PARADIGM INITIATIVE

Locked Out of the AI Revolution:

Africa's Absence in the Development and Regulation of Emerging Technologies

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Key questions the policy brief will answer:

1. What specific challenges does Africa face regarding the domestication and regulation of emerging technologies, and how do these impact the continent's ability to leverage these technologies effectively?
2. How can the region strengthen its role in advocating for Africa's interests in global discussions on AI governance and regulations?

Policy Brief Overview.

Africa faces significant challenges in the domestication and regulation of emerging technologies, hindering its ability to harness their full potential. This policy brief addresses these challenges and explores strategies to strengthen Africa's role in advocating for its interests in global AI governance and regulations discussions.

Historically, Africa has been a passive recipient of technologies and their international regulations. This external imposition has limited Africa's ability to shape its technology landscape, exemplified by the control exerted by non-African countries over social media platforms. Also, Africa faces a significant digital divide, marked by limited internet access, insufficient funding for research and development, inadequate government support, and disparities in educational opportunities, all adding to the limitation of the continent's meaningful participation in emerging technology development.

Africa must actively contribute to emerging technology development and governance to overcome these challenges. This involves harmonising its stance on comprehensive AI regulation and actively engaging in international discussions on AI governance. Opportunities such as the Global AI Summits, UNESCO forums on Artificial Intelligence, and the creation of an international oversight organisation for AI systems offer platforms for the region to assert its influence and steer the direction of AI development.

Africa's journey in shaping the future of emerging technologies, particularly AI, is just beginning. Despite past missed opportunities, this brief suggests that through proactive engagement, strategic positioning, and concerted efforts to bridge the digital divide, Africa can harness the power of emerging technologies to benefit its people and the global community.

Background

The rate of diffusion of the new generation Artificial Intelligence (AIs) is unlike anything we have seen, but even more remarkable is the sense of empowerment it has already unlocked in every corner of the world, including Africa. Disruption is still the defining characteristic of these technologies today; they are upending sectors but also creating and reimagining them. AI and similar technologies can simplify and increase productivity, among other benefits.

This revolution is well underway globally, and there is a fear that Africa will be left behind as the digital gap grows. According to PwC's Artificial Intelligence Study, by 2030, AI is projected to contribute a staggering $15.7 trillion to global Gross Domestic Product (GDP), with $6.6 trillion coming from increased productivity and $9.1 trillion from consumption effects. In our globalised and ever-digitalising world, AI is relevant and utilised in several aspects of international relations, such as trade, international finance, technological transfer, human rights, power, and international politics.

However, since the beginning of the internet, Africa has largely been a receiver of new communication technologies and the international regulations that they come with. This was the case with social media, where countries outside the US have had to work with and around platform terms of service that are rooted in American legal structures, as Kate Klonick demonstrates. Developing countries have far less say when it comes to developing, influencing, or contesting these regulations, and for Africa, this essentially translates to operating within rules that are externally set.

What specific challenges hinder Africa from fully participating in the subsequent revolution and the current AI revolution

The lack of African representation in shaping the future of AI is influenced by various factors. Primarily, a significant digital divide impedes access to technology and digital infrastructure across the continent. Limited internet connectivity, inadequate funding for research and development, insufficient government support, and disparities in educational opportunities further compound this divide, leading to exclusion. Unfortunately, the crucial elements needed for technology adoption are largely absent across most of Africa, including necessary infrastructure, governance, Science, Technology, Engineering and Mathematics (STEM) education, and other essential factors for advancements in this field.

Another concern lies in whether AI can flourish amidst Africa's data gap. Fundamentally, artificial intelligence relies on algorithmic techniques loosely modelled on the human brain to enable machines to uncover patterns, derive insights from data, and apply these lessons to future decision-making and predictions. However, the lack of accurate, up-to-date, and timely data poses a threat to the continent's digital economy. Machine learning methods are only as effective as the data they are given, making data quality a crucial factor.

Furthermore, AI algorithms can perpetuate biases in data or the individuals who create the processes, amplifying social disparities. This issue is particularly significant in Africa, where machine learning algorithms imported from abroad may be based on data that does not recognise or may even be biased against substantial portions of the African population.

Efforts to address digital inequities in the internet economy have been made through programs combating the "digital divide." However, in the data economy, a lack of data collection or utilisation leads to social and economic inequities. Novel policy solutions are necessary to ensure that all Africans are represented in data and can utilise it effectively.

Moreover, the limited investment in local talent and innovation, combined with the dominance of

external actors, hampers Africa's active participation in defining AI's ethical frameworks, standards, and applications that align with its unique social, economic, and cultural contexts. Notably, most successful AI ventures in Africa rely on global partnerships that provide financing and expertise.

Another critical issue to consider is the concentration of AI research and development in wealthier nations, which perpetuates a power imbalance and marginalises African perspectives. The recent G7 summit held in Hiroshima in May this year provided a platform for discussions on AI governance and other immersive technologies. During the summit, the Hiroshima AI process was launched, aiming to deliver results by the end of 2023. However, the potential implications for African input remain uncertain. Given the current circumstances, it is unfortunate to anticipate limited African involvement in the decision-making process. Addressing this imbalance and fostering more inclusive participation from all regions should be a priority to ensure AI development is comprehensive and representative of diverse perspectives.

When it comes to government support, overall, there need to be more relevant policies that can prioritise the design and implementation of AI and address the potential impacts on society. AI holds promise in countries and continents where governments have prioritised technology and are taking concerted measures to stimulate innovation and improve data protection, research, and development. Africa has developing economies that require technological advancements to accelerate growth.

Advocating for African interests on the global stage:

The preceding examples highlight the implications of AI implementation strategies in developed countries like the United Kingdom, France, and the United States. It becomes apparent that African nations must adopt a comprehensive policy on AI implementation to leverage the continent's rich diversity, stimulate innovation, and regain control over its technological destiny. To achieve this, active participation and meaningful engagement are crucial, enabling Africa to assert its rightful place in shaping a future where AI caters to the needs and aspirations of all its people.

To make progress, it is vital to understand AI's capabilities in specific real-world contexts and have a pragmatic view of its limitations and distinctions from conventional technologies.

However, the position of African countries on the balance of power scale with digital platforms, predominantly situated in Western nations, remains to be determined. This raises the question of how much influence African countries can wield on these platforms. Governments must recognise the importance of eliminating or improving critical regulatory and infrastructure bottlenecks. A unifying pan-African data acquisition and protection framework could play a vital role in this effort.

Moreover, for AI solutions to thrive, countries worldwide must collectively agree to create, domesticate, and apply a unified systemic regulatory code to any platform or AI-related entity headquartered within their jurisdiction. Inclusivity in developing general-purpose AI regulation, with active contributions from African countries, is crucial. The African Union (AU) should take a leading role in this campaign, strengthening its proposal for a continental strategy and working group on AI to

address broader risks, including data flows and protection.

Africa must reposition itself as a valuable contributor to the development and governance of these technologies. Harmonising its stance on comprehensive AI regulation and advocating for an international protocol in which the continent plays an active role is essential. While some opportunities may have been missed, there is still time, as this is just the beginning. Future and ongoing opportunities, such as the Global AI Summits, Global Partnership on Artificial Intelligence (GPAI), the various ongoing UNESCO forums on Artificial intelligence, or even the governance of superintelligence (including the formation of an international oversight organisation for future AI systems, as advocated by OpenAI's document released earlier in May 2023), present a good avenue to get started. With proactive engagement and concerted efforts, Africa can assert its influence and shape the course of AI development for the greater benefit of its people and the world.

Policy Recommendations:

1. **Harmonise African AI Efforts:** The African Union should develop a unified African Programme of Action on Artificial Intelligence (AI) to consolidate and align national AI programs and initiatives. This collective approach will enable Africa to assert its interests in global AI governance. This document should complement the continental Digital Transformation Strategy (2020-2030).
2. **Anticompetitive Practice Oversight:** At the national level, governments should establish robust mechanisms to detect and address anticompetitive practices related to AI. Emphasising AI from a consumer rights perspective is crucial, given the underrepresentation of African consumer data in AI development. Governments should ensure the protection and fair representation of their citizens.
3. **Clear National AI Policies:** African countries must develop comprehensive and forward-thinking national AI policies. Relying solely on data protection laws to regulate AI, as observed in approximately 35 African countries, is insufficient and indicative of a lack of proactive governance.

Non-Policy Recommendations:

1. **Infrastructure Investment:** The African Union and member countries, despite entering the AI landscape later, should prioritise the development of essential infrastructure to compete effectively in the established AI arena. Africa has the youngest population in the world, meaning that most long-term consumers and users of technology and products are in Africa. African governments must be strategic, use their market advantage, and insist on favorable investment terms.
2. **Foster African AI Expertise:** Promoting the growth of AI expertise in Africa is essential. This can be achieved through funding initiatives for research and development and by providing exchange programs to equip African professionals with AI skills.
3. **Public-Private Partnerships:** Collaboration between governments and private sector entities can accelerate innovation, research, and technology adoption in the AI field. Such partnerships can enhance Africa's technological capabilities. African governments must be deliberate in collaborating with local and international private companies to accelerate innovation in their jurisdictions.