace Administration of China

CBN - Central Bank of Nigeria

CJID - Center for Journalism, Innovation, and Development

COMPAS - Correctional Offender Management Profiling for Alternative Sanctions

CSOs - Civil Society Organizations

EU - European Union

FabLab - Digital Fabrication Facility

FCCPA - Federal Competition and Consumer Protection Act

FMCIDE - Federal Ministry of Communication, Innovation and Digital Economy

G7 - Group of Seven

G20 - Group of Twenty

GITEX - Gulf Information Technology Exhibition

ISO - International Organization for Standardization

KBTC24 - Kwara Build Technical Care

LLM - Large Language Model

NCA - Nigerian Communications Act

NCAIR - National Centre for Artificial Intelligence and Robotics

NCC - Nigerian Communications Commission

NDPR - Nigeria Data Protection Regulation

NGOs - Non-Governmental Organizations

NAIRS - Nigeria Artificial Intelligence Research Scheme

NITDA - National Information Technology Development Agency

NLP - Natural Language Processing

OECD - Organisation for Economic Co-operation and Development

ONDI - Office for Nigerian Digital Innovation

SDGs - Sustainable Development Goals

TTC - US-EU Trade and Technology Council

UN - United Nations

US - United States

WEF - World Economic Forum

Abstract

Artificial Intelligence (AI) is growing quickly and changing many sectors around the world, including in Nigeria, where it was once seen as a distant possibility. Given the improvements in internet and mobile technology, Nigeria's tech industry has expanded significantly, which has created a strong and enabling environment for AI development. This growth has increased the popularity of many new startups and established tech companies like Opay, Google, and Meta; owners of Facebook, WhatsApp, and Instagram, and thus, positions Nigeria as a potential leader in AI. Moreover, Nigeria has a large, young, and tech-savvy population that is well-suited for AI advancements. However, despite these promising opportunities, Nigeria's current technology-related laws, such as the Nigeria Data Protection Act and the Cybercrimes Act, are not enough to tackle the unique challenges that AI presents. This research examined the urgent need for new laws to regulate AI in Nigeria. It identified gaps in existing AI laws and looked into the ethical and legal issues arising from its widespread use. By comparing Nigeria's situation with how the European Union, China, and the United States managed AI, this study uncovered significant weaknesses in Nigeria's legal responses to these critical matters. The findings highlighted the pressing need to develop specific laws for AI that not only reduced risks but also supported technological advancement. A risk-based approach, similar to the EU's AI Act, was recommended. Additionally, the study recommended that the legal framework should clearly define AI and establish responsibility for any harm caused by AI-related issues. The study further recommended that Nigeria strengthen the operations of agencies like the National Information Technology Development Agency (NITDA) and the National Centre for Artificial Intelligence and Robotics (NCAIR). For further studies, the study suggested that exploring how these regulations could be effectively implemented and evaluating their impact on Nigeria's AI landscape would be crucial. Overall, this research contributed to the ongoing discussion about AI regulation in Nigeria and offered important guidance for policymakers.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Just about a decade ago, the concept of Artificial Intelligence (AI); machines learning and imitating human intelligence, seemed like science fiction in Nigeria, a developing nation with limited access to advanced technology. But today, the landscape has dramatically shifted. In 2022, Google Search data showed a staggering 100% increase in Nigerians searching for "Artificial Intelligence."[1]

Nigeria's tech industry is growing fast, especially with better internet and mobile technology, which has encouraged more use of AI in daily life. During the 2020 lockdown, many people and institutions adapted to remote work and online meetings, including the courts. At that time, the Chief Justice of Nigeria and other court officials set up Guidelines and Practice Directions to allow virtual court sessions. [2]

In the legal field, AI tools can now assist with tasks like legal research, case prediction, and document automation. These AI solutions bring clear benefits to Nigeria's judicial system by making justice more accessible, speeding up case processing to reduce delays, and bringing greater consistency to court rulings, which makes legal outcomes easier to predict. These advantages show

[1] U V Obi, N C Ole & S Uzoigwe, 'Artificial Intelligence (AI) Systems Use in Nigeria: Charting the Course for AI Policy Development' (27 October 2023) Available at <https://www.lexology.com/library/detail.aspx?g=600a8ee0-5b28-44da-8415-0e07c7f333fe> accessed 22 October 2024.

[2] P A Akhihiero, 'Virtual Court Hearings: Towards a Purposive Interpretation of Statutes' Available at <https://edojudiciary.gov.ng/wp-content/uploads/2020/06/VIRTUAL-COURT-HEARINGSTOWARDS-A-PURPOSIVE-INTERPRETATION-OF-STATUTES.pdf> accessed 23 May 2024.

how AI can improve Nigeria's legal processes, making them more efficient and accessible for everyone.

Other sectors, from the financial to healthcare sector, down to education and agriculture, are not left out of the immense benefits that AI has to offer. Presently, there is facial recognition software in mobile phones, and even AI-powered chatbots providing customer service. Without a doubt, AI is transforming societies across the globe, and it is only necessary for Nigeria to jump on this train of innovation.

Impressively, Nigeria's National Information Technology Development Agency (NITDA) and the National Centre for Artificial Intelligence and Robotics (NCAIR), are at the forefront of driving AI research and development in Nigeria. These initiatives align with the provisions of Section 18(2) of the Nigerian constitution, which establishes "the promotion of science and technology" as part of the Fundamental Objectives and Directive Principles of State Policies.[3] Moreso, the government's commitment to exploiting AI for economic growth is further underscored by its target of creating 50,000 AI-driven jobs by 2030.[4]

As Nigeria attempts to be a leader in the African digital economy, having a regulation for AI in place becomes critical to ensure AI creates the most potential in the country with minimal danger. The balancing between two extremes, however, is necessary to realize the advantages of AI, because while AI has clear benefits, not having the right regulation in place will lead to significant problems. Stringent actions taken to address data privacy, algorithm bias, and ethical issues could

[3] Constitution of the Federal Republic of Nigeria 1999 (as amended) Cap. C23 Laws of the Federation of Nigeria 2004 (CFRN) 1999, s 18(2).
[4] A Daramola, 'Three Million Techies in 4 Years, 50K AI Jobs – Highlights of Communication Ministry's Roadmap' (2 October 2023) Available at <https://www.thecable.ng/three-million-techies-in-4-years-50k-ai-jobs-highlights-of-communication-ministrys-roadmap/> accessed 16 April 2024.

end up hindering the innovation AI is supposed to bring. On the other hand, lax rules will only foster misuse.

For instance, during the 2019 Nigerian presidential election, the potential for misuse played out in the alleged use of deepfake videos and audio to spread misinformation and fake news, framing candidates Atiku and Okowa.[5] These manipulations were later exposed, but the incident shows the vulnerability of democratic processes to AI-powered disinformation campaigns.

Aminu Maida, the Executive Vice Chairman of the Nigerian Communications Commission (NCC), stressed this issue during an event to mark the 2024 World Consumer Rights Day. According to Maida, "Although most legislative and governing bodies are looking to regulate this technology, there has been a continuous struggle to strike the right balance between risk mitigation and stifling innovation, while promoting innovation and ensuring security and trust."[6]

This shows how hard it is to regulate AI, especially in a country like Nigeria, where the legal system struggles to keep up with fast-changing technology. However, despite these challenges, some countries have begun creating rules to manage AI research and use.

While a dedicated AI regulatory framework may still be unavailable, there are extant legislations in Nigeria, such as the National Data Protection Act[7] and the Cybercrimes Act[8], on which we could build a framework for regulating AI applications in Nigeria. It will, therefore, require concerted effort on the part of government agencies, tech companies, civil society organizations, and

[5] D Lawal, 'Fact-Check: How Deepfake Audio Was Used to Frame Atiku, Okowa, Others in 2023 Elections' (24 February 2023) Available at <https://prnigeria.com/2023/02/24/atiku-okowa-election> accessed 23 May 2024.
[6] S Akintaro, 'Why AI Regulation Is Difficult Globally—NCC' (16 March 2024) Available at <https://nairametrics.com/2024/03/16/why-ai-regulation-is-difficult-globally-ncc/> accessed 22 October 2024.
[7] Nigeria Data Protection Act (NDPA) 2023..
[8] Cybercrimes (Prohibition, Prevention, etc.) (Amendment) Act, 2024.

academia to ensure responsible AI development in Nigeria. Studying international efforts like the European, American and Asian approaches can also provide practical guides for drafting an effective AI regulation in Nigeria.

Against this background, this research will delve into the specific challenges and opportunities surrounding the evolving landscape of AI development in Nigeria, the potential risks and benefits, and the crucial role of stakeholders in this phase.

1.2 Statement of the Problem

Given how quickly AI is being adopted across Nigeria, the country will see significant improvements in the acceptability of AI technologies. A more pressing problem, however, is that Nigeria's current regulatory frameworks are no longer able to keep up with this exponential growth.

This creates significant challenges, such as who owns works made with AI and/or human-AI collaboration, who is responsible for liabilities arising from AI, misinformation, and accidents involving AI, as well as issues with intellectual property rights related to AI development. Additionally, since AI learns from a vast amount of personal data, there are concerns about privacy and data security. These highlight the need for effective regulations that promote responsible AI use, protect consumers, and uphold ethical standards. Therefore, it's important to address the lacuna in AI regulation in Nigeria.

1.3 Aim and Objectives of the Research

This study aims to examine the necessity of a thorough regulatory framework for AI in Nigeria and to recommend important components for its development.

The objectives of this research include;

1. To identify and analyze the major legal and ethical challenges associated with the development and deployment of AI in Nigeria.
2. To develop mechanisms to mitigate the risks associated with AI and ensure that its benefits are shared equitably throughout all levels of the sectors in the Nigerian economy.
3. To examine the regulatory approaches to AI in other jurisdictions, identify best practices and recommend their applicability to Nigeria.
4. To propose a comprehensive regulatory framework on AI for Nigeria that will strike a balance between the promotion of innovation and the consideration of ethics and law for responsible deployment, contribution to economic development, human rights, and dignity.

1.3.1 Research Questions

Flowing from the above, the research seeks to address the following questions:

1. What are the major legal and ethical challenges associated with the development and deployment of AI in Nigeria?
2. What strategies can be implemented to mitigate the risks associated with AI and ensure equitable access to its benefits in Nigeria?
3. How do the existing regulatory frameworks in other jurisdictions address the legal and

ethical issues surrounding AI, and what best practices can be applied to Nigeria?

4. What specific elements should be included in a comprehensive AI regulatory framework for Nigeria to balance innovation with ethical considerations, ensure responsible deployment, and uphold human rights and dignity?

1.4 Scope and Limitation of the Study

This research investigates the need for a comprehensive regulatory framework for Artificial Intelligence (AI) in Nigeria. The study will primarily focus on the ethical and legal issues surrounding AI development and adoption in Nigeria. It will also broaden this perspective by incorporating comparative legal analysis, which will assess the various regulatory frameworks found in other nations—specifically, the United States, the European Union, and China—that are highly developed in AI and will be beneficial to Nigeria's legal system. Through a review of relevant case law, legislation, and papers, this research will consider current legal thinking in Nigeria as well as emerging trends in the development and regulation of AI globally.

The limitation of this study is that applicable primary and secondary sources, including case laws, legislations, textbooks, and journal articles, within Nigeria are relatively unavailable, considering that the regulation of AI in the country is still in its infancy. Also, there are challenges in accessing legal information from other countries. China is very advanced in AI, but most of its materials are not in English. The European Union and the United States have resources in English, but many of these are only available for a fee, making it hard to access them.

Despite these limitations, this research will provide a comprehensive analysis of the need for a

regulatory framework for AI in Nigeria and recommendations for the development of a robust one.

1.5 Significance of the Study

In Nigeria, the growth and use of AI bring both great opportunities and serious challenges. To make the most of AI's benefits and reduce its risks, clear rules are needed. This study is important because it seeks to identify the gaps in Nigeria's current AI laws and suggests a strong regulatory framework that encourages responsible, ethical, transparent, and accountable AI development. By doing this, we can avoid negative consequences and help the public trust AI technologies more.

The study also focuses on protecting human rights and dignity. A good set of rules will ensure that AI practices respect basic human values and do not involve discrimination. Additionally, AI has the potential to help Nigeria's economy grow by making businesses more efficient and promoting innovation. Moreover, Nigeria's experience in setting up AI regulations can serve as an example for other developing countries facing similar challenges.

Overall, this research aims to promote a more informed and responsible approach to AI in Nigeria, which will benefit policymakers, industry leaders, and researchers in years to come.

1.6 Research Methodology

This study combines doctrinal legal research methodology with comparative legal analysis.

With doctrinal research, the study thoroughly examines relevant primary sources, including the Constitution, existing laws that touch upon AI (like data privacy, intellectual property and

cybercrime), and relevant case law. Given the scarcity of primary sources, the study uses more secondary sources like legal documents, scholarly materials on AI regulation, reports on AI development, journal articles, internet resources, and applicable judicial decisions from other jurisdictions.

With comparative legal analysis, the study examines existing regulatory frameworks for AI in other countries, particularly those with advanced AI development or similar legal systems to Nigeria, particularly China, the United States and the European Union. This analysis will involve reviewing their relevant legislation, scholarly works analyzing these frameworks, and case law on AI-related issues from these jurisdictions.

1.7 Chapter Analysis

Chapter One introduces the study by giving an overview of AI in Nigeria, especially the legal and ethical problems that come with the rapid growth of AI technology. It states the main problem, which is that Nigeria's current laws are not enough to handle AI and that a new and comprehensive set of regulations is needed. The chapter also lays out the study's aim and objectives, focusing on finding solutions to these legal problems. The scope of the study mainly looks at Nigeria but also compares it to AI rules in places like the European Union (EU) and the United States (US). It ends by talking about the research methodology, which uses a combination of doctrinal legal research and comparative analysis.

Chapter Two takes a closer look at AI, starting with the Conceptual Clarifications which explain what AI is and how it has developed over time. The chapter also looks at the Theoretical

Foundation of AI, including its study from different jurisprudential schools of thought. The chapter ends with a Literature Review of existing research works on AI, which reveals that Nigeria doesn't have strong laws in place to manage AI properly.

Chapter Three examines the Legal and Institutional Frameworks that manage AI in Nigeria. It reviews current Nigerian laws, like the Constitution and the Nigeria Data Protection Act, showing how they fall short in handling AI-specific and AI-causing issues, such as data privacy and intellectual property. The chapter also compares Nigeria's situation with international frameworks, like the EU's AI Act, and mentions how global bodies, like the United Nations, support ethical AI use. It stresses the need for Nigeria to improve its regulatory agencies, such as the NDPC and NITDA, and pushes for new laws to deal with the challenges AI brings.

Chapter Four delves into the Positive and Negative Impacts of AI in Nigeria, showing how AI could influence important areas like law, finance, healthcare, and education. It also examines the AI Regulatory Landscape in the European Union, United States, and China, and identifies ideas that Nigeria can draw from in crafting its own legislation.

Chapter Five concludes the study by bringing together the main findings from earlier chapters. It points out the problems Nigeria faces in its AI regulation and stresses the need for a complete AI law. The chapter offers recommendations for creating a risk-based framework for AI regulation, taking ideas from successful international practices. It advises Nigeria to follow a clear and accountable approach to managing AI, strengthen its regulatory bodies, and work with other countries. Lastly, it emphasizes the need for public involvement and rules structured to specific sectors to deal with AI's unique challenges in Nigeria.

CHAPTER TWO

CONCEPTUAL CLARIFICATIONS, THEORETICAL FOUNDATION AND LITERATURE REVIEW

2.1 Conceptual Clarifications

2.1.1 Artificial Intelligence (AI)

Artificial Intelligence (AI), a term coined in 1956 during the Dartmouth Summer Research Project, seeks to create intelligent non-human beings capable of reasoning, learning, and acting independently.[9] According to the Merriam-Webster Dictionary, AI is defined as "the capability of computer systems or algorithms to imitate intelligent human behaviour."[10]

The idea of AI originated from various ancient myths about artificial beings; however, its scientific framework began to take shape in the mid-20th century, once computers could be programmed. Research in AI began in the 1950s, building on Alan Turing's work from the 1930s. He explored the idea of whether machines could think and ultimately suggested that it's more accurate to say machines imitate thinking.[11] Early AI research inspired by Turing focused on developing algorithms for tasks like playing games and proving mathematical theorems.

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[9] J McCarthy et al., 'A Proposal for the Dartmouth Summer Research Project on AI' (Dartmouth Conference, Hanover, New Hampshire, 31 August 1955) Available at <https://ojs.aaai.org/aimagazine/index.php/aimagazine/article/view/1904> accessed 21 June 2024.

[10] 'AI', Merriam-Webster Dictionary (18 October 2024) Available at <https://www.merriam-webster.com/dictionary/artificial%20intelligence> accessed 22 October 2024.

[11] A M Turing, 'Computing Machinery and Intelligence' (1950) Mind 49, 433-460. Available at <https://courses.cs.umbc.edu/471/papers/turing.pdf> accessed 21 June 2024.

In a matter of decades, AI rapidly evolved to embrace a wide array of applications in the areas of natural language processing, computer vision, robotics, and autonomous vehicles, enabling machines to do things very much considered exclusive to humans. Although there is no universally accepted definition of AI, it is often distinguished by its ability to demonstrate intelligence through reasoning, learning, planning, problem-solving, perception, and language comprehension.

As extensively covered by Russell and Norvig, AI systems can be categorized based on their capabilities.[12] Reactive machines, the most basic type, react to inputs only by following pre-programmed rules; they have no recollection of previous experiences. Deep Blue, a chess computer that beat Garry Kasparov, is one example.[13]

Another type is AI with limited memory, which may make decisions by remembering prior knowledge. This is demonstrated by some models of AI chatbots, e.g., the GPT 4-0 and 4-0 mini, recommendation engines and self-driving automobiles. The "theory of mind," which imagines robots that comprehend human emotions and beliefs, and self-aware AI—which would have consciousness and self-awareness—are examples of theoretical advances in AI.[14]

Currently, the majority of AI in use is narrow AI (weak AI), built for specialized tasks like voice help or spam filtering. While artificial superintelligence (ASI) is still a theoretical idea that may outsmart humans and raise ethical questions, general AI (strong AI or AGI) represents the possibility of cognitive powers comparable to those of humans.

[12] S J Russell & P Norvig, *AI: A Modern Approach* (4th edn, Pearson Education 2020). 1-4.
[13] Ibid, 30.
[14] Ibid, 7.

2.1.1.1 Related Concepts

In talking about AI, various concepts will be mentioned. These include:

(i) Machine learning: is a branch of AI that gives systems the capacity to learn from their experiences and get better over time without explicit programming.[15] It makes predictions that help improve decisions by finding patterns in large amounts of data.

(ii) Algorithms: Machine learning algorithms are the fundamental building blocks of data analytics.[16] Algorithms can learn in different ways, including supervised, unsupervised, or reinforcement learning. Supervised learning uses labelled examples to find patterns, while unsupervised learning looks for patterns without labels. For instance, if you're teaching a child to recognize animals, show the child a picture of a cat and say, "This is a cat," and then a picture of a dog and say, "This is a dog." After showing many labelled pictures, the child learns to tell the difference between a cat and a dog. This is what supervised learning does—algorithms learn from labelled data (like the pictures with names) to make predictions on new, unlabeled data.

In unsupervised, imagine you give the child a pile of animal pictures without telling them the names of the animals. The child can still group similar-looking animals—like cats in one group and dogs in another—even though they don't know the names. This is how unsupervised learning works. The algorithm doesn't have labels, but it can find patterns and group things that are alike.

Reinforcement learning works by learning through trial and error. However, machine learning has some risks, especially when it comes to bias. In areas like lending or criminal justice, if the data

[15] Russell & Norvig (n12), 651–715.
[16] Ibid, 765.

used to train algorithms is biased, the algorithms can make unfair decisions and make the problem worse.

(iii) Neural networks and deep learning: Neural networks are information processing systems based on the structure of the human brain, where connected nodes act like small computers. Deep learning, a type of neural network, uses many layers to find complex patterns in data.[17]

(iv) Big data and Natural Language Processing (NLP): Machine learning runs on big data, which includes huge amounts of both organized and unorganized information. This helps computers work better and gives useful insights. One goal of machine learning is to teach computers to understand human languages. In Nigeria, this could improve communication between different languages when combined with tools like chatbots and translation apps.[18]

(v) Robotics and visual aids: Robotics uses AI to enable robots to do tasks that humans usually do. With computer vision, machines can understand visual information, like recognizing objects and making sense of what's happening around them.[19]

2.1.2 Regulation

Regulation involves creating and enforcing rules, guidelines, and standards for the development and use of AI technologies. Protecting human rights by addressing biases in AI systems, encouraging innovation through a clear legal framework, and providing responsibility and transparency for AI acts are some of the main objectives of AI regulation.[20]

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[17] Russell & Norvig (n12), 772.
[18] Ibid, 26, 823.
[19] Ibid, 881-975.
[20] R Rodrigues, 'Legal and Human Rights Issues of AI: Gaps, Challenges and Vulnerabilities' (2020) *Journal of Responsible Technology* vol. 4, p. 100005. Available at <https://doi.org/10.1016/j.jrt.2020.100005> accessed 22 October 2024.

AI regulation also builds public trust through the establishment of clear guidelines and oversight, ensuring that it is fair and does not worsen inequality. It deals with legal issues where responsibility for injury can be traced when an AI system causes any type of harm. And it fosters international cooperation to have more harmony towards global collaboration in AI regulation.

Many different mechanisms shape AI regulation. Enacted Laws like the GDPR of the European Union are binding on specific issues, such as data protection and algorithmic transparency, among others. Policies, on the other hand, give the general direction to AI, while Standards outline how AI systems should be designed and operated, ensuring the data used is of good quality and fair. Codes of Conduct encourage the responsible use of AI, while soft laws that include guidelines and recommendations are of nonbinding influence. While co-regulation encourages cooperation between the government, business community, and civil society, self-regulation entails the voluntary observance of ethical standards.

2.1.3 Innovation

Innovation is the creation of new technologies, methods, applications, and business models for the creation of general, social, and economic value that differs significantly from routine improvements, introduces radical shifts from past practices, and introduces novel concepts, procedures, or goods into preexisting paradigms or establish entirely new ones.[21]

Innovation in AI can take many different forms. The creation of new AI models, algorithms, and methods that enable machines to carry out tasks more independently, precisely, or productively is referred to as technological innovation. Examples of this type of innovation include advances in

[21] A Aldoseri, et al., 'AI-Powered Innovation in Digital Transformation: Key Pillars and Industry Impact' *Sustainability (MDPI)* vol. 16, (no. 5), [2023], p. 1790 Available at <https://doi.org/10.3390/su16051790> (accessed 22 October 2024).

computer vision, deep learning, natural language processing, and reinforcement learning.[22]

Application innovation, on the other hand, focuses on applying AI to solve new problems or improve existing solutions in diverse domains such as healthcare, finance, agriculture, education, and transportation.[23] Examples include AI-powered medical diagnosis tools, fraud detection systems, personalized learning platforms, and autonomous vehicles.

Business model innovation leverages AI in the development of new ways of value creation for customers or stakeholders. It may be related to the creation of state-of-the-art AI-powered products and services, the opening of new markets for AI-driven solutions, or even enhancements of existing business processes and operations with AI.

Most of all, social innovation leverages AI for the solutions to certain pivotal challenges that society is facing and improving livelihoods.[24] The areas where this is critical involve AI-driven solutions for disaster response, accessibility tools for the disabled, environmental monitoring systems, and projects aimed at reducing inequality and social good.

2.1.4 Ethics

Ethics refer to a set of moral principles, especially ones relating to or affirming a specified group, field, or form of conduct. AI systems that are developed and used with ethics in mind help mankind and do the least amount of harm possible, both of which uphold human ideals.

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[22] Russell & Norvig (n12).
[23] A B Rashid & A Karim, 'AI Revolutionizing Industries Worldwide: A Comprehensive Overview of Its Diverse Applications' *Science Direct (Hybrid Advances)* vol. 7, [2024], 100277–100277, Available at <https://doi.org/10.1016/j.hybadv.2024.100277> (accessed 22 October 2024).
[24] WEF, 'AI for Impact: The Role of AI in Social Innovation' (In collaboration with EY and Microsoft). Available at <https://www3.weforum.org/docs/WEF_AI_for_Impact_Social_Innovation_2024.pdf> accessed 22 October 2024.

The Turing Test, proposed by Alan Turing in 1950, serves as a benchmark for assessing AI's progress in natural language processing.[25] Although the possibility of passing the Turing Test is an advancement in capability, it does bring into question ethical considerations about deception and manipulation by AI capable of convincingly impersonating humans.

Transparency, equity, accountability, non-maleficence, and beneficence are important ethical concepts in AI.[26] The AI system should be comprehensible and explicable to foster responsibility and trust by eliminating biases in openness. In Nigeria, ensuring fairness is vital; AI must treat individuals and groups equitably without discrimination based on race, gender, or ethnicity.

Accountability guarantees that people or organizations are in charge of AI choices, which calls for distinct lines of accountability for users and developers that are backed by impartial audits. Non-maleficence requires AI to refrain from harming people, placing a strong emphasis on cybersecurity, safety, and thorough testing. Finally, beneficence encourages the application of AI to solve societal issues, ehance living standards, and support sustainable growth.

2.1.5 Legal Considerations

The significant legal areas include but are not limited to, data protection and privacy, intellectual property, liability and accountability, consumer protection, algorithmic transparency, competition and antitrust, and employment and labour concerns.[27]

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[25] Turing (n11).

[26] A Jobin, M Ienca & E Vayena, 'The Global Landscape of AI Ethics Guidelines' *Nature Machine Intelligence* vol. 1, (no. 9), [2019], 369–379, available at <https://www.researchgate.net/publication/335579286_The_global_landscape_of_AI_ethics_guidelines> (accessed 21 June 2024).

[27] A Hassan, 'The Legal, Ethical Issues and Impact of AI on Legal Profession: Which Way Nigeria?' (2023) Available at <https://lawpavilion.com/blog/the-legal-ethical-issues-and-impact-of-artificial-intelligence-on-legal-profession-which-way-nigeria-by-aminu-hassan/> accessed 21 June 2024.

Data protection and privacy are quite paramount because AI systems often rely on volumes of data, including personal and sensitive information. The need for sound data protection laws not only helps protect the rights of privacy but also restrains data collection and processing practices, thus making AI systems more transparent and accountable in the way the data is used.

Ownership and protection of intellectual property rights over AI-generated creations remain challenge. While the lack of clarity on determining ownership and protection of such creations within the framework of existing laws is indeed a hurdle, many AI algorithms are still "black box" in nature and raise transparency and explainability concerns. Therefore, regulation should include demands for transparency about how AI systems work, what data they feed on, and what kind of biases may be involved. And since most of the development in AI is concentrated in the hands of a few large technology companies, there is an obvious concern for anti-competitive practices; the reason for regulations to guarantee competition, avoid abuses of market power, and promote innovation.

2.2. Theoretical Foundation

2.2.1 Jurisprudential Theories

AI can be examined through different legal theories, each giving a unique view of how law and technology interact. Here are a few important perspectives:

(i) Legal Realism: This view focuses on how laws actually work in real life. When it comes to AI, it looks at how AI tools impact legal work, like helping lawyers do research or making

decisions in court, as well as its potential negative impacts.[28]

(ii) Critical Legal Studies: This theory challenges traditional ideas about law, suggesting that laws are influenced by social and political factors. As Cathy O'Neil argues, "Models are opinions embedded in mathematics."[29] This theory examines how AI could reinforce existing inequalities or create new challenges, such as bias in AI systems.

(iii) Feminist Legal Theory: This approach highlights how laws often reflect and maintain gender inequalities. It studies whether AI helps promote gender equality or if it adds to existing biases, especially in areas like employment or family law.[30]

(iv) Natural Law: This theory believes that laws should reflect moral values and ethics.[31] Discussions on AI may center on the ethical ramifications of applying AI to court cases and who bears responsibility for errors made by AI.

(v) Positivism: Legal positivism looks at laws as they are written, without considering moral questions. It analyzes how current laws regulate AI, like issues related to copyright for AI-generated content or liability in self-driving cars.[32]

Each of these viewpoints reveals the advantages and difficulties associated with new technology,

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[28] 'AI in the Courts: How Worried Should We Be?' (6 March 2024) *Judicature | the Scholarly Journal about the Judiciary*. Available at <https://judicature.duke.edu/articles/ai-in-the-courts-how-worried-should-we-be/> accessed 22 October 2024.

[29] S Larsson, 'The Socio-Legal Relevance of AI' [2019] Droit et Société N° (103(3)), 573–593. Available at <https://doi.org/10.3917/drs1.103.0573> accessed 22 October 2024.

[30] Beijing Platform for Action, 'AI, Platform Work and Gender Equality' Available at <https://eige.europa.eu/sites/default/files/documents/artificial_intelligence_platform_work_and_gender_equality.pdf > accessed 22 October 2024.

[31] O C Nweke & G I Nweke, 'Legal and Ethical Conundrums in the AI Era: A Multidisciplinary Analysis' [2024] (13(1)) *International Law Research* 1–15. Available at <https://doi.org/10.5539/ilr.v13n1p1> (accessed 22 October 2024).

[32] U Okwara Donatus, et al., 'AI and Its Societal Legal Implications' [2024] (10(2)) *IGWEBUIKE: African Journal of Arts and Humanities*.

helping us grasp the link between AI and the law.

2.2.2 Systems Theory

Systems theory views AI as a complex, interconnected system with three main components: technology, law, and society.[33] Each component influences and is shaped by the others, creating a dynamic relationship.

At the core of the AI system, the technology includes algorithms, models, and data-driven AI applications. Technological developments may restructure the capabilities of AI and subsequently lead to applications of different types with new ethical challenges. Advances in natural language processing make AI chatbots smarter, raising concern over misinformation.

The legal component includes regulations, policies, and standards governing AI development and use. Laws can promote or constrain innovation; stricter data protection laws may limit data for training AI models, while incentives for research could accelerate development.

The societal aspect entails the values and beliefs that form the acceptance of AI. Public opinion and ethical issues directly impact the levels of the boundaries of AI. Fear of machines taking over jobs may lead to legislation against automation, while demand for AI healthcare solutions may trigger funding in that direction.

The interconnectedness of these components means changes in one can ripple through the system. For example, breakthroughs in AI technology can create new legal challenges and societal concerns, highlighting the need for adaptable regulatory approaches responsive to rapid

[33] L von Bertalanffy, *General System Theory: Foundations, Development, Applications* (George Braziller, 1968). Available at <https://www.scirp.org/reference/referencespapers?referenceid=2040488> accessed 21 June 2024.

technological changes.

2.2.3 Stakeholder Theory

Stakeholder theory highlights the importance of understanding the varied interests of parties involved in AI development and deployment.[34]

The Nigerian government aims to promote AI innovation for economic growth while ensuring its safe and ethical use by developing regulations, policies, and standards. Nigerian businesses see AI as a means to enhance efficiency and create new products but desire a regulatory environment that fosters innovation and protects their intellectual property. However, they also have concerns about compliance costs and potential liabilities for AI-related harm.

AI researchers in Nigeria, on the other hand, focus on advancing capabilities and addressing ethical challenges. They require funding, access to data, and a supportive regulatory framework that is necessary for responsible innovation. Nigerian consumers benefit from AI-powered products but are concerned about privacy, security, and discrimination.

In an effort to uphold human rights and avoid inequality, civil society groups (CSOs) promote the moral use of AI. They promote policies that serve the public interest and increase knowledge, they aid in the regulatory process.

When these interests are examined, possible conflicts and areas for collaboration become apparent. CSOs stress ethics and social impact, while corporations promote profit and innovation. The

[34] RK Mitchell, BR Agle, & DJ Wood, 'Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts' [1997] *Academy of Management Review* (22(4)), 853–886. Available at <https://www.jstor.org/stable/259247> accessed 21 June 2024.

government must strike a balance between these interests and provide a framework that encourages everyone to innovate responsibly in AI.

2.2.4 Risk Management Theory

The safe and moral application of AI technologies in Nigeria would be greatly aided by the foundation that Risk Management Theory provides for the identification, evaluation, and cogent mitigation of these risks.[35] Identification is the first step in risk management, and in Nigeria, there will be several things to consider.

The safety hazards include bodily injury from AI systems, such as misdiagnosis in medicine or accidents involving self-driving automobiles. Cyberattacks and data breaches that compromise sensitive data and interfere with services will pose a security risk. Due to the solution's heavy reliance on personal data, which is vulnerable to discrimination and unauthorized access, privacy issues are also substantial. Additionally, automation poses social dangers, primarily the loss of jobs for low-skilled individuals, which exacerbates their inequality.

Following the identification of these hazards, additional risk assessment on the sector in question and the level of technological maturity must be conducted. Technical solutions like safety standards and security protocols, which support legal frameworks like data protection laws and requirements for algorithmic openness, will be a part of management and mitigation methods. Responsible AI development is also promoted by industry standards and ethical principles. Public education on the advantages and hazards of AI will encourage more informed and conscientious adoption.

[35] *ISO 31000:2018 Risk Management – Guidelines.*

2.2.5 Innovation Theory

Innovation theory clearly explains those factors that act as driving and hindrance forces for AI advancement.[36] These factors relate to the technological, economic, political, social, and regulatory dimensions.

For AI innovation, technological elements such as research capacity and data accessibility are essential. Progress in Nigeria is greatly impacted by the availability of qualified researchers and top-notch research institutions.

AI development is also influenced by economic issues. Strong market pull is produced by the growing need for AI solutions in industries like healthcare and finance, which encourages investment and entrepreneurship.

In order to promote AI innovation, political factors—such as government policy and research funding—are essential. For businesses and research organizations, government assistance can offer crucial resources and incentives.

AI adoption is also influenced by social variables, such as cultural attitudes toward technology and public knowledge. Fostering digital literacy and increasing public confidence in AI is essential to fostering an innovative atmosphere.

Over-regulation or under-regulation could hurt the balance needed for the sustainable development of AI in Nigeria since regulation plays a dual role of catalyst and constraint.

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[36] I M Cockburn, R Henderson & S Stern, 'The Impact of AI on Innovation' in *The Economics of AI: An Agenda* (University of Chicago Press 2018) 113-146. Available at <https://www.nber.org/system/files/chapters/c14006/c14006.pdf> accessed 21 June 2024.

2.2.6 Regulatory Theory

Regulatory theory provides a framework for understanding governance approaches in shaping the AI landscape.[37] Command-and-control regulation involves the government setting strict rules and standards for AI, with penalties for non-compliance. While this ensures a baseline of safety and ethical standards, it may hinder innovation and adaptability, especially in Nigeria's emerging AI industry, where such enforcement can be challenging.

Self-regulation relies on industries to create their codes of conduct, promoting flexibility and innovation but lacking the necessary oversight to protect public interests. In Nigeria, self-regulation alone may not sufficiently address the complex ethical implications of AI.

Co-regulation combines government oversight with industry self-regulation, where the government sets the framework while industries implement the standards. This model utilizes expertise from both sectors but requires strong coordination, which can be challenging in a country as diverse as Nigeria.

2.3 Literature Review

Several works exist related to the rise of AI in Nigeria. However, given its emerging nature, there's a relative paucity of literature specifically focused on the regulation of AI, despite the just-released national policy on AI. The existing literature does not comprehensively proffer a solution to the multifaceted challenges AI may raise, and how they can be taken into consideration in forming a

[37] C Cath, 'Governing AI: Ethical, Legal and Technical Opportunities and Challenges' [2018] (376(2133)) *Philosophical Transactions A: Mathematical, Physical and Engineering Sciences*, 20180080. Available at <https://doi.org/10.1098/rsta.2018.0080> accessed 22 June 2024.

national legislation for its regulation; instead, it primarily identifies the problems that may be faced with the rapid increase in AI usage. This review aims to bridge the gaps.

Thompson[38] provides a brief overview of AI and its potential applications in Nigeria and Africa, highlighting the excitement and rapid adoption of tools like ChatGPT. However, the article lacks a comprehensive analysis of the legal and ethical challenges associated with AI adoption in Nigeria. It briefly mentions existing legislation like the Startup Act 2022[39] and the NDPR but does not delve into their adequacy or inadequacy for AI governance. Also, the study focuses more on economic opportunities, particularly infrastructure development, than on specific policy suggestions or regulatory framework proposals for the best way to control AI in Nigeria. That is a crucial oversight since creating a cohesive regulatory framework depends on understanding whether the current laws are adequate.

In contrast, Obianyo and Ater[40] argue that a robust legal governance structure, sensitive to the unique circumstances that define Nigeria is necessary. They discuss a human-centred AI governance framework that is based on the values of justice, equity, and fairness and weigh the advantages of AI against its inherent hazards. Their efforts highlight the necessity of defending citizens' rights, particularly concerning privacy and data security. Although their framework is thorough, it is devoid of real-world examples or case studies that might demonstrate how they could be implemented inside the Nigerian legal system.

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[38] A Thompson, 'AI: What Does This Mean for Nigeria and Africa?' (2023) *Africa Law Practice NG and Company*. Available at <https://www.alp.company/sites/default/files/Artificial%20Intelligence%20What%20Does%20This%20Mean%20for%20Nigeria%20%26%20Africa.pdf> accessed 22 June 2024.

[39] The Nigerian Startup Act 2022.

[40] C I Obianyo & S V Ater, 'A Critical Appraisal of the Legal Framework of AI Governance in Nigeria' *Chukwuemeka Odumegwu Ojukwu University Journal of Private and Public Law* (4.1) [2023].

The ethical implications of AI, particularly regarding its use in cybercrime, are examined by Kanu et al.[41] To address the issues, they propose developing a set of ethical guidelines. Their study's flaw, though, is that it ignores the laws that might aid in developing these guidelines for certain real-world circumstances.

The Nigerian Communications Commission[42] provides a comprehensive overview of the ethical and societal impacts of AI, encompassing issues like bias, inequality, privacy, and security. The research paper effectively raises awareness about the potential risks associated with AI deployment in Nigeria, particularly by highlighting instances where AI systems have perpetuated biases or caused harm. However, the paper primarily focuses on general ethical considerations and lacks a detailed analysis of the specific legal and regulatory challenges in Nigeria. For instance, the paper does not explore how existing laws and policies address (or fail to address) these challenges posed by AI, e.g., the potential impact of AI on the labour market, including job displacement and the need for workforce reskilling. It also does not delve into the potential sector-specific impacts of AI, such as its effects on the judiciary, legal practice, healthcare, or education, especially by drawing on case studies and examples from Nigeria and other countries.

In order to solve these issues, Agunbiade[43] highlights the necessity of a legislative framework and promotes a well-rounded strategy that protects human rights and dignity while promoting innovation. The author emphasizes the significance of justice and equity in AI development and implementation in Nigeria while highlighting the possibility of prejudice and discrimination in AI

[41] K Ikechukwu, T Dokpesi & C Adidi, 'AI and Cybercrime in Nigeria: Towards an Ethical Framework (2024).' Available at <https://doi.org/10.5840/du202434115> accessed 11 August 2024..
[42] Nigerian Communications Commission, *Ethical and Societal Impact of AI (AI)* (2023).
[43] A I Agunbiade, *AI and Law: A Nigerian Perspective* (LAP LAMBERT Academic Publishing 2019).

systems, drawing comparisons with the problems brought up by the COMPAS system in the US.[44]

Although the study makes extensive use of theoretical justifications and examples from other nations, it lacks empirical data unique to Nigeria and does not offer specific recommendations regarding the mechanisms or provisions that such a framework should contain. For example, it does not thoroughly discuss current Nigerian laws and regulations that may be pertinent to AI, such as data protection laws or consumer protection laws.

Akhihiero[45] and Aneke[46] address the validity of virtual court proceedings in Nigeria, even as the country's judiciary investigates the growing use of AI, particularly in these hearings.

Akhihiero provides a thorough analysis of Nigerian virtual court proceedings, examining both their procedural implications and legality. The study investigates what constitutes "public" in the context of virtual hearings and concludes that they are permissible under Nigerian law. He highlights several benefits of virtual hearings and urges that the constitution and laws be interpreted to reflect evolving technological capabilities.

Similarly, Aneke maintains that virtual court hearings in Nigeria are legitimate and that no constitutional modification is required for the hearings to take place. To do this, the study examines several court rulings and current legislation on these topics and concludes that virtual hearings are constitutional. Aneke says that a purposive interpretation of the Constitution should be used to incorporate virtual hearings and that the previously strict legal framework should be sufficiently

[44] A M Taylor, 'AI prediction tools claim to alleviate an overcrowded American justice system… but should they be used?' *Stanford Politics* (2020) Available at <https://stanfordpolitics.org/2020/09/13/ai-prediction-tools-claim-to-alleviate-an-overcrowded-american-justice-system-but-should-they-be-used> accessed 6 June, 2024.
[45] Akhihiero, (n2).
[46] P C Aneke, 'The Legality of Virtual Court Hearing in Nigeria: The Way Forward' (6.2) [2021].*Madonna University, Nigeria Faculty of Law Law Journal*.

adaptable to new technology.

However, both studies do not discuss the wider ethical, legal, and social issues arising in regard to AI in the Nigerian legal profession. More specifically, the effects of AI on practice and education within the law sector, or how discrimination and bias may arise in the AI-powered tools used in the legal world remain widely unexplored.

Apart from that, there is heavy reliance on legal analysis and judicial decisions; empirical evidence concerning what actually happens in practice due to virtual hearings and AI tools within the legal ecosystem in Nigeria is completely lacking. In addition, the studies do not provide the needed insight into different approaches and best practices concerning other jurisdictions through various comparative analyses.

Bello and Ogufere[47] have further assessed the preparedness and adaptability of the Nigerian judiciary to adopt AI technologies. Their analysis has brought out sharp lacunae in both preparedness and adaptation in the existing legal structures, and how urgent reforming the latter to accommodate AI is. Though this piece of work brings out many valuable insights, it does not look at any measures taken by way of regulation or recommendations that can be taken or made to make the judiciary more adaptable for AI.

Attat[48] examines AI's transformative effects on legal practice, focusing on document review and risk assessment efficiencies. Even though Attat recognizes the benefits of AI, he draws attention

[47] O Bello & C Ogufere, 'The Emerging AI Legal-Judicial System's Interface: Assessing the State of Nigeria's Judicial System's Readiness for a Revolution' (University of Leicester, 2024) Journal contribution, https://hdl.handle.net/2381/26053102.v1 (accessed 22 October 2024).

[48] T Etieno Attat, 'An Appraisal of AI and Its Impact on the Nigerian Legal Profession' (2023) Available at <https://www.academia.edu/105017564/AN_APPRAISAL_OF_ARTIFICIAL_INTELLIGENCE_AND_ITS_IMPACT_ON_THE_NIGERIAN_LEGAL_PROFESSION> accessed 22 July 2024.

to the conservative mindset that permeates the legal profession and will hinder the industry's adoption of AI. Although this research is helpful, it lacks specific suggestions on how to overcome the opposition to the use of AI in legal practice.

The dispute about determining authorship or inventorship of an AI work under Nigerian copyright and patent rules is examined by Adaka and Olubayi.[49] Since it raises issues of fundamental ownership and the legal status of works created by more complex AI systems, it is a crucial component of AI regulation. This paper demonstrates the difficulties with ownership and inventorship of AI-generated creations. Conventional legal frameworks are ill-equipped to handle the unique circumstances of AI-generated artworks, leaving open several issues regarding who should be regarded as the legitimate owner and who would be responsible for any legal repercussions that may result from using such works.

This is particularly crucial given current advancements that show AI systems may progressively function without human supervision and make judgments on their own. The writers offer a plethora of insightful opinions based on their knowledge and global legal precedents about how new AI creations could be subject to intellectual property regulations. The paper attempts to provide a thorough review of copyright and patent law, but it ignores the potential for prejudice and discrimination as well as the impact on human innovation. Regarding the effects of quickly developing AI technologies—like generative models of AI—on intellectual property rights, the report skimps in detail. Thus, new concerns about the nature of creativity and the potential contribution of AI to the creative process are brought up by the developing works. Lastly, despite

[49] E E Adaka & I AOlubiyi, 'Lessons for Nigeria: Determining Authorship and Inventorship of AI Generated Works' [2022] *Journal of Intellectual Property and Information Technology Law* (JIPIT) (2(1)), 15-48. Available at <https://doi.org/10.52907/jipit.v2i1.203> accessed 6 June 2024.

mapping legal difficulties and obstacles for AI-generated works, the report offers no specific legislative proposals to address these issues.

Akinlotan[50] examines Nigeria's legal framework on culpability for harm brought on by AI. The author questions if using the current legal frameworks—such as vicarious responsibility and product liability—with AI systems presents any challenges. These are mostly made for human actors and traditional technology, which could not adequately support the characteristic characteristics of AI, such as autonomy, learning, and perhaps unpredictability.

The author emphasizes the necessity of creating a clear legal framework addressing responsibility resulting from AI. Therefore, he suggests a framework that takes into account the intricacy of AI systems and offers precise guidelines for establishing liability when AI is involved in any situation that causes harm. This could lead to greater predictability and a fair environment when developing and implementing AI technologies. Although the study delves deeply into the legal aspects of AI liability, it fails to address more significant worries about algorithmic bias, transparency, and the potential for AI to exacerbate long-standing social injustices. Establishing thorough and efficient AI legislation requires knowledge of how AI could transform various domains, both favourably and unfavourably.

In his proposal for a rights-respecting AI strategy for Nigeria, Effoduh[51] highlights the need to uphold democratic ideals and human rights in the era of AI. The policy brief highlights the urgent need for a comprehensive AI strategy that is firmly based on fundamental human rights principles and guarantees that its implementation and usage won't infringe upon the liberties and rights of

[50] Akinlotan I, 'Liability for Damage Caused by AI' (2019) *Templars Law* 1-3.
[51] Effoduh, J O, 'Towards a Rights-Respecting AI Policy for Nigeria' (2021) *Paradigm Initiative*.

individuals. The author highlights democratic principles that should direct AI policymaking, including accountability, openness, and involvement. With this strategy, the advancement and use of AI technology will transcend the values that society as a whole upholds, such as justice, equity, and human dignity.

Although this policy brief argues for a rights-respecting AI policy, it skips over essential specifics of examining Nigeria's current legal system, which is crucial for spotting any gaps or contradictions that must be fixed in a new AI policy. Furthermore, the brief makes no recommendations for the precise manner in which such AI rights may be governed in Nigeria, including the kinds of rules that might be in place, the organizations that might be in charge of supervision, and the methods for enforcing adherence.

The broader implications of AI in Africa are discussed by Ade-Ibijola and Okonkwo[52], focusing on the requirement for an effective collaborative ecosystem across policymakers, universities, and the private sector. Given the centrality of ethical considerations and cultural contexts in any development of AI in innovation, while mitigating risks, the issue is discussed without really looking closely at specific ethical frameworks that could guide this collaboration.

Given the foregoing, there are several gaps in the literature currently available on AI regulation in Nigeria that require attention. First of all, no thorough research has been done to examine the unique ethical and legal issues raised by AI in Nigeria. The possible effects of AI on particular Nigerian sectors, such as the judiciary, legal profession, healthcare, education, and economics, are also not well covered in the existing literature. The topic of liability for harm brought about by AI

[52]A Ade-Ibijola & C Okonkwo, 'AI in Africa: Emerging Challenges' in *Responsible AI in Africa: Challenges and Opportunities* (Springer International Publishing 2023) pp 101-117.

systems in Nigeria has also received little attention. Furthermore, the importance of public knowledge and involvement in AI regulation is not well explored in the research currently in publication.

To bridge these gaps, this study suggests a thorough ethical and legal framework for regulating AI in Nigeria that strikes a balance between innovation and ethical and legal considerations. This will guarantee that AI technologies are used responsibly, support Nigeria's economic growth, and respect human rights and dignity. Furthermore, this research will investigate how AI could affect certain industries and methods for risk mitigation and guarantee that all Nigerians have fair access to AI's advantages.

CHAPTER THREE

LEGAL AND INSTITUTIONAL FRAMEWORK OF ARTIFICIAL INTELLIGENCE IN NIGERIA

3.1 Legal Frameworks for Artificial Intelligence Regulation in Nigeria

Because AI depends on vast amounts of personal data, there are several problems with data collection, storage, and abuse. Section 37 of the Constitution protects privacy but lacks clear provisions for specific AI-related issues.[53]

In this light, the Nigerian National Assembly has expressed confidence that one of its areas of interest is the development of a legal regime for AI governance.[54] In the words of Rt. Hon. Tajudeen Abbas; "In order to key in to this emerging development, the 10th National Assembly will strive to provide a legal framework for regulating the adoption of AI in our country. This is in order to ensure an optimal mix of labour-capital ratio in our nation's development process…."

The current legal frameworks are insufficient to address the unique issues raised by AI in Nigeria and throughout the world, hence new legislation is required in order to address the requirements of effective AI governance.

[53] Constitution of the Federal Republic of Nigeria (1999, as amended) s 37.
[54] A Akinwale, 'Abbas: N'Assembly Planning Law to Regulate AI in Nigeria – THISDAYLIVE' (2024) Available at <https://www.thisdaylive.com/index.php/2024/04/23/abbas-nassembly-planning-law-to-regulate-ai-in-nigeria/> accessed 22 July 2024.

3.1.1 International Legal Frameworks For AI Regulation

On the international scene, the issue of AI regulation has been growing in importance, with countries acknowledging its implications for industries, governance, and society alike. Many jurisdictions and international organizations are actively working on developing regulations that address the ethical, legal, and social implications raised by AI technologies.[55]

The following are some of the major international legal frameworks and initiatives that influence the regulations for AI:

(i) European Union AI Act

The EU is paving the way for comprehensive regulation with the proposed AI Act, which was approved in 2024.[56] This landmark law introduced a risk-based approach toward AI, and categorized AI systems into four tiers of risk; unacceptable, high, limited and minimal.

The Act outlines the obligations of consumers, developers, and suppliers within the AI ecosystem. Additionally, it enforces the adherence to applicable EU laws on intellectual property and data protection.

(ii) United States AI Policy Landscape

In the United States, AI regulation is currently fluctuating and tends to be more decentralized than the European Union's approach. A significant step was taken in 2023 when President Biden issued Executive Order 14110, which outlined the essential tenets of safe AI development: privacy,

[55] M Abramov, 'Regional and International AI Regulations and Laws in 2024' (2024) Available at <https://keymakr.com/blog/regional-and-international-ai-regulations-and-laws-in-2024> accessed 22 October 2024.
[56] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence.

consumer protection, and fair design.[57] Additionally, there is a Blueprint of AI Bill of Rights that includes guidelines for creating nondiscriminatory and transparent AI mechanisms.[58]

Furthermore, the diverse applications of AI have prompted various states to establish their own laws and regulations. For instance, California has been actively involved in legislating AI by enacting several bills to regulate the use of AI in sectors like consumer protection, and advertisement.[59]

(iii) Organisation for Economic Co-operation and Development (OECD)

The OECD's AI Principles are perhaps the most accepted international standards on this issue. These guidelines insist upon transparent, explainable, fair, and accountable AI. Their objective is to ensure responsible AI that can be trusted by promoting human-centric values, and more than 40 countries have signed up to the guidelines, including non-members.[60]

(iv) United Nations Resolution

In March 2024, the UN adopted a resolution on ethical guiding principles of AI compatible with international human rights law.[61] This resolution demonstrates the commitment of the international community to the reduction of bias within AI technologies.

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[57] T W House, 'Fact Sheet: President Biden Issues Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence' (2023, October 30) Available at <https://www.whitehouse.gov/briefing-room/statements-releases/2023/10/30/fact-sheet-president-biden-issues-executive-order-on-safe-secure-and-trustworthy-artificial-intelligence/> accessed 22 July 2024.

[58] Blueprint for an AI Bill of Rights.

[59] White & Case LLP, 'Raft of California AI Legislation Adds to Growing Patchwork of US Regulation' (2024, October 10) Available at <https://www.whitecase.com/insight-alert/raft-california-ai-legislation-adds-growing-patchwork-us-regulation> accessed 22 July 2024.

[60] OECD, 'Chapter 11. Artificial Intelligence, Blockchain and Quantum Computing' in *OECD Digital Economy Outlook 2020* (2020) OECD Library Available at <https://www.oecd-ilibrary.org/sites/bb167041-en/1/3/11/index.html?itemId=/content/publication/bb167041-en&_csp_=509e10cb8ea8559b6f9cc> accessed 28 June 2024.

[61] UN News, 'General Assembly Adopts Landmark Resolution on Artificial Intelligence' (2024, March 21) Available at <https://news.un.org/en/story/2024/03/1147831> accessed 12 August 2024.

(v) WEF and Singapore's Model AI Governance Framework

AI is a hotbed; it promises to ingeniously shape the future of international trade, automation, and global markets. Regarding AI and its effects on the global economy, trade, and labour markets, the World Economic Forum (WEF) has launched several initiatives.[62] For instance, Singapore published its first edition of the Model Framework, an industry, technology, and algorithm-agnostic framework that implements important ethical principles into tangible practices in an AI deployment process within enterprises.[63]

(vi) The African Union (AU) AI Strategy

In this regard, the AU is developing an AI Strategy for Africa that will ensure the responsible development and use of AI technologies across African nations. Building capabilities that support ethical AI and fairly distribute the advantages of AI throughout the continent is the goal.[64]

3.1.2 National Legal Frameworks For AI Regulation

(i) Nigeria Data Protection Act, 2023

The Nigeria Data Protection Act (NDPA)[65] provides a comprehensive legal structure for protecting personal information in Nigeria. This Act, officially known as Act No. 37, aims to regulate the processing of personal data to safeguard privacy and ensure transparency in data handling. It sets

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[62] P McMaster & World Economic Forum, 'Why AI Is the New Frontier Global Trade Must Learn to Cross' (2024, October 9) World Economic Forum https://www.weforum.org/agenda/2024/10/ai-global-trade-policymaking/ accessed 22 October 2024.
[63] World Economic Forum, Model Artificial Intelligence Governance Framework and Assessment Guide. Available from <www.weforum.org>. accessed 4 July 2022.
[64] Continental Artificial Intelligence Strategy: Harnessing AI for Africa's Development and Prosperity, Available at <https://au.int/sites/default/files/documents/44004-doc-EN-_Continental_AI_Strategy_July_2024.pdf> accessed 13 October 2024.
[65] Nigeria Data Protection Act (NDPA) 2023.

out guidelines for data controllers and processors on the lawful collection, use, and storage of personal information. The NDPA also emphasizes the rights of individuals regarding their personal data, ensuring that their information is processed fairly and securely. Despite this well-established framework for data protection, Nigeria still lacks a robust regulatory structure specifically for AI governance.

(ii) National Artificial Intelligence Strategy

The National Artificial Intelligence Strategy of Nigeria, published in August 2024, aims to guide the country in developing and implementing AI.[66] Spearheaded by the Federal Ministry of Communication, Innovation and Digital Economy (FMCIDE), it leverages contributions from several major stakeholders that include the Lagos Business School, Data Science Nigeria, the NITDA, and the NCC.

This action plan establishes a comprehensive approach, guided by a vision of values for sustainability, inclusivity, and ethics. Global leadership in the AI economy, technological innovation, and AI-enabled economic growth are its main goals.

The plan also includes using AI in governance, agriculture, education, and health. The implementation plan outlines potential risks, including data privacy and ethical issues, and suggests ways to mitigate them. It also explains how the public and commercial sectors may work together.

[66] National Artificial Intelligence Strategy (August 2024) Available at <https://ncair.nitda.gov.ng/wp-content/uploads/2024/08/National-AI-Strategy_01082024-copy.pdf> accessed 13 October 2024.

This would put Nigeria in a better position to integrate AI, but it cannot replace the power that a legally binding act—like the EU AI Act—offers in terms of enforced rules and safeguards. A specific AI Act would provide the proper legal control and responsibility.

In the meantime, Nigeria has the potential to become a leader in AI on the African continent if this AI strategy is implemented successfully.

(iii) NITDA's Policies, Guidelines and the Nigerian Data Protection Regulation (NDPR) 2019

Through the NITDA Act, the NITDA carries out information technology-related laws in Nigeria. Sections 6(a) and (c) of the NITDA Act, which deal with data privacy, are based on the NDPR. However, there are several significant omissions regarding the NDPR's approach to AI-driven systems.

For example, if the AI handles data in ways that cannot be traced, the permission requirements under section 2.3 could not be implemented successfully. Second, while NDPR mentions data privacy, it makes no mention of ownership rights or culpability for harm caused by improper use of AI. Salami[67] comments that even though the NDPR is important regarding privacy, its application to AI data processing requires more detail and new regulations.

For one, principles like the data minimization principle need strengthening, because it will enable enterprises to gather just the personal information required for AI development. Additionally, data anonymization permits data analysis while protecting privacy. In essence, the current NDPR rules need to be enhanced or changed to shed light on automated judgments and a Data Protection Impact Assessment to ensure that AI systems operate within moral and legal bounds.

[67] E Salami & I Nwankwo, 'Regulating the Privacy Aspects of Artificial Intelligence Systems in Nigeria: A Primer' [2024] (1) *African Journal on Privacy & Data Protection*, 220-247.

In March 2023, NITDA created the initial draft of the National Artificial Intelligence Policy in an effort to formally regulate AI in the nation.

(iv) Cybercrimes (Prohibition, Prevention, etc.) (Amendment) Act, 2024

In the last decade, Nigeria has become a hotbed for cybercrimes, with fraud, hacking, and identity theft high among the prevalent issues.

While the rise of AI has greatly improved many sectors, such as health care, finance, and education, it does have its own newer and more dynamic challenges. AI-driven innovations have opened up a wider arena for cybercrime, rather inadvertently.[68] For instance, AI can be used in phishing attacks that are far more complex, automating malware deployment, or generating convincing deepfakes – all factors likely increasing the already alarming rates of cybercrime in Nigeria.[69]

The Cybercrimes Act remains ostensibly the most extensive law on computer-related crimes in Nigeria. It provides punishment for various atrocities, including identity theft, cyberattacks, fraud, and unauthorized access to computer systems. But while the Act is significant, it does not have provisions concerning AI yet. The Act does not deal well with instances where machine learning algorithms are used to get around traditional security measures, or where computer hackers use the weak side of AI systems to compromise sensitive financial data or launch an AI-powered cyberattack against bank networks.

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[68] K Ikechukwu, et.al, 'Artificial Intelligence and Cybercrime in Nigeria: Towards an Ethical Framework' (2024) Available at <10.5840/du202434115> accessed 15 September 2024.

[69] 'Cybersecurity in the Age of AI: Exploring AI-Generated Cyber Attacks' (2024) Available at <https://www.tripwire.com/state-of-security/cybersecurity-age-ai-exploring-ai-generated-cyber-attacks> accessed 12 August 2024.

Although the Cybercrimes Act does protect against some aspects, it is clearly an outdated law in terms of the complexities that come with modern AI-related threats. Thus, to be better prepared for all these challenges, Nigeria needs to revisit and update its Cybercrimes Act with specific provisions concerning AI-related threats.

(v) Nigerian Communications Commission Regulations

As Elena Fersman, Ericsson's Vice President and Head of Global AI Accelerator, noted, "AI is not the icing on the cake but has to be imbibed into a product or service for its complete functionality to be enjoyed; whether proactive or reacting to network anomalies and sub-par performance in near real-time."[70]

Precisely, AI-operating on real-time data interchange and cloud-based computing-remains seriously dependent on the state of its underlying telecommunication infrastructure.

It is in this regard that Aminu Maida, the Executive Vice Chairman of the Nigerian Communications Commission (NCC), notes that; "developing regulations and policies to govern AI deployment can be complex, as well as playing catch up due to technological advancements."

The rules set by the NCC ensure the integrity of the network and the security of data utilization and resource utilization, thus indirectly providing a fair platform that supports AI functions.

[70] E Fersman, 'AI in Telecom: Past, Present and Future' (2023, November 9) *Ericsson.com* Available at <https://www.ericsson.com/en/blog/2023/11/ai-in-telecom-past-present-and-future> accessed 2 June 2024.

Additionally, removing biases from AI algorithms and highlighting financial services powered by AI are key components of the NCC Act's guiding principles and the Securities and Exchange Commission's laws pertaining to robo-advising services.[71]

Nonetheless, there is a case to be made for the NCC to expand its regulatory scope to include AI-specific standards given the growing growth of AI applications, particularly in the Internet of Things and autonomous systems. Since the Nigerian Communications Act gives the Commission the authority to enact regulations on a range of topics, including emerging technologies, they are expected to create guidelines that will govern AI-powered automated services, like telecommunications, and protect the privacy of data on AI-enabled devices.[72]

3.2 Institutional Framework for AI Regulation in Nigeria

The institutional framework of regulating Artificial Intelligence in Nigeria remains at its formative stages. There are existing structures in government, regulatory agencies, and research institutions that oversee technology and data use, with newer institutions for AI regulation in particular. At an international level, this is a different ball game altogether, with established institutions making headway and great impacts.

[71] OAL, 'Robo-Advisors in Nigeria: The Regulatory Framework for Robo-Advisory Services in Nigeria' (2021, August 18) Available at <https://oal.law/robo-advisors-in-nigeria-the-regulatory-framework-for-robo-advisory-services-in-nigeria> accessed 10 June 2024.
[72] Nigerian Communications Act (NCA) 2003, Section 70.

3.2.1 International Institutions

Various international organizations have come up with guidelines and policies that inform national AI regulatory frameworks. Some of the most influential include:

(i) The United Nations (UN)

The UN is significantly influencing the worldwide conversation over the ethical application of AI and its effects on human rights. A few organizations that actively investigate the moral implications of AI on world development include UNESCO and the UN Human Rights Council.

The UN Secretary-General's Roadmap for Digital Cooperation, which outlines a global vision for AI governance, is another important project.[73] This Roadmap places a strong emphasis on inclusion by making sure AI benefits everyone, especially the most underrepresented and marginalized groups, by developing fair, impartial, and widely available AI systems.

The Roadmap also emphasizes how important it is to uphold fundamental human rights in the digital age, such as non-discrimination, freedom of speech, and privacy. The UN also highlights AI's potential role in achieving the Sustainable Development Goals (SDGs), such as poverty reduction, improved education, and a healthy environment.

(ii) European Union (EU)

The EU has been leading in AI regulation with its Artificial Intelligence Act.[74] It categorizes AI applications into four types of risk: unacceptable, high, limited, and minimal risk. Conditions involving the use of AI in vital infrastructures, education, and employment fall into this category

[73] UN News (n 61).
[74] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence.

of high-risk AI systems and are hence strictly regulated. The GDPR of the EU also plays a role in shaping how AI handles personal data and privacy.

(iii) G20 and G7 Summits

Major economies convene as the G20 (Group of Twenty) and G7 (Group of Seven) to discuss global concerns including technology, trade, and climate change.[75] AI rules have arrived at these sessions because of the rapidly increasing developments in AI technology. The summits are supposed to demonstrate that nations must truly cooperate to develop common rules and principles for guaranteeing that AI is morally and safely sound for the benefit of all members of society.

The United States, China, India, Germany, Brazil, and Japan are among the major economies that are members of the G20, which is made up of 19 nations and the European Union. The advanced economies that make up the G7 are the United States, the United Kingdom, Germany, Canada, France, Italy, Germany, and Japan.

AI regulation has also been on the agenda of the G20 and G7; both configurations discussed international cooperation in setting common standards.[76] The G20 accepted some principles of responsible use of AI based on a framework of the OECD – an organization that fosters inclusiveness, privacy, and data protection to ensure that AI is developed and used ethically across the globe.

[75] BBC Bitesize, 'G7 and G20 Groups Global National 5 Modern Studies Revision' (2018, February 19) Available at <https://www.bbc.co.uk/bitesize> accessed 17 October 2024.
[76] R Radu, 'The G20 and Global AI Governance' Available at <https://static.ie.edu/CGC/G20_Global_AI_Governance.p> accessed 21 October 2024.

(iv) Council of Europe

The Ad Hoc Committee of the Council of Europe on Artificial Intelligence (CAHAI) was mandated to study the feasibility of a legal framework for AI development, design, and application regarding the protection of human rights, democracy, and the rule of law. This mandate was fulfilled by the CAHAI between 2019 and 2021, after which it was succeeded by the Committee on Artificial Intelligence (CAI).

Under wide multi-stakeholder consultations, CAHAI discussed possible elements of such a framework with consideration of gender perspectives, the rights of persons with disabilities, and societal cohesion. Its AI governance discussion centres on the prevention of harm from AI systems, as indicated in the report "Towards Regulation of AI Systems."[77]

(v) US-EU Trade and Technology Council (TTC)

The TTC is a bilateral forum to promote cooperation between the United States and the European Union to establish standards for AI and digital technology.[78] It provides a platform for the harmonization of approaches to the administration of AI as well as issues connected with data sharing, ethics of AI, and digital infrastructure.

[77] CAHAI - Ad hoc Committee on Artificial Intelligence, 'Artificial Intelligence' (2014) Available at <https://www.coe.int/en/web/artificial-intelligence/cahai> accessed 15 October 2024.
[78] European Commission, 'EU-US Trade and Technology Council' (2023) Available at <https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/stronger-europe-world/eu-us-trade-and-technology-council_en> accessed 15 October 2024.

(vi) WEF's Centre for the Fourth Industrial Revolution

The World Economic Forum (WEF) Centre for the Fourth Industrial Revolution provides the space for interaction among governments, companies and other stakeholders on how AI policies and frameworks are or can be designed and shaped to respond to the needs of sustainable development.

(vii) Private Sector Initiatives

Private initiatives significantly shape the ethical landscape of AI development alongside government regulation. As AI technologies advance, many institutions proactively address ethical concerns related to data privacy, transparency, and accountability. For instance, for Apple, privacy is a human right; therefore, it does as much on-device processing as possible and collects as little data as possible.[79] Similarly, Microsoft Azure AI's Privacy and Security program covers compliance under regulations such as GDPR, with personal information given at a high level of encryption. Beyond that, IBM developed an "AI Fairness 360" toolkit that gives insight into how to identify and mitigate bias in machine learning models. All these initiatives undertaken by the industry indicate that the private sector, too, is quite serious about developing and using AI responsibly.

[79] Apple Newsroom, 'Apple builds on privacy commitment by unveiling new education and awareness efforts on Data Privacy Day' (2023) Available at <https://www.apple.com/newsroom/2023/01/apple-builds-on-privacy-commitment-by-unveiling-new-efforts-on-data-privacy-day/> accessed 5 September 2024.

3.3.2 National Institutions

(i) Nigeria Data Protection Commission (NDPC)

The NDPC is a government body established to enforce the Nigeria Data Protection Act (NDPA) 2023. It is sometimes referred to as the "Data Controller," and is responsible for overseeing data protection practices across the country. Its primary mandate includes implementing regulations, monitoring compliance, and ensuring that personal data is processed according to the legal standards set by the NDPA. The NDPC also plays a crucial role in promoting data privacy awareness and handling complaints related to data breaches. However, despite the existence of this institutional framework for data protection, there is currently no solid regulatory framework for the governance of artificial intelligence (AI) in Nigeria.

(ii) The National Information Technology Development Agency (NITDA)

The NITDA is at the heart of spearheading Nigeria for IT growth, as the leading regulatory agency in all matters relating to emerging technologies, which include AI. Although its mandate covers a variety of areas of IT development, NITDA's role in the AI sector becomes increasingly germane as time goes on and technology evolves.

The establishment of the National Centre for Artificial Intelligence and Robotics (NCAIR) is an important step in developing the AI capabilities of Nigeria in ways that are very crucial for fostering AI research and innovation.

(iii) The National Centre for Artificial Intelligence and Robotics (NCAIR)

The National Information Technology Development Agency (NITDA) created the cutting-edge National Centre for Artificial Intelligence and Robotics (NCAIR) to support research in cutting-

edge fields such as AI, robotics, drones, and the Internet of Things. NCAIR, which was established on November 13, 2020, promotes innovation in the digital economy and is in line with Nigeria's National Digital Economy Policy and Strategy. A digital fabrication facility (FabLab) for practical experimentation is part of NCAIR, which is situated in Abuja next to the Office for Nigerian Digital Innovation (ONDI).

Among the most promising initiatives signaling momentum in Nigeria's AI space is the NGN225 million Nigeria Artificial Intelligence Research Scheme (NAIRS), a grant dedicated to startups and researchers pushing boundaries in AI. This funding directly supports NCAIR's goals of fostering AI research, creating jobs, and cultivating a robust innovation ecosystem. Addressing both theoretical research and practical applications, NCAIR seeks to position Nigeria as a prominent player in the global AI industry.[80]

The centre is run by Dr. Olubunmi Ajala, a seasoned data scientist who was previously the Learning Analytics Lead at Coventry University in the United Kingdom. In addition to concentrating on AI applications in health, agriculture, and education, his initiatives include creating algorithms to distinguish HIV from TB and locating AI researchers.

There are still issues despite NCAIR's creative contributions, most notably the absence of a national AI regulatory framework to handle the moral, legal, and societal ramifications of AI development in Nigeria.

[80] NCAIR, 'About Us' (2020) Available at <https://ncair.nitda.gov.ng/about-us/> accessed 20 October 2024.

(iv) Nigerian Communications Commission (NCC)

NCC regulates the telecommunications industry, forming the backbone for most of the AI applications, especially in the subject areas of 5G, IoT, and cloud computing. NCC is instrumental in ensuring that whatever networks are accessed by any AI system are secure and reliable.

The broad mandate notwithstanding, the NCC has not come up with clear AI-specific policies. For instance, existing regulations do not capture the obvious current and emerging AI-related challenges, only traditional telecommunications issues like bandwidth allocation and infrastructure development.

This would be a serious concern in this space, other than cybersecurity, given that AI systems deployed in telecommunication would easily fall prey to sophisticated AI-driven cyberattacks. An example is AI-powered phishing attacks, which are growing but for which existing regulations lack the required specificity to deal with such concerns. With the absence of AI-related rules, the NCC is particularly unprepared to cope with these new risks; furthermore, conventional cybersecurity frameworks might not be fit for an AI-driven environment.

(v) Central Bank of Nigeria (CBN)

The Central Bank of Nigeria regulates the financial sector in which the application of AI is steadily finding its way into fraud detection, personal banking, robo-advisors, and so on. In as much as the CBN encourages financial stability and consumer protection, it cannot escape the fact that the increasing influence of AI in finance does create particular regulatory challenges, given that even algorithmic bias in credit scoring systems or discriminatory lending practices do raise ethical concerns. These are complexities that current CBN regulations do not comprehensively address, hence gaps that make for unfairness and lack of transparency in AI-driven financial services.

The fact that AI in FinTech leaves out a large number of individuals without digital footprints adds another level of complexity and widens the gap in access to financial services.[81] The CBN should therefore establish policies to ensure the appropriate and inclusive use of AI technology inside the financial industry.

(vi) Ministry of Communications, Innovation, and Digital Economy

In 2024, Nigeria's Ministry of Communications, Innovation, and Digital Economy ramped up its AI efforts by announcing plans to hire 120 experts from various fields—including researchers, startups, and other stakeholders—to co-develop the country's National Artificial Intelligence Strategy.[82] The initiative, aimed at leveraging AI to address pressing challenges in sectors such as education, agriculture, and health, culminated in launching Nigeria's first multilingual large language model (LLM). This model, developed in collaboration with local AI firm Awarritech, global tech company DataDotOrg, and other partners, is designed to support five low-resource languages and accented English. The initiative has gotten $3.5 million in initial financing and is supported by nearly 7,000 fellows from the 3MTT Nigeria program, according to Communications Minister Dr. Bosun Tijani, further boosting the nation's AI plan.[83]

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[81] M Puri, T Berg, V Burg & A Gombović, 'On the Rise of the FinTechs - Credit Scoring using Digital Footprints' *SSRN Electronic Journal* (2018) Available at <https://doi.org/10.2139/ssrn.3259901> accessed 30 March 2024.
[82] O Ekhator, 'Nigeria enlists 120 experts to develop a framework for AI adoption' (2024, April 4) Available at <https://techpoint.africa/2024/04/04/nigeria-enlists-experts-framework-ai-adoption/> accessed 4 August 2024.
[83] M Sehloho, 'Nigeria launches own LLM, Kenya accelerates fiber rollout' (2024, April 22) Available at <https://www.connectingafrica.com/regulation/nigeria-launches-own-lim-kenya-accelerates-fiber-rollout> accessed 16 October 2024.

(vii) Academic and Research Institutions

Attention to AI will most likely remain minimal in universities and other higher institutions in Nigeria due to severe underfunding, even as its impact spreads across various spheres, for many years to come, leaving students as consumers rather than creators of technology.[84]

The reliance on foreign AI solutions hampers local innovation and stifles the development of homegrown applications. Concerns over academic integrity are being raised by students' growing usage of AI-powered tools for assignments, such as text generators and essay evaluators. This dependence raises concerns over the validity of student submissions by blurring the line between human and machine-assisted intellectual production.

In response, developers like Edward Tian have created tools such as GPTZero to detect AI-generated content, but the development of programs like Undetectable.ai complicates efforts to maintain academic honesty.[85] This situation is worsened in Nigeria, where higher institutions lack policies to address these challenges.

Academic and research institutions are also hampered by a lack of financing and cooperation with regulatory agencies such as the NDPC and NITDA, which are crucial for promoting AI innovation and ethics talks. Due to this gap, policy cannot benefit from important research, which leads to a reactive approach to AI regulation. Nigeria must increase funding for academic research and develop closer institutional ties to participate in the global AI market.

[84] B Reuben, O Samuel & A Lawal, 'A Review of Artificial Intelligence (AI) Readiness in Higher Education Institutions: A Case Study of Northern States of Nigeria' (2024) Available at <https://www.researchgate.net/publication/382001558_A_Review_of_Artificial_Intelligence_AI_Readiness_in_Higher_Education_Institutions_A_Case_Study_of_Northern_States_of_Nigeria> accessed 18 October 2024.
[85] NPR, 'A college student created an app that can tell whether AI wrote an essay' (2023, January 9) Available at <https://www.npr.org/2023/01/09/1147549845/gptzero-ai-chatgpt-edward-tian-plagiarism> accessed 13 July 2024.

(viii) Private Sector and Non-Governmental Organizations (NGOs)

In Nigeria, the private sector—especially IT firms and startups—is also leading the charge in the development of AI. These companies are at the forefront of AI innovation, and NGOs are fighting for ethical AI practices that prioritize openness, non-discrimination, and privacy.

Hubs for IT innovation, like Lagos' CCHub, are essential for developing local talent and fostering AI-driven business. During a two-day event on November 21–23, the Kwara Build Technical Care #KBTC24 will also teach 2,000 young people about entrepreneurship and AI. The program will use collaborative creativity to propose answers to both local and global concerns. The Chief Coordinating Officer, Kamaldeen Kehinde, has said that by bringing together opinion leaders and business specialists, the event aims to revitalize Nigeria's disgruntled yet dynamic youth population.[86]

Other recent endeavours include those that Microsoft and Data Science Nigeria have undertaken. The latter example demonstrates the increasingly dynamic environment of charitable organizations establishing AI competence. Their AI for Non-Profit Organizations and Social Good Summit demonstrates how AI can support social impact initiatives in the fields of education, finance, healthcare, and agriculture. "It is very important that Nigerian nonprofits are empowered with the use of AI for inclusive and equitable solutions," said Dr. Bayo Adekanmbi, CEO of DSN.[87]

[86] Jimi, 'NGO to train 2,000 Kwara youths in AI, entrepreneurship' *The Guardian Nigeria News* (2024, October 15) Available at <https://guardian.ng/news/nigeria/ngo-to-train-2000-kwara-youths-in-ai-entrepreneurship/> accessed 20 October 2024.
[87] J Okamgba, 'Microsoft DSN promote AI adoption among NGOs' *Punch* (2024) Available at <https://punchng.com/microsoft-dsn-promote-ai-adoption-among-ngos/> accessed 20 October 2024.

Luminate also provided support to the Nigerian AI Collective, which was just founded.[88] The Lagos Business School, Data Science Nigeria, and the Center for Journalism, Innovation, and Development (CJID) are home to this Collective, which is essential for governance, research, and promoting ethical AI methods. And because of Luminate's involvement, this aspect of Nigeria's AI development efforts sets the standard for what has to be done to use AI for the benefit of all people.

It is a fact, nonetheless, that the private sector operates primarily for financial gain, which can compromise ethics. Applications of AI that are deeply biased or violate user privacy, for instance, are problematic.

NGOs also face challenges, chief among them being the scarcity of possibilities to impact AI policies. It is difficult for NGOs to push for reforms that will guarantee AI technologies are used responsibly and ethically, at least in heavily AI-adopting industries like banking and telecoms, if they don't have significant participation with the regulatory body.

[88] Luminate, 'Luminate supports inclusive AI Collective in Nigeria' (2024) Available at <https://www.luminategroup.com/posts/news/luminate-supports-inclusive-ai-in-nigeria/> accessed 20 October 2024.

CHAPTER FOUR

REGULATING ARTIFICIAL INTELLIGENCE IN NIGERIA: BALANCING INNOVATION WITH LEGAL AND ETHICAL CONSIDERATIONS

4.1 Legal and Ethical Considerations of AI in Nigeria

Artificial Intelligence (AI) is getting better really fast by the day. This is both positive and negative, especially for countries like Nigeria. As AI is used more and more in areas like finance, health, agriculture, and travel, there is an urgent need to regulate this technology. The development and deployment of Artificial Intelligence (AI) in Nigeria raise significant concerns alongside its potential benefits. Thus, it is imperative to examine its impact on society through a legal and ethical lens, to ensure that the regulation of this technology does not stifle the innovation that AI promises to bring.

4.1.1 Legal Considerations

(i) Regulatory Framework For AI Deployment

The main challenge in this situation is the discrepancy between these AI advancements and the comparatively sluggish Nigerian government regulations. As mentioned numerously, it does have several broad-spectrum ICT legislation, such as the Cybercrimes Act and the NDPA, but no particular rules addressing hazards associated with AI, like errors in output, autonomous decision-making or algorithmic bias. This puts companies and developers in a legally murky area because conflicts pertaining to AI are complicated due to the lack of well-defined laws.

Since many of the AI systems utilized in Nigeria are created or hosted outside of the nation, cross-border uses of AI present even more challenges and raise jurisdictional issues. And because Nigeria's current legal framework is unable to address these cross-border issues, Nigerian businesses are left vulnerable in the event that AI does harm.

Therefore, the law itself must have a significant role in the matter of whether AI should acquire legal personality and be able to assume rights and duties similar to those of a company. The current state of Nigerian law does not acknowledge AI as a legal entity that can be held accountable for any harm that may result from its usage. Liability is an additional issue that arises when AI systems cause harm. This creates legal confusion around AI systems since it is unclear who should be held liable—the AI itself, the creator, or the owner.

As a result, Nigeria's regulatory system must be modified to meet these challenges in a more complex legal and jurisdictional way.

(ii) Intellectual Property Rights

Artificial intelligence-generated works challenge traditional intellectual property rights, particularly copyright law. The Copyright Act defines authorship as stemming from human creators, placing AI-created works in a legal grey area regarding originality.[89] Therefore, questions about AI-generated works easily bring up disputes in authorship and rights over them especially as AI acceptance gains momentum in Nigeria. Unlike human-created works, there does not appear to be any individual originator in the case of AI output, hence making copyright protection more

[89] Copyright Act (2022).

cumbersome. The question lurks over whether anyone can have rights over AI-generated content and whether AI-generated art, music, or written works will not fall under copyright.

An illustrative case is Thaler v. Perlmutter, where Judge Beryl A. Howell denied an attempt to register AI-created art.[90] While this case is outside Nigeria, it is exemplary of issues that are likely to come up in Nigerian courts with the present state of IP laws.

Again, the use of AI in invention raises issues with patent laws that are typically centered on a human inventor.[91] In essence, it calls into question whether the user, the AI's creator, or another party should be given credit for being the inventor of the technology. Without rules governing ownership and patentability, this might deter funding for AI research, impede Nigeria's technical advancement, and spark disagreements amongst those engaged in AI development and application.

(iii) Product Liability

Product liability has been proposed as a viable alternative for addressing liability related to AI in Nigeria. Under the current regime, there is no statute on product liability claims. These claims can be availed under the general law of contract or tort and also under existing statutes on consumer protection. Claims depend on whether the claimant is a consumer. The Nigerian courts interpret this liberally to include all users or purchasers of services unless otherwise provided.[92]

The foundational case for product liability is Donoghue v. Stevenson, which establishes that a manufacturer may be liable for injuries resulting from a breach of duty of care.[93] The Law Reform

[90] *Thaler v Perlmutter* No. 22-CV-384-1564-BAH (U.S. District Court for the District of Columbia, 2022).
[91] Patents and Designs Act (2004).
[92] A Oyinlade, 'Defective Products, Goods and Services: Available Remedies to Consumers Against Manufacturers in Nigeria' (2024, June 23) Available at <https://www.adeolaoyinlade.com/en/defective-products-goods-and-services-available-remedies-to-consumers-against-manufacturers-in-nigeria> accessed 11 April 2024.
[93] Donoghue v Stevenson [1932] AC 562 (House of Lords).

(Torts) Law of Lagos State[94] also imposes strict liability for manufacturers of defective products, making them accountable for damages caused by their products. This may, therefore, apply to any injury resulting from AI. However, this liability can only extend to manufacturers to the exclusion of owners, keepers, users, and software providers as well.

Under FCCPA, there is a requirement that goods be of good quality and imposes liability on suppliers for any damages arising from defective goods.[95] Although the FCCPA provisions encompass goods and services, the definitions do not address AI, making the process of determining liability quite ambiguous. Moreover, the vagueness of the definition of "defect" further complicates product liability for AI, again with a need for revisions that address comprehensively AI-related liability. Furthermore, no provision of the FCCPA prescribes damages to victims, and so claims will be prosecuted under common law, which underlines the need for a more robust legal framework for AI-related damages.

(iv) Vicarious Liability

Vicarious liability traditionally applies in employment and partnership situations, but this concept has been advanced as a potential solution for AI liability, and thus, a legal framework.

Huberman argues that this theory could extend beyond the realm of employment, especially in situations where an AI is a crucial component of the operations of its principal.[96] Given that the AI system functions as an agent for its owner or maker, it would follow that an AI tort is a principal's risk. Therefore, if the AI does harm, the human principal may be held vicariously

[94] Law Reform (Torts) Law of Lagos State (2013).
[95] Federal Competition and Consumer Protection Act (2018), Section 136.
[96] P Huberman, 'A Theory of Vicarious Liability for Autonomous-Machine-Caused Harm' [2021] (58) *Osgoode Hall LJ*, 233.

accountable. For instance, using AI robots or autonomous vehicles to carry out tasks that would have typically been completed by a person should make a business vicariously liable for any harm, just as it would when using human workers.

However, there are several practical difficulties. The concept of agency does not always work in the case of AI, considering that the present doctrines of vicarious liability are based on human agents. Moreover, identification of the principal in modern, complex AI systems where multiple parties are involved is quite difficult. If through a chatbot, incorrect information is provided, and causes damage, the question of liability as to whether it lies with the owners, providers of data, or the designers is quite tricky. In the overall analysis, where several parties can all be characterized as principals, those parties should be jointly and severally liable for damages caused.

(v) Case Law

Presently, no leading judicial precedents in Nigeria guide disputes arising on the subject matter of AI; hence there is little evidence to show how the existing laws relate to this type of emerging technology. This shortage adds to the uncertainty around AI legislation.

However, under Nigeria's general tort law, contracts, and other statutes, parties who may have been harmed or lost anything as a result of AI systems may be able to recover damages. A key maxim underlining this is "ubi jus ibi remedium," or "where there is a wrong, there is a remedy." This means that even in AI situations, a litigant's right to a remedy should not be hampered by the novelty of the action.[97]

[97] K Philip & B Chima, 'Cause of Action in Nigeria Jurisprudence' (2024). Available at <https://www.researchgate.net/publication/380711026_CAUSE_OF_ACTION_IN_NIGERIA_JURISPRUDENCE> accessed 17 October 2024.

Individuals injured by defective AI can pursue claims against manufacturers, owners, users, or software developers based on negligence, breach of contract, or strict liability. When existing legal remedies seem inadequate, courts are encouraged to create novel solutions for victims.

The U.S. case United States v. Loomis[98] illustrates how other jurisdictions handle AI-related issues. In this case, Eric Loomis was sentenced based partly on an AI algorithm called Correctional Offender Management Profiling for Alternative Sanctions (COMPAS), which predicted his reoffending risk. In order to maintain justice while permitting the use of AI, the Wisconsin Supreme Court supported its application but suggested that risk scores produced by the technology not be used exclusively to decide sentences.

(vi) Access to Justice and AI in the Legal System

While AI has the potential to streamline processes within the Nigerian legal system, ethical implications arise concerning accessibility and fairness. AI tools like Law Pavilion can enhance legal research and case management, but they also risk perpetuating inequalities if access to these technologies is limited to certain demographics or socioeconomic classes. The judiciary must ensure that the deployment of AI does not further marginalize disadvantaged groups or undermine the principle of equal access to justice.

(vii) Data Privacy Concerns

The use of AI in various sectors raises significant concerns about data privacy and security. AI systems often require large datasets to function effectively, which can lead to the collection and processing of personal information. It is crucial to establish legal protections to safeguard

[98] *State of Wisconsin v Eric L Loomis* 881 NW2d 749 (Wis. 2016).

individuals' privacy rights and prevent unauthorized data use. Moreover, companies must ensure compliance with data protection regulations to avoid potential legal repercussions.

4.1.2 Ethical Considerations

(i) Job Displacement and Economic Inequality

An essential problem is the possibility of AI replacing labour, particularly in areas where work is repetitive. AI-driven automation is becoming more and more common in Nigerian industrial facilities to handle jobs like assembly and quality control. Technology has the danger of eliminating a lot of manual occupations, even if it can also increase productivity and lower expenses. This is just as Yelwa opines; "AI could be described as a double-edged sword; it disrupts some jobs and creates new ones at the same time."[99]

AI chatbots and virtual assistants have also replaced contact centres and support workers by significantly increasing customer service-related responsibilities. Nigeria may experience significant job losses as a result of this replacement, particularly among low-skilled individuals who lack the abilities needed to transition to other roles. This means that displacement brought on by AI might exacerbate already-existing economic disparities.[100]

Consequently, individuals will become poorer as a result of the replacement of conventional occupations, and the divide between those who can and cannot adjust to a new labour market will

[99] M M Yelwa & S Abdulhameed, 'Artificial Intelligence and the Future of Work in Nigeria: A Shift from Educational Requirements to Skills Possession' [2020] (6) *Social Science Research* 1.
[100] International Monetary Fund (IMF), 'How Artificial Intelligence Could Widen the Gap Between Rich and Poor Nations' (2 December 2020) Available at <https://www.imf.org/en/Blogs/Articles/2020/12/02/blog-how-artificial-intelligence-could-widen-gap-between-nations> accessed 17 October 2024.

grow. Furthermore, wealthier earners who might use AI for complex activities could experience pay increases, whereas poorer people could have fewer job options and lower incomes. Social instability might arise from this as it would be difficult for redundant people to obtain new skills or find alternative employment.

(ii) Services Losing Their Human Touch

A rising number of people are complaining that the service industries are losing their personal touch, which is crucial for providing high-quality services, as AI takes centre stage in these sectors.[101] Nigeria, for instance, values hospitality and positive interpersonal interactions, therefore this development may have a significant impact on the nation's norms.

AI chatbots for customer service, for instance, are capable of handling a large volume of inquiries quickly, but they are still devoid of the empathy and nuanced replies that human agents possess. Given that a significant portion of the process by which services are provided to clients involves interpersonal contacts, the use of AI in this way might make the customer experience for Nigerian enterprises undesirable.

This applies to all service industries, including health. Patients, for instance, will feel less supported and at ease the more they interact with automated systems rather than caring medical staff.

[101] C Prentice, S Dominique-Ferreira & X Wang, 'The Impact of Artificial Intelligence and Employee Service Quality on Customer Satisfaction and Loyalty' *Journal of Hospitality Marketing & Management* [2020] (29:1722304.)

(iii) Possibility of Human Abuse

Serious concerns should be raised about possible AI abuse, particularly in light of the technology's rising sophistication and accessibility. In Nigeria, AI may also be misused in the production of sophisticated phishing schemes and deepfake material. Phishing attempts are designed to trick victims into providing important information. They may become more convincing if AI-generated emails or other communications that closely mimic those from trustworthy sources are used.[102] This may make cybercrime in Nigeria even worse, resulting in more losses—both monetary and non-monetary.

Furthermore, the abuse of AI will lead to the automation and escalation of cyberbullying and harassment.[103] AI-generated false information may also travel quickly across social media platforms, swaying public opinion on a variety of subjects, including political events and health emergencies. As a result, individuals may have far less faith in institutions and the media. That is particularly concerning in Nigeria, where social media usage is rather prevalent and abuses related to the platform are already an issue.

More significantly, AI systems used for data collecting and surveillance may breach individuals' right to privacy. For example, AI technology created for security purposes may result in serious violations of civil liberties if they are exploited for illicit data collection or monitoring. Cybercriminals would also use AI to create ransomware or sophisticated malware that might evade conventional security measures.[104] As ransomware assaults rise, AI raises the likelihood of more

[102] V Ciancaglini, et al., 'Malicious Uses and Abuses of Artificial Intelligence' (2020) *Trend Micro Research* 4-79.
[103] S Hinduja, 'Generative AI as a Vector for Harassment and Harm' *Cyberbullying Research Center* (10 May 2023) Available at <https://cyberbullying.org/generative-ai-as-a-vector-for-harassment-and-harm> accessed 12 August 2024.
[104] V Ciancaglini, et al. (n102).

serious and malevolent strikes on critical infrastructures, financial institutions, or even Nigerian civilians.

(iv) Sector-specific Challenges

Based on the benefits and drawbacks of AI covered above, Nigeria in particular faces ethical issues as a result of the technology's development and application. This is because some fundamental laws, particularly those pertaining to privacy, data security, and intellectual property rights protection, are compromised by the unique characteristics of AI.

The integration of AI in Nigeria brings up several ethical issues related to the education, finance, and health sectors.

AI applications, like Helpmum, simplify healthcare but also increase the risk of misdiagnosis, especially in places where medical personnel are in limited supply.[105] Given that more private hospitals than public health centres are using this cutting-edge equipment, this may contribute to gaps in healthcare access.

In the financial sector, prejudices may be reinforced by AI-powered credit rating systems. For instance, Nigerian banks employing AI would apply biased conditions to applicants from rural areas, much as in the US Apple Card discrimination case.[106] This raises a lot of accountability issues, especially in a nation like Nigeria, where financial knowledge is low.

[105] Digital Health Africa, 'Overview of Healthcare Chatbots in Africa' *LinkedIn* (2024) Available at <https://linkedin.com/pulse/overview-healthcare-chatbots-africa-digitalhealth-africa/> accessed 17 March 2024.
[106] BBC News, 'Apple's "Sexist" Credit Card Investigated by US Regulator' *BBC News* (10 November 2019) Available at <https://bbc.com/news/business-50365609> accessed 17 March 2024.

Another issue is that while AI technologies are making research more efficient, they also carry the risk of overuse, which might compromise academic integrity.[107] While AI-generated work may be recognized by programs like GPTZero, other technologies, such as Undetectable.ai, are easy to avoid detection, making attempts to uphold academic standards even more difficult. Nigeria does not yet have very clear regulations governing the use of AI in the classroom.

Moreso, due to wrong data or keyword selection, prospective applicants may be eliminated from a pool of eligible applications by AI-driven applicant tracking systems.[108] Further evidence of AI bias in recruiting platforms against marginalized areas and ethnic groups in Nigeria came from a 2020 study by the Center for Social Awareness Research.[109] Once more, this brings up moral questions about the balanced use of AI in the workplace.

4.2 A Comparative Analysis of Global AI Regulatory Frameworks

(i) The European Union

Aware of the difficulties faced by AI, the European Union proposed the Artificial Intelligence Act, the world's first worldwide legislation for AI regulation.[110] The goal of the AI Act is to safeguard moral principles and fundamental rights to advance the development of reliable AI. The legislative

[107] Science X, 'AI-Generated Exam Submissions Evade Detection at UK University' *Phys.org* (26 June 2024) Available at <https://phys.org/news/2024-06-ai-generated-exam-submissions-evade.html> accessed 10 July 2024.
[108] P Porebski, 'The Benefits and Disadvantages of Applicant Tracking Systems' *4 Corner Resources* (13 September 2023) Available at <https://4cornerresources.com/blog/applicant-tracking-systems/> accessed 20 May 2024.
[109] Ibid.
[110] The European Union's AI Act: What You Need to Know' *Holland & Knight Insights* (2024) Available at <https://hklaw.com/en/insights/publications/2024/03/the-european-unions-ai-act-what-you-need-to-know> accessed 17 October 2024.

framework assigns certain duties and obligations to creators, suppliers, and users of AI systems and supports the risks associated with AI technology.

One of the Act's primary initiatives is risk-based classification. Thus, in light of the possible threats to safety, ethics, and fundamental rights, AI systems are divided into four categories:

- **Unacceptable risk:** Systems that financially take advantage of weaker individuals and social credit systems are examples of AI systems that pose unacceptable risks to others. The Act stipulates that they are prohibited.
- **High risk:** AI systems that affect people's safety or fundamental rights, such as medical equipment and law enforcement administrative powers, must be closely monitored. Developers would be required to make them public and accountable in this regard.
- **Minimal Risk:** Programs such as chatbots are required to disclose to users that they are interacting with AI. This is due to a number of worries about the Black Box nature of the majority of AI systems.
- **Minimal/No Risk:** Broad regulations shouldn't be applied to programs like spam filters that are low-risk or nonexistent.

Transparency is another pillar of the AI Act. AI system developers should make sure that their models can be understood and, if needed, audited—especially in high-risk areas. For consumers to recognize that AI is being used, systems that interact directly with people should be labelled appropriately. Large language models and other general-purpose AI models include extra reporting and documentation, which includes details on the training data.

The AI Act's safeguarding of moral and legal precepts is another crucial strategy. The Act states that AI may create concerns in areas like criminal justice, immigration, and recruiting where

prejudice may exacerbate inequality. The legislation now states that in order to lessen prejudice and guarantee that AI decision-making procedures are impartial and open, expeditious supervision systems must be put in place.

Furthermore, human supervision is crucial in these kinds of systems. AI systems must collaborate with humans to make decisions that impact people's rights, means, and quality of life. Human intervention may offer accountability and avoid arbitrary judgments in situations where AI systems may infringe basic rights, such as law enforcement or border control.

Enforcement and Sanctions for Non-Compliance

The terms of the AI Act will affect businesses operating outside of the EU as well. The Act will apply to all developers and providers of AI services operating within the EU, regardless of whether such services are located physically inside or outside of Europe. This makes significant AI companies with U.S. headquarters, for example, subject to fines indefinitely until they comply with the rules, like the GDPR's current implementation.

The financial consequences of non-compliance are severe; according to a report by Harvard Business Review, they can reach up to €35 million, or 7% of a company's total worldwide revenue. Businesses are compelled by this reason—some would even argue that it serves as an effective incentive—to use AI more responsibly.[111]

In February 2024, the European Commission formed the European AI Office, which would oversee the member states' adoption and enforcement of the AI Act, according to the Commission's

[111] 'The EU's AI Act and How Companies Can Achieve Compliance' *Harvard Business Review* (22 February 2024) Available at <https://hbr.org/2024/02/the-eus-ai-act-and-how-companies-can-achieve-compliance> accessed 17 October 2024.

digital plan.[112] It aims to establish a supportive atmosphere in which AI technologies uphold the rights, dignity, and trust of people. In addition to this primary goal, many stakeholders' cooperation, inventiveness, and AI research are encouraged. Efforts are also being made to guarantee that there is a need for global agreement on AI governance through international collaboration and communication addressing AI concerns.

(ii) The United States

The White House Office of Science and Technology Policy's "Blueprint for an AI Bill of Rights" is intended to serve as a kind of basis for AI policy in the United States, safeguarding people while fostering innovation.[113]

Even though AI has the potential to greatly improve many facets of life, the framework makes sure to state that there will be some requirements. Specifically, AI cannot be permitted to compromise democratic principles, worsen social injustice, or violate an individual's rights.

Thus, five fundamental guidelines are outlined in the "Blueprint for an AI Bill of Rights" in order to guarantee the safe and equitable integration of automated technologies and AI into American society.

One key idea in this plan is "Safe and Effective Systems." Here, the guiding concept mandates testing AI systems before deployment for ongoing user safety, dependability, and benefit monitoring thereafter. This means that to assess risk, many communities and stakeholders must be included in the deployment of new AI technology.

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[112]'AI Act' *Shaping Europe's Digital Future* (25 September 2024) Available at <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai> accessed 11 October 2024.
[113] Blueprint for an AI Bill of Rights.

Pre-testing, for instance, would stop flawed algorithms in the health sector from misdiagnosing conditions that might endanger a patient's life. In addition, transparency makes it possible for the principle to demand that system evaluations be made publicly available, which would encourage public trust and accountability.

Algorithmic discrimination constitutes the other noteworthy issue that the plan addresses. However, as AI systems become more prevalent in decision-making processes related to hiring, credit scoring, criminal justice, and other areas, there is a growing possibility that serious biases could be reinforced or exacerbated. AI-driven recruiting tools, for instance, have come under fire for perpetuating racial and gender prejudices by giving preference to particular groups of people based on data that has previously been biased.[114]

Its "Algorithmic Discrimination Protections" state that AI systems undergo testing and design in order to guarantee inclusivity. To find and lessen biased results, this will need ongoing disparity analysis. This phase contributes to the security of AI-driven choices and guarantees that underprivileged groups suffer no unfair consequences; as a result, equality is improved across several domains.

The framework's emphasis on representative data and equality evaluations marks a significant advancement in algorithmic decision-making procedures, which have up to now been very opaque. More inclusive datasets would be promoted to developers in order to ensure that AI systems accurately represent the variety of the American people. Second, regular audits and impartial

[114] Z Chen, 'Ethics and Discrimination in Artificial Intelligence-Enabled Recruitment Practices' *Humanities and Social Sciences Communications* [2023] (10:41599).

evaluations would add a layer of supervision that would make technology developers answerable for any biases in their products.

Data privacy is another area of emphasis for this strategy. In a world where data is frequently utilized without the owner's knowledge or consent, the "Data Privacy" principle seeks to empower people by granting them control over their personal information. To avoid misuse through the acquisition of needless data, the framework mandates that data collection be limited and context-specific. Moreover, for consent to be really meaningful, privacy rules and conditions of use must be presented in an intelligible manner without the use of legalese.

The framework maintains "privacy by design" principles, which prioritize the needs of the user, and openly opposes such tactics. One of the main areas in which the framework's approach demonstrates a developing consensus in AI legislation is the notion that consumers have to be freed from the burden of deciphering intricate algorithms and trying to make sense of convoluted privacy agreements.

In cases where the principles of "Notice," "Explanation," and "Human Alternatives" do pave the way for increased accountability and transparency in AI systems, people who are the targets of automated decisions ought to have access to comprehensible, transparent explanations of the processes and reasoning behind the results of those processes. In delicate fields like banking, employment, and criminal justice, where opaque AI systems can have detrimental effects that are far-reaching, this type of openness is essential.

Human intervention is always a possibility when mistakes or other unfavourable results arise, which lends credence to the idea of "Human Alternatives." AI systems can still malfunction even with their sophisticated features. The framework has placed a strong emphasis on how crucial it is

to have humans involved in decision-making when it comes to matters that are crucially legal, moral, or intimate. For example, the use of AI technologies in law enforcement, such as face recognition, needs to be severely limited and should have mechanisms for appealing machine-generated conclusions. This would allow for more flexibility in the AI system and human backup, allowing automated judgments to be questioned rather than being viewed as final or absolute.

The Blueprint for an AI Bill of Rights is impressively not a stand-alone document; rather, it is meant to be used in conjunction with other legal and regulatory frameworks, including the FTC recommendations, civil rights legislation, and industry-specific rules pertaining to finance, healthcare, and education. One factor is the regulatory environment's flexibility. Although AI technologies are still developing, the framework's guiding principles can change to reflect the threats and capabilities of AI as they change.

However, the way AI is regulated in the United States is different from other international models, including the current EU AI Act and the stringent General Data Protection Regulation, which were both proposed by the European Union and have more direct limitations on the creation and application of AI. Although innovation and civil rights are fundamental to the U.S. framework, its more principle-based design fosters innovation without impeding the advancement of technology that comes with unduly restrictive regulations.

(iii) China

In terms of AI governance and regulatory framework, China is undoubtedly among the first in the world and has the most complete approach, with an emphasis on AI control and governance. Its suggestions for laws governing recommendation algorithms, the production of synthetic content,

including deepfakes, and generative AI technologies will, in turn, influence how these technologies are developed and used both domestically and abroad.[115]

While the Chinese regulatory approach has frequently been seen through the lens of geopolitical rivalry, policymakers can gain valuable insights from its attempts to address the obstacles presented by AI.

China has implemented three significant AI rules, which are as follows:

- **2021 Recommendation Algorithm Regulation:** This controls the way web material is personalized by AI-powered algorithms. This has aided in addressing issues such as the protection of workers from algorithmic scheduling and excessive pricing discrimination.
- **2022 Deep Synthesis guidelines:** This relates to AI-generated content, namely deepfakes, which must be properly tagged. This emphasizes the need for transparency in the material produced by AI.
- **2023 Draft Regulations for Generative AI:** The proposed regulations stipulate that training data and AI model outputs must be "true and accurate," which presents a challenge for generative AI platforms like ChatGPT that produce data based on chance.

All three rules, however, have two things in common; AI security self-assessment and required filings in an algorithm repository.

The register will act as a sort of AI central bank, allowing the Chinese government to closely monitor the training and use of algorithms. These rules serve two purposes; they limit the spread

[115] Carnegie Endowment for International Peace, 'China's AI Regulations and How They Get Made' (2023) Available at <https://carnegieendowment.org/research/2023/07/chinas-ai-regulations> accessed 17 October 2024.

of false information while also ensuring that AI development follows the CCP's directives and advances the party's overarching objectives of social and political stability.

The necessity of establishing regulatory infrastructure gradually is demonstrated by the Chinese government's phase-in regulatory method, which is also known as implementing laws on certain AI applications. The future of AI governance will be built upon the reusable regulatory instrument known as the algorithm registry.

China can gradually increase its technological know-how and bureaucratic capacity in AI governance because to this focused, progressive legislation. And in this sense, other countries may learn from China's gradual approach as they begin to establish their AI legislation, particularly concerning how control and innovation are balanced.

Major participants in China's AI governance include the Ministry of Science and Technology and the Cyberspace Administration of China (CAC). Even though the CAC could be in charge of content management, new laws might go beyond what is seen online and involve more bureaucratic review than ministries that focus on technology.

Reasons for China's AI Regulations

The following is an explanation of the three factors that led to China's AI regulations:

- **Information Control and Social Stability:** AI cannot operate as an exception to the CCP's view that social stability depends on information control. Because maintaining political order and AI control are closely related in China, emphasis is placed on the power of algorithms over internet material.

- **Examining the Effects on Ethics, Society, and Economy:** Even while political control is paramount, Chinese authorities do discuss the moral and financial ramifications of AI use—for example, the effects algorithmic decision-making may have on workers' rights.
- **Leadership in AI Development:** China's 2017 New Generation AI Development Plan outlines the country's long-term goal of becoming a leader in this field. Regulating AI is the main emphasis of the rules that are now in place, but China's desire to dominate the world in technology influences how it develops laws and policies. This will not be the primary motivator, but rather a helpful byproduct. Chinese authorities easily acknowledged the additional difficulty that comes with being a regulatory pioneer, given that they usually lack an international model to draw inspiration from. In order to address these problems, China has had to develop new regulatory instruments, such as the algorithm registry.

CHAPTER FIVE

5.1 Summary of Findings

In order to reconcile AI's innovative potential with current ethical and legal constraints, this research work set out to explore how Nigeria can establish a legislative framework around the technology, especially given the swift advancements in AI across several fields.

The following are the findings of the study:

(i) The study found that there are important legal and ethical challenges connected to AI development and use in Nigeria. There are problems with the lack of laws about who is liable when things go wrong, protecting people's data, and ownership of AI-created work. There are also problems with the possible misuse of AI in high-risk sectors. The study noted that there is no complete legal framework to manage these issues.

(ii) The research discussed ways to reduce the risks that come with AI and ensure that everyone can benefit from it. It looked at how AI affects key areas like small businesses, the government, and the legal system. The findings stressed the need for flexible laws that will promote responsibility, openness, and ethical use of AI, and not stifle the innovative potential of AI in the process.

(iii) The study provided an overview of Nigeria's current laws and institutions. It found that existing laws, such as the Cybercrimes Act and the NDPA, are not enough to regulate AI properly. It also recognized the National Artificial Intelligence Strategy released by the FMCIDE as a positive step. The research compared Nigeria's situation to laws in other places like the EU and the US to find best practices that Nigeria could use. It found that

the EU has a binding Act, the US has a Blueprint for the ethical use of AI, and China prioritizes governmental oversight. The research then suggests a hybrid approach of these practices to AI regulation in Nigeria.

(iv) The findings suggest that Nigeria needs to create a complete set of laws for AI that balances innovation with ethical concerns. These laws should address issues of liability, protect people's data, and ensure ownership rights for AI-created work while respecting human rights and dignity.

5.2 Recommendations

In light of the foregoing, the following suggestions are offered in order to provide the groundwork for the creation of a practical AI regulatory framework in Nigeria that would strike a balance between innovation and moral and legal considerations.

These recommendations are as follows:

(i) Nigeria should implement a risk-based categorization similar to the EU's AI Act, where the potential threats of AI systems determine the level of regulation. High-risk applications in sectors like finance, law enforcement, and healthcare should face stricter regulations, while low-risk technologies can have more flexible monitoring. This approach ensures that AI innovation continues without being hindered by overly strict regulations.

(ii) The regulatory framework should clearly define AI and outline who is liable for harm caused by AI malfunctions or misuse, such as developers, distributors, sellers, or end

users. It should also connect with other relevant laws, like cybersecurity and intellectual property, ensuring comprehensive legal coverage.

(iii) AI developers must ensure transparency in their decision-making processes and allow for regular audits. Competition laws should be established to prevent power from concentrating in a few entities, ensuring that AI systems are fair and non-discriminatory. Strengthening regulatory institutions will help oversee these processes effectively.

(iv) Nigeria should take inspiration from the American "Blueprint for an AI Bill of Rights" to protect individual rights while fostering technological advancement. This will help create a modern regulatory framework that respects civil rights in the context of AI development.

(v) It is essential to involve various stakeholders—government, academia, businesses, and civil society—in creating AI regulations. This cooperation will ensure the framework reflects diverse perspectives. Additionally, prioritizing funding for AI literacy projects can enhance public understanding of AI and its impacts, supporting inclusive growth across different sectors.

By putting these suggestions into practice, Nigeria would be able to create a comprehensive AI law that strikes a real balance between innovation and citizen rights protection, making it a true pioneer in the ethical governance of AI on the African continent.

5.3 Contributions to Knowledge

This study contributed to knowledge by examining the strategies used by China, the US, and the EU to find best practices that can help Nigeria create its own AI regulations. It provides a foundation for building a comprehensive system that balances innovation with ethical concerns, guiding stakeholders and policymakers in developing relevant rules. When everyone's views are included, the resulting policies are more effective.

The research highlights the importance of focusing on high-risk AI applications when discussing safety and accountability in technology. It also emphasizes the need for laws that support social justice and human rights, especially in developing countries where public accountability is crucial.

In all, this research contributes to the literature on AI regulation and offers insight into its appropriate regulation for scholars, practitioners, and policy thinkers inside and outside Nigeria.

5.4 Areas for Further Studies

The study provides a comprehensive overview of AI regulation in Nigeria; nevertheless, further research is needed in a few areas to improve comprehension and facilitate the development of efficient regulatory frameworks.

As far as Nigeria is concerned, a study on the efficacy and efficiency of current AI rules should be done in the areas of innovation, public safety, and ethical issues in order to inform any required modifications to current frameworks.

Also, an analysis of the laws governing AI in Nigeria and other African nations might reveal regional patterns, difficulties, and solutions. It will highlight the best practices that are adaptable to various circumstances throughout the continent.

Studies on the public's attitude toward AI and its governance will also shed light on societal expectations and anxieties. How various groups view this technology will lead to more inclusive and successful regulatory approaches.

Further discussion of AI applications in certain industries, such as healthcare, finance, or agriculture, may also be instructive in order to create legislation that addresses the potential and constraints unique to those industries. This will translate into increased AI safety and effectiveness in the most crucial spheres of society.

Prospects for international collaboration on AI regulation should be taken into consideration in future research. This will entail thinking about forming alliances with other organizations and nations in order to exchange best practices, standards, and information in AI governance.

Future research areas that address these areas will help develop a sophisticated and multi-faceted understanding of AI regulation and what it signifies for society; toward a safer, more innovative technological future in Nigeria and beyond.

5.5 Conclusion

This paper explains why Nigeria needs an effective AI law that balances innovation and ethics. Since AI technologies are always developing, regulation is urgently needed to address these rising

dangers and provide benefits to society. The results show that although the nation has made significant progress in understanding AI, there are still significant gaps in the ethical and legal frameworks that govern its application. Nigeria must now dedicate herself to a long-term, strategic regulatory framework that supports AI development in a way that is consistent with international best practices and advances the country's overarching socioeconomic goals.

BIBLIOGRAPHY

BOOKS

Agunbiade, A I, *AI and Law: A Nigerian Perspective* (LAP LAMBERT Academic Publishing, 2019).

Bertalanffy, L V, *General System Theory: Foundations, Development, Applications* (George Braziller, 1968).

Merriam-Webster Dictionary, *'Artificial Intelligence'* (18 October 2024) Available at https://www.merriam-webster.com/dictionary/artificial%20intelligence accessed 22 October 2024.

Russell, S J & Norvig, P, *AI: A Modern Approach* (4th edn, Pearson Education, 2020).

BOOK CHAPTERS

Ade-Ibijola, A & Okonkwo, C, 'AI in Africa: Emerging Challenges' in *Responsible AI in Africa: Challenges and Opportunities* (Springer International Publishing, 2023) 101-117.

Cockburn, I M, Henderson, R & Stern, S, 'The Impact of AI on Innovation' in *The Economics of AI: An Agenda* (University of Chicago Press, 2018) 113-146.

CONFERENCE PAPERS

McCarthy, J et al., 'A Proposal for the Dartmouth Summer Research Project on AI' (Dartmouth Conference, Hanover, New Hampshire, 31 August 1955) Available at https://ojs.aaai.org/aimagazine/index.php/aimagazine/article/view/1904 accessed 21 June 2024.

Turing A M, 'Computing Machinery and Intelligence' (1950) Mind 49, 433-460. Available at <https://courses.cs.umbc.edu/471/papers/turing.pdf> accessed 21 June 2024.

JOURNAL ARTICLES

Adaka, E E & Olubiyi, I A, 'Lessons for Nigeria: Determining Authorship and Inventorship of AI-Generated Works' [2022] *Journal of Intellectual Property and Information Technology Law (JIPIT)* (2(1)), 15-48. Available at https://doi.org/10.52907/jipit.v211.203 (accessed 6 June 2024).

Aldoseri, A et al., 'AI-Powered Innovation in Digital Transformation: Key Pillars and Industry Impact' [2023] *Sustainability (MDPI)* vol. 16, (no. 5), p. 1790. Available at https://doi.org/10.3390/su16051790 (accessed 22 October 2024).

Ciancaglini, V et al., 'Malicious Uses and Abuses of Artificial Intelligence' (2020) *Trend Micro Research* 4-79.

Cockburn, I M, Henderson, R & Stern, S, 'A Theory of Vicarious Liability for Autonomous-Machine-Caused Harm' [2021] *Osgoode Hall LJ* (58, 233).

Jobin, A, Ienca, M & Vayena, E, 'The Global Landscape of AI Ethics Guidelines' [2019] *Nature Machine Intelligence* vol. 1, (no. 9), 369-379. Available at https://www.researchgate.net/publication/335579286 (accessed 21 June 2024).

Larsson, S, 'The Socio-Legal Relevance of AI' [2019] *Droit et Société* N° (103(3)), 573-593. Available at https://doi.org/10.3917/drs1.103.0573 (accessed 22 October 2024).

Mitchell, R K, Agle, B R & Wood, D J, 'Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts' [1997] *Academy of Management Review* (22(4)), 853-886. Available at https://www.jstor.org/stable/259247 (accessed 21 June 2024).

Nweke, O C & Nweke, G I, 'Legal and Ethical Conundrums in the AI Era: A Multidisciplinary Analysis' [2024] (13(1)) *International Law Research* 1-15. Available at https://doi.org/10.5539/ilr.v13n1p1 (accessed 22 October 2024).

Prentice, C, Dominique-Ferreira, S & Wang, X, 'The Impact of Artificial Intelligence and Employee Service Quality on Customer Satisfaction and Loyalty' [2020] *Journal of Hospitality Marketing & Management* (29), 1722304.

Puri, M, Berg, T, Burg, V & Gombović, A, 'On the Rise of the FinTechs - Credit Scoring using Digital Footprints' (2018) *SSRN Electronic Journal*. Available at https://doi.org/10.2139/ssrn.3259901 (accessed 30 March 2024).

Rashid, B A & Karim, A B, 'AI Revolutionizing Industries Worldwide: A Comprehensive Overview of Its Diverse Applications' (2024) *Science Direct (Hybrid Advances)* vol. 7,

100277. Available at https://doi.org/10.1016/j.hybadv.2024.100277 (accessed 22 October 2024).

Rodrigues, R, 'Legal and Human Rights Issues of AI: Gaps, Challenges and Vulnerabilities' (2020) *Journal of Responsible Technology* vol. 4, p. 100005. Available at https://doi.org/10.1016/j.jrt.2020.100005 (accessed 22 October 2024).

Uzedhe, G & Okhaifoh, J, 'A Technological Framework for Transparent E-Voting Solution in the Nigerian Electoral System' [2016] (35) *Nigerian Journal of Technology* 627. Available at https://doi.org/10.4314/njt.v3513.22 (accessed 9 July 2024).

Yelwa, M M & Abdulhameed, S, 'Artificial Intelligence and the Future of Work in Nigeria: A Shift from Educational Requirements to Skills Possession' [2020] (6) *Social Science Research* 1.

INTERNET-SOURCED DOCUMENTS

Akinwale, A, 'Abbas: N'Assembly Planning Law to Regulate AI in Nigeria - THISDAYLIVE' (2024) Available at https://www.thisdaylive.com/index.php/2024/04/23/abbas-nassembly-planning-law-to-regulate-ai-in-nigeria/ accessed 22 July 2024.

Apple Newsroom, 'Apple builds on privacy commitment by unveiling new education and awareness efforts on Data Privacy Day' (2023) Available at https://www.apple.com/newsroom/2023/01/apple-builds-on-privacy-commitment-by-unveiling-new-efforts-on-data-privacy-day/ accessed 5 September 2024.

BBC Bitesize, 'G7 and G20 Groups Global National 5 Modern Studies Revision' (2018, February 19) Available at https://www.bbc.co.uk/bitesize accessed 17 October 2024.

Bello, O & Ogufere, C, 'The Emerging AI Legal-Judicial System's Interface: Assessing the State of Nigeria's Judicial System's Readiness for a Revolution' (University of Leicester, 2024) Journal Contribution. Available at https://hdl.handle.net/2381/26053102.v1 accessed 22 October 2024.

CAHAI - Ad hoc Committee on Artificial Intelligence, 'Artificial Intelligence' (2014) Available at https://www.coe.int/en/web/artificial-intelligence/cahai accessed 15 October 2024.

Daramola, A, 'Three Million Techies in 4 Years, 50K AI Jobs - Highlights of Communication Ministry's Roadmap' (2 October 2023) Available at https://www.thecable.ng/three-million-techies-in-4-years-50k-ai-jobs-highlights-of-communication-ministrys-roadmap/ accessed 16 April 2024.

Digital Health Africa, 'Overview of Healthcare Chatbots in Africa' LinkedIn (2024) Available at https://linkedin.com/pulse/overview-healthcare-chatbots-africa-digitalhealth-africa/ accessed 17 March 2024.

Ekhator, O, 'Nigeria enlists 120 experts to develop a framework for AI adoption' (2024, April 4) Available at https://techpoint.africa/2024/04/04/nigeria-enlists-experts-framework-ai-adoption/ accessed 4 August 2024.

European Commission, 'EU-US Trade and Technology Council' (2023) Available at https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/stronger-europe-world/eu-us-trade-and-technology-council accessed 15 October 2024.

Fersman, E, 'AI in Telecom: Past, Present and Future' (9 November 2023) Ericsson.com Available at https://www.ericsson.com/en/blog/2023/11/ai-in-telecom-past-present-and-future accessed 2 June 2024.

Garlick, M, 'Automation and the Evolution of African Agriculture' Digital Diplomacy (2024) Available at https://digitaldiplomacy.africa/automation-in-agriculture accessed 23 April 2024.

Hassan, A, 'The Legal, Ethical Issues and Impact of AI on Legal Profession: Which Way Nigeria?' (2023) Available at https://lawpavilion.com/blog/the-legal-ethical-issues-and-impact-of-artificial-intelligence-on-legal-profession-which-way-nigeria-by-aminu-hassan/ accessed 21 June 2024.

Hinduja, S, 'Generative AI as a Vector for Harassment and Harm' Cyberbullying Research Center (10 May 2023) Available at https://cyberbullying.org/generative-ai-as-a-vector-for-harassment-and-harm accessed 12 August 2024.

Ikechukwu, K et al., 'Artificial Intelligence and Cybercrime in Nigeria: Towards an Ethical Framework' (2024) Available at https://doi.org/10.5840/du202434115 accessed 15 September 2024.

INCAIR, 'About Us' (2020) Available at https://ncair.nitda.gov.ng/about-us/ accessed 20 October 2024.

Jimi, 'NGO to train 2,000 Kwara youths in AI, entrepreneurship' The Guardian Nigeria News (2024, October 15) Available at https://guardian.ng/news/nigeria/ngo-to-train-2000-kwara-youths-in-ai-entrepreneurship/ accessed 20 October 2024.

Lawal, D, 'Fact-Check: How Deepfake Audio Was Used to Frame Atiku, Okowa, Others in 2023 Elections' (24 February 2023) Available at https://prnigeria.com/2023/02/24/atiku-okowa-election accessed 23 May 2024.

Luminate, 'Luminate supports inclusive AI Collective in Nigeria' (2024) Available at https://www.luminategroup.com/posts/news/luminate-supports-inclusive-ai-in-nigeria/ accessed 20 October 2024.

McMaster, P & World Economic Forum, 'Why AI Is the New Frontier Global Trade Must Learn to Cross' (9 October 2024) Available at https://www.weforum.org/agenda/2024/10/ai-global-trade-policymaking/ accessed 22 October 2024.

NPR, 'A college student created an app that can tell whether AI wrote an essay' (2023, January 9) Available at https://www.npr.org/2023/01/09/1147549845/gptzero-ai-chatgpt-edward-tian-plagiarism accessed 13 July 2024.

OAL, 'Robo-Advisors in Nigeria: The Regulatory Framework for Robo-Advisory Services in Nigeria' (2021, August 18) Available at https://oal.law/robo-advisors-in-nigeria-the-regulatory-framework-for-robo-advisory-services-in-nigeria accessed 10 June 2024.

Okamgba, J, 'Microsoft DSN promote AI adoption among NGOs' Punch (2024) Available at https://punchng.com/microsoft-dsn-promote-ai-adoption-among-ngos/ accessed 20 October 2024.

OECD, 'Chapter 11. Artificial Intelligence, Blockchain and Quantum Computing' in OECD Digital Economy Outlook 2020 (2020) OECD Library Available at https://www.oecd-ilibrary.org/sites/bb167041-

en/1/3/11/index.html?itemId=/content/publication/bb167041-en&csp=509e10cb8ea8559b6f9cc accessed 28 June 2024.

Oyinlade, A, 'Defective Products, Goods and Services: Available Remedies to Consumers Against Manufacturers in Nigeria' (2024, June 23) Available at https://www.adeolaoyinlade.com/en/defective-products-goods-and-services-available-remedies-to-consumers-against-manufacturers-in-nigeria accessed 11 April 2024.

Radu, R, 'The G20 and Global AI Governance' Available at https://static.ie.edu/CGC/G20_Global_AI_Governance.pdf accessed 21 October 2024.

Reuben, B, Samuel, O & Lawal, A, 'A Review of Artificial Intelligence (AI) Readiness in Higher Education Institutions: A Case Study of Northern States of Nigeria' (2024) Available at https://www.researchgate.net/publication/382001558_A_Review_of_Artificial_Intelligence_AI_Readiness_in_Higher_Education_Institutions_A_Case

POLICY AND REGULATORY FRAMEWORKS

2021 Recommendation Algorithm Regulation.

2022 Deep Synthesis Guidelines.

2023 Draft Regulations for Generative AI.

Blueprint for an AI Bill of Rights.

Executive Order 14110.

ISO 31000:2018 Risk Management – Guidelines.

National Artificial Intelligence Strategy (August 2024).