A CRITICAL APPRAISAL OF THE LEGAL FRAMEWORK OF ARTIFICIAL INTELLIGENCE GOVERNANCE IN NIGERIA.

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Abstract

The proliferation of AI inventions globally and in particular, Africa and Nigeria without corresponding legal and governance framework to guide its operation is a cause that needs urgent attention than any part of this global innovation. AI governance and legal frameworks when designed are to help strike a balance between the benefits of these inventions and manage the risks occasioned by their operation. Significantly, these frameworks will import and draw in to consideration the various ethical and legal dilemmas associated with the use of AI. It will also forge such principles of justice like equity, and fairness into the practicable AI operation so it will meet the need of the common good. In this research, the researchers observed that it is expected that these frameworks will define such issues like jurisdiction of operation, provide reference point to questions bordering on rights and liabilities arising from AI operations and give a proper perspective to different areas of AI applications as well as provide for a cultural sensitive AI products and services peculiar to

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Africa. This research, through doctrinal method explored the challenges of AI, and the need for a formidable AI governance Frameworks in Nigeria after looking at AI governance Models adopted by other countries/regions. By way of recommendation, AI governance framework must encourage local content and production of AI systems. This will reduce risks of biases in AI and place Africa with her contemporaries.

1.0. Introduction

There is a growing concern about the risk of harm associated with the use of AI technologies if the systems are not deployed responsibly, and the data within the models is not managed properly. Interestingly, many governments and international organizations have worked or at least are working out ethical principles to govern the development and use of these new technologies. The aim is not farfetched. It is to mitigate the risk of harm that these technologies might bring. Singapore for instance issued the first edition of its Model AI Governance Framework ("Model Framework"), a sector-, technology- and algorithm-agnostic framework, which converts relevant ethical principles to implementable practices in an AI deployment process so that organizations can operationalize these principles[1].

AI governance is very imperative at a time so crucial and wrapped up with the complexity of a pluralistic world where organization and bodies that applies AI have had to contend with other sectors that need governance such as Data governance, IT governance, Corporate

[1] World Economic Forum, Model Artificial Intelligence Governance Framework and Assessment Guide. Available from <www.weforum.org>. accessed 4 July 2022.

Governance, etc. Hence, the inevitability of synergistic strategy to achieve the aim of AI since it is not applied in vacuum[2]. This will also ensure that AI is part of the country's structure and is hinged on the pillars of legal and ethical considerations to reduce the incidence of risks.

1.1 Definition of AI Governance

There is a growing body of research that hold so dear the importance of governed AI. Georgieva and her colleagues[3] call this the "*third wave of scholarship on ethical AI,"* which focuses on turning AI principles into actionable practice and governance. The third wave aims at promoting practical accountability mechanisms[4]. In order to structure this complete domain, researchers have presented layered AI governance structures, which include, for example, ethical and legal layers and levels ranging from AI developers to regulation and oversight[5]. At the societal level, AI regulation and policy[6], and

[2] Mäntymäki et al. 'Defining AI governance' Springer. (2022) Available from <<https://doi.org/10.1007/s43681-022-00143-x>> accessed 4 July 2022.

[3] Georgieva, I., Lazo, C., Timan, T., van Veenstra, A.F, From AI ethics principles to data science practice: a reflection and a gap analysis based on recent frameworks and practical experience. AI Ethics (2022). Available from <https://doi.org/10.1007/s43681-021-00127-3> Accessed 24 July 2022.

[4] Hickok, M.: Lessons learned from AI ethics principles for future actions. AI Ethics 1, 41–47 (2021). <https://doi.org/10.1007/s43681-020-00008-1> Accessed 4 July 2022.

[5] Gasser, U., Almeida, V.A.F.: A layered model for AI governance. IEEE Internet Comput. 21, 58–62 (2017). <https://doi.org/10.1109/MIC.2017.4180835> Accessed 4 July 2022.

[6] Charlotte Stix, 'Actionable principles for artificial intelligence policy: three pathways. Sci. Eng. Ethics 27, 1–17 (2021). Available from <https://doi.org/10.1007/s11948-020-00277-3> Accessed 24 July 2022.

paticularly human rights law[7], have also been raised as critical considerations. Despite this scholarly attention, there have been few explicit attempts to define AI governance. In their global overview, Butcher and Beridze[8] characterize AI governance as "a variety of tools, solutions, and levers that influence AI development and applications". Mäntymäki et al[9] viewed AI governance is a system of rules, practices, processes, and technological tools that are employed to ensure an organization's use of AI technologies aligns with the organization's strategies, objectives, and values; fulfills legal requirements; and meets principles of ethical AI followed by the organization.

AI governance according to Lewis[10] is the idea that there should be a legal framework for ensuring that machine learning (ML) technologies are well researched and developed to help humanity navigate the adoption of AI systems fairly.

It involves identifying answers to questions surrounding the safety of AI, which sectors are appropriate and inappropriate for AI automation,

[7] Yeung, K., Howes, A., Pogrebna, G.: AI governance by human rights-centered design, deliberation, and oversight: an end to ethics washing. In: Dubber, M.D., Pasquale, F., Das, S. (eds.) The Oxford Handbook of Ethics of AI, pp. 75–106. Oxford University Press, Oxford (2020). Available from <https://doi.org/10.1093/oxfordhb/9780190067397.013.5> Accessed 24 July 2022.

[8] Butcher, J., Beridze, I.: What is the state of artificial intelligence governance globally? RUSI J. 164, 88–96 (2019). Available from <https://doi.org/10.1080/03071847.2019.1694260> Accessed 24 July 2022.

[9] Op cit.note, 2.

[10] Lewis Sarah, 'AI governance' TechTarget. (Nov 6, 2018) Available from <https://www.google.com/amp/s/www.techtarget.com/searchenterpriseai/definition/AI-governance%3famp=1> Accessed 6 August 2022.

what legal and institutional structures need to be involved, control and access of personal data, and what role moral and ethical intuitions play when interacting with AI. In entirety, AI Governance determines how much Daily life can be shaped by algorithms and is in control of monitoring it[11].

2.0. Risks and Challenges of AI

There are a lot of challenges associated with AI and its operations. This is what researchers call the risks of AI. These include AI biases, the fear of job loss, marginalization, ethical and legal dilemma, etc.

AI systems rely heavily on data for optimum performance. In fact, the systems are taught to do the things they do by humans through machine learning. They are the reflection of the society and people that creates them. So somehow, human biases have crept into the AI algorithms and data and has been one of the serious threat to equitable use of AI. With the increasing number of AI systems been deployed in virtually all areas of existence, from healthcare to industrialization, agriculture, security, governance, law, economy, etc. and the fact that the systems like robots handles a lot of works with minimal supervision, time and with precision, there is the fear that many will be sacked out of their jobs.

AI systems are created by private sector and are sold at high prices and the fact that not all societies have the capacity to produce them, there is the fear that there will be marginalization of those who don't have the technical know-how, and the financial capacity to produce or

[11] Ibid.

acquire them. (AI governance will address those issues arising from transactions on AI to avoid exploitation.)

There are so many ethical and legal questions around AI that have not been cleared. The more reason why there is need for a defined AI governance framework to clarify such legal and ethical questions and set standards of operation.

3.0. Why We Need AI Governance

Artificial Intelligence research, although far from reaching its pinnacle, is already giving us glimpses of what a future dominated by AI can look like. While the rapid progress of the technology should be seen with a positive lens, it is important to exercise some caution and introduce worldwide regulations for the development and use of AI technology.

In fact, the complexity of things and the continuous demand by the tech savvy population of the world, the various governments of the world are beginning to import, deploy or/and employ the innovative solutions of AI in solving public challenges as such AI is no longer a domain for the private sector alone. This explains why there is dire need for AI governance framework to ensure equitable benefits and minimize the risks of its operation.

Regulating AI will help project the following:

i. the non-weaponization of AI technology, and

ii. the liability of AI owners, developers, or manufacturers for the actions of their AI systems[12].

AI governance framework is needed to minimize the risks in AI. This will be a brain trust at the nexus between global, regional, and local governments should seek to establish a common framework for effective governance of internet-enabled technologies. Such a framework as Besaw & Filitz[13] argued should ideally attempt to curtail the malignant use of the internet, data, and AI applications.

4.0. AI Governance and Selected Countries

With the complexity of things and the continuous demand by the tech savvy population of the world, the various governments of the world are beginning to import, deploy or/and employ the innovative solutions of AI in solving public challenges as such AI is no longer a domain for the private sector alone. This explains why there is dire need for AI governance framework to ensure equitable benefits and minimize the risks of its operation.

[12] Joshi N. 'Why governments need to regulate AI' Allerin. (May 1, 2019) Available from <https://www.allerin.com/blog/why-governments-need-to-regulate-ai> Accessed 4 July 2022.

[13] Besaw C. & Filitz J. 'AI & Global Governance: AI in Africa is a Double-Edged Sword' UN-CPR Centre for Policy Research. (2019) Available from <https://cpr.unu.edu/publications/articles/ai-in-africa-is-a-double-edged-sword.html> Accessed 27 July 2022.

Oxford Insights in its 'Government AI Readiness Index 2021[14],' shows governments across the continent are turning to AI to improve their public services and gain strategic economic advantages. The index is usually published annually to rank countries based on 42 indicators across three pillars; Government, the Technology sector and Data and Infrastructure.

In the report, the USA tops the ranking and is followed by Singapore and UK respectively. The countries of East Asia took turns to occupy the top 20 positions[15]. The report that und 30% of 160 countries – more than 41 of these African nations – in the global rankings have a national AI strategy, with 9% more at least drafting one[16].

On the African continent, Mauritius with a score of 52.71 out of 100 is the most AI-ready African public sector, followed by Egypt (49.7and 5), South Africa (48.24)[17]. This shows that there is still very much to be done one the African continent in terms of AI governance.

4.1. AI Governance in China

The AI governance regime in China has taken a rapid development space. China is seen as one of the AI Super Powers leading the era of AI implementation. Such efforts undertaken include;

[14] Oxford Insights Government AI Readiness Index 2021. Available from <https://www.oxfordinsights.com/government-ai-readiness-index2021> Accessed 6 August 2022.
[15] Ibid.
[16] Ibid.
[17] Ibid.

The Development plan of the new generation artificial intelligence was released in 2017 and it stresses that the dual technical and social attributes of AI must be carefully managed to ensure that AI is trustable and reliable[18].

Ministry of Science and Technology of the People's Republic of China (MOST) established a National Governance Committee for the New Generation Artificial Intelligence and released the Governance principles for the new generation artificial intelligence-Developing responsible artificial intelligence that was established in 2019 to guide AI operations[19].

The Beijing Academy of Artificial Intelligence (BAAI)[20] also published the Beijing AI principles to guide research and development in the area. In totality, AI governance framework in China is centered on; Security and privacy, Safety and reliability, Transparency, Accountability, Fairness: AI systems should treat all people fairly[21].

[18] National Governance Committee for the New Generation Artificial Intelligence. Governance principles for the new generation artificial intelligence—developing responsible artificial intelligence [Internet]. Beijing: China Daily; c1995–2019 [updated 2019 Jun 17; cited 2019 Dec 18]. Available from: <https://www.chinadaily.com.cn/a/201906/17/WS5d07486ba3103dbf14328ab7.html?from=timeline&isappinstalled=0> Assessed 23 August 2022.

[19] Ibid.

[20] Beijing AI principles [Internet]. Beijing: Beijing Academy of Artificial Intelligence; c2019 [updated 2019 May 28; cited 2019 Dec 18]. Available from: <https://www.baai.ac.cn/blog/beijing-ai-principles> Accessed 6 August 2022.

[21] Wu. W., Gong K., 'Ethical Principles and Governance Technology Development of AI in China. *Science Direct*. Volume 6, Issue 3, March 2020, Pages 302-309.

4.2. AI Governance in Europe

On average, Europe's digital gap with the world's leaders is now being compounded by an emerging gap with the world's leaders in its development and corporate use of AI technologies. Without faster and more comprehensive engagement in AI, that gap could widen, especially for those European countries with relatively low AI-readiness.[22]

The potential to deliver on AI and catch up against the most AI-ready countries such as the United States and emerging leaders like China are large. If Europe on average develops and diffuses AI according to its current assets and digital position relative to the world, it could add some €2.7 trillion, or 20 percent, to its combined economic output by 2030. If Europe were to catch up with the US AI frontier, a total of €3.6 trillion could be added to collective GDP in this period.

One positive point to note is that Europe may not need to compete head to head but rather in areas where it has an edge (such as in business-to-business [B2B] and advanced robotics) and continue to scale up one of the world's largest bases of technology developers into a more connected Europe-wide web of AI-based innovation hubs.

The European Commission's AI governance framework is set to:

a. address risks specifically created by AI applications;
b. propose a list of high-risk applications;

[22] <https://www.mckinsey.com/featured-insights/artificial-intelligence/tackling-europes-gap-in-digital-and-ai> Accessed 16 August 2022.

c. set clear requirements for AI systems for high risk applications;
d. define specific obligations for AI users and providers of high risk applications;
e. propose a conformity assessment before the AI system is put into service or placed on the market;
f. propose enforcement after such an AI system is placed in the market;
g. propose a governance structure at European and national level.

4.3. The USA and AI Governance

The National AI Initiative Act of 2020 (DIVISION E, SEC. 5001) became law on January 1, 2021, providing for a coordinated program across the entire Federal government to accelerate AI research and application for the Nation's economic prosperity and national security. National AI Initiative is aimed at ensuring continued U.S. leadership in AI research and development, lead the world in the development and use of trustworthy AI in the public and private sectors, and prepare the present and future U.S. workforce for the integration of AI systems across all sectors of the economy and society.

4.4. AI Governance in Egypt

AI governance framework in Egypt focuses on four pillars and their four enablers. The pillars are AI for government, AI for development, Capacity building and International relations whilst the enablers are

governance, data, ecosystem and infrastructure[23]. All of the above pillars are enabled by the enablers to exploit AI for the development of Egypt and the well-being of Egyptians while fostering the development desired at regional and international levels[24]. Interestingly, the framework is now codified in the Egyptian Charter on Responsible AI published in 2021 in accordance with the OECD's AI Principles with the aim to adopt assessment, and technical guidelines to ensure best practices.

4.5. AI Governance Framework in Nigeria

Nigeria is the giant of Africa and it is expected that it should also lead in the AI journey. However, the reverse is the case as the AI growth pace is quite slow due to challenges ranging from lack of adequate knowledge about AI to infrastructure decay, and lack of regulatory and policy and frameworks. In fact, according to the Oxford Insights in its 'Government AI Readiness Index 2020, Nigeria ranks 138 globally and 20 in the region below South Africa, Kenya and Ghana. The same report in 2021 had Nigeria scoring below Mauritius, Egypt and South Africa[25].

Notwithstanding the above, the country had taken some giant strides in the last few years beginning with the establishment of the National Council for Artificial Intelligence and Robotics (NCAIR) in

[23] Sally Radwan &, Samar Sobeih 'Egypt's AI strategy is more about development than AI.' OECD AI Policy Observation. (May 26, 2021). Available from <https://oecd.ai/fr/wonk/egypt-ai-strategy> Accessed 9 August 2022.
[24] Ibid.
[25] Op cit note, 2.

November, 2020[26]. The council is the innovative body of the government under the NITDA charged with researching and further understanding of the application and use of emerging technologies like AI, Deep Learning, Extended Reality (XR-VR/MR/AR), Robotics, and Drones, and the Internet of Things (IoT)[27].

It is important to note that a National AI governance framework for Nigeria must be that which takes into account the country's sensibilities in terms of region, values, and institutions[28]. It must be one that is geared towards providing answers to ethical issues and defining standards and guidelines for application of AI for the common good of all. It should not just be an expression to do the above but should actually set to do it. The NCAIR though a step in the right direction is not so potent enough to herald the above development. It is therefore imperative to recommend an AI Governance Framework for the country. The next phase of the work will extensively deal with that.

[26] Mfon Udechukwu 'AI Readiness in Nigeria.' Artificial Intelligence 4 Development Agency. (Aug 30, 2021). Available from <https://ai4da.com/ai-readiness-in-nigeria/> Accessed 10 August 2022.

[27] National Center for Artificial Intelligence and Robotics. Available from <https://nitda.gov.ng/ncair/#> accessed 9 August 2022.

[28] Jake Okechukwu Effoduh, 'Towards A Rights-Respecting Artificial Intelligence Policy for Nigeria' (eds) Khadijah El-Usman and Kenneth Oyeniyi Policy brief published by Paradigm Initiative. (2021). Available from <https://www.google.com/url?sa=t&source=web&rct=j&url=https://paradigmhq.org/wp-content/uploads/2021/11/Towards-A-Rights-Respecting-Artificial-Intelligence-Policy-for-Nigeria.pdf&ved=2ahUKEwiI_63T7rv5AhWWNewKHYR3CUoQFnoECBUQAQ&usg=AOvVaw1utDYJqJzKo3SHp37qtLLT> Accessed 10 August 2022.

5.0. Recommended AI Governance Framework for Nigeria

An AI Governance Framework in Nigeria must ensure that AI application is pro-people, or human-centric to avoid the risks of destroying the citizens' moral and ethical values or even driving them out of jobs, etc.

Such a framework must conform to the protection of citizen' rights which includes right to privacy, data protection, freedom of information and speech, etc. it should be potent enough to address issues of data breaches arising from non-authorization and lack of consent.

The framework must envisage a synergy between the private sector and the governance body. This must be done with the aim to ensure that regulations provide certainty of operations and discourage exploitation whilst providing striving environment for the private individuals. An ideal framework must ensure that government Ministries, Departments, and Agencies that directly or indirectly apply AI form part of AI governing body. AI governance framework must encourage local content and production of AI systems. This will reduce risks of biases in AI and place Africa with her contemporaries. There is dire need to develop and build skills for AI optimization in Nigeria. Currently there is dearth of knowledge on these systems and the needed skills to develop them. An ideal AI framework for Nigeria must encourage up skilling and reskilling in AI development and application. Finally, the goal of the framework must be to minimize risks of applying AI and increase the benefits of its application.

6.0. Conclusion

AI is unarguably, one of the greatest innovations of man. With its systems, this technological innovation is aimed at bettering the existence of man by automating most of his works. In virtually all areas of human endeavour, AI systems have been deployed to boost productivity, increase yield, solve health complicated problems, handle security and crisis issues perfectly with little or no supervision. However, there are challenges when these systems and their algorithms are not properly structured. It is even projected as pointed in this paper that AI if not moderately managed will create more troubles than solutions. To avert these impending dangers, countries of the world have developed governance frameworks for AI application to ensure that the benefits are reaped but at the same time, the risks are managed. This paper has thoroughly examined Nigeria's approach to this dire need, identifying lapses and offering useful recommendations based on the AI Governance models adopted by selected countries. It is hoped that with the recommendations proffered, a robust AI Governance Framework will surely emerge for Nigeria.