

Digital Policy Hub – Working Paper

# Sustainable Data Governance Frameworks in Africa

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The Digital Policy Hub at CIGI is a collaborative space for emerging scholars and innovative thinkers from the social, natural and applied sciences. It provides opportunities for undergraduate and graduate students and post-doctoral and visiting fellows to share and develop research on the rapid evolution and governance of transformative technologies. The Hub is founded on transdisciplinary approaches that seek to increase understanding of the socio-economic and technological impacts of digitalization and improve the quality and relevance of related research. Core research areas include data, economy and society; artificial intelligence; outer space; digitalization, security and democracy; and the environment and natural resources.

The Digital Policy Hub working papers are the product of research related to the Hub's identified themes prepared by participants during their fellowship.

## Partners

Thank you to Mitacs for its partnership and support of Digital Policy Hub fellows through the Accelerate program. We would also like to acknowledge the many universities, governments and private sector partners for their involvement allowing CIGI to offer this holistic research environment.



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## Key Points

- The nascent digital economy in Africa presents both opportunities for indigenous innovation and development as well as challenges that have the potential to worsen expected gains. This working paper gives an overview of the critical challenges and opportunities for developing sustainable data governance frameworks in the region.
- Geopolitical technology rivalry is enhancing African agency, which is defined as the ability of African actors to negotiate and bargain with external actors in a manner that benefits Africans.
- Evidence suggests that more needs to be done to include public input in African digital policy development processes by engaging with diverse stakeholders to ensure that data governance frameworks reflect a broad range of perspectives. Multi-stakeholder dialogues involving government, civil society, academia and the private sector are essential to shaping the future of data governance on the continent.

# Introduction

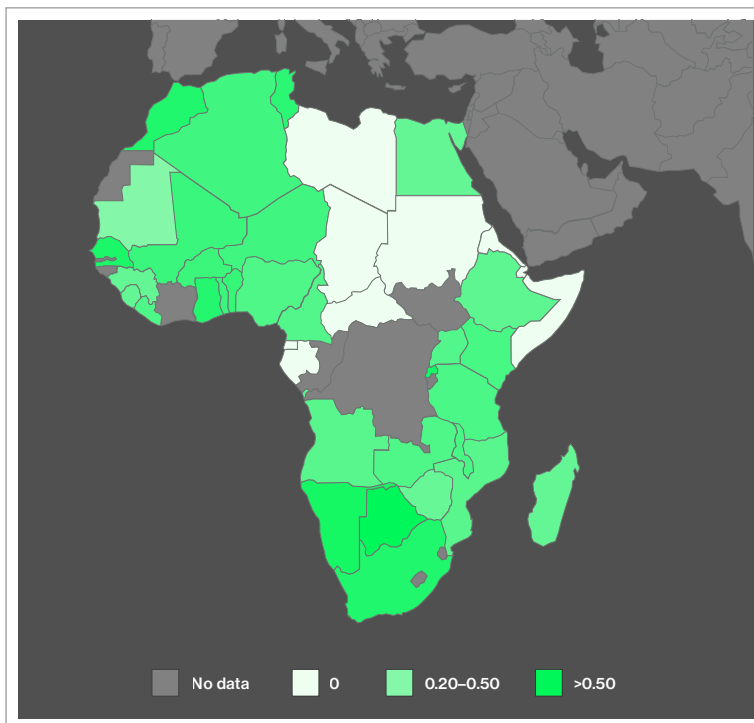
An ideal sustainable data governance framework carefully balances the promotion of the digital economy with guaranteeing data safety, security and individual protection rights. In line with the Digital Policy Hub's focus on increasing public understanding of the need for digital ethics and rights frameworks at both the national and international levels, this paper asks how can sustainable data frameworks be developed in Africa? It is the first of three working papers exploring the increasingly complex policy challenges and opportunities for developing data policy frameworks and regulatory approaches for digital transformation in the Global South. The research seeks to contribute to debate by practitioners, policy makers and scholars on the norms, institutional coordination and legal instruments of digital transformation (DeNardis 2023); it focuses on Africa in particular in order to examine the impact of policy harmonization and the development of sustainable and interoperable cross-border digital policies across the continent. This paper lays the foundation for this research by providing a current scan of the African digital landscape and identifying the key issues shaping its data governance debates.

The two working papers still to come will apply agential constructivism (AC) (Grant 2018) as a conceptual framework to unpack African agency in digital governance by assessing existing key data governance frameworks. This theoretical framework breaks free from mainstream theories about international relations that traditionally view actors from the Global South as passive recipients of norms. AC also engages with non-state actors who play a significant role in the African digital ecosystem but are not sufficiently recognized. Informed by lessons learned from experiences in other regulatory areas, this theoretical framing examines the constraints African actors face in developing data governance frameworks and the opportunities gained by providing a rigorous impact assessment of the effectiveness and sustainability of the existing data frameworks in terms of their handling of cross-border data flows of emerging technologies.

Underpinning this research is the recognition that there are “multiple Africas”: African states might share similar economic roots but they have varied politico-social contexts and levels of technological advancement. While some states have strong data protection legislation, others are still in the early stages of developing and enforcing legal frameworks and often face challenges of enforcement, compliance and public awareness. This wide range in terms of digital development and the maturity of regulations, as illustrated below in Figure 1, challenges the harmonization of cross-border policies.

This paper proceeds as follows: The first section situates the research within the literature on digital regulatory politics, followed by overviewing the critical issues shaping data governance debates in Africa and the identification of existing key data frameworks in the region. The final section provides a set of recommendations, a conclusion and an outline of the two working papers still to come.

Figure 1: Data Governance — Regulatory Enforcement in Africa



Source: <https://eledportal.com/gism/data-governance>; reproduced with permission.

## Methodology

This research uses qualitative methods to better reflect the perspectives of multiple stakeholders. Drawing from both interviews conducted and literature collected in a desk review, the research builds on the idea that African actors need to adopt a mix of pragmatic approaches to navigate ongoing geopolitical rivalries between digital powers (Agbebi 2022; Soulé 2023). According to Chux Daniels, Benedikt Erforth and Chloe Teevan (2023, 2) “for many African actors, China’s ever-growing presence in Africa’s digital

infrastructure is a welcome diversification of their international partnerships, but for the European Union (EU) this growing presence is considered a geographical threat. The EU fears China's growing influence on Africa's development and governance models. Recent efforts, notably the announcement of the EU's Global Gateway, are testimony to the EU's concerns and efforts to engage with this new form of power politics." This geopolitical rivalry between China and the European Union has created more options for African actors in terms of establishing partnerships as well as negotiating leverage over external actors. Geopolitical contestations are thus enhancing African agency, defined as the ability of African actors to negotiate and bargain with external actors in a manner that benefits Africans (Chipaike and Knowledge 2018, Soulé 2020). African actors are adopting new trends such as digital foreign policy strategies and embedding elements of digital transformation into diplomatic policy planning: examples include Kenya's National Digital Master Plan and Côte d'Ivoire's National Development Strategy (Teleanu and Kurbalija 2023). African actors are also exerting agency and ownership over their digital development through regional coordination and the development of policy frameworks such as the African Union's Digital Transformation Strategy for Africa, its Convention on Cyber Security and Personal Data Protection (also known as the Malabo Convention) and, more recently, its Data Governance Framework. The African Union is also in the process of drafting a Pan-African Strategy on Artificial Intelligence.

## Overview: Geopolitical-Techno Pawns?

According to the United Nations Conference on Trade and Development (UNCTAD), by 2022 33 out of the 54 African countries had enacted data protection legislation.<sup>1</sup> Since then, a majority of the continent's countries have written or passed digital transformation-related national policy, regulation or law, but the scope and effectiveness of the frameworks vary widely. There is concern that competing Chinese, American and European models for data governance, artificial intelligence (AI) ethics and internet sovereignty will limit the ability of African countries to develop data governance frameworks informed by local knowledge and contexts (O'Hara and Hall 2021; Bradford 2023; Kwet 2019). African actors are increasingly finding that without robust national and regional policies and regulations, technology trade-offs can hinder expected gains (Abah et al. 2023). To this effect, many African countries are grappling with how to assert greater control over data generated within their borders, using strategies such as data onshoring and legislation to increase local control over citizen data flows (Soulé 2023).

Several interrelated and key debates surround data governance in Africa. These include questions of reliance on foreign firms and investors for core digital infrastructure in the continent's nascent digital economy, with its implications for digital sovereignty and data protection. In their bid to gain access to new markets to expand their global operations, Chinese enterprises are driving technological development and governance models in Africa, which is further fuelled by African governments' preference for these partnerships (Bradford 2023; Soulé 2023; Agbebi 2022). China's digital footprint in the African continent stems from the Digital Silk Road (DSR), an offshoot of the

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<sup>1</sup> See <https://unctad.org/page/data-protection-and-privacy-legislation-worldwide>.

Belt and Road Initiative (BRI), which is China’s overarching international strategy to connect Asia with Africa and Europe via land and maritime networks with the stated goals of regional integration, increased trade and economic growth (Tugendhat and Voo 2021; He 2022). The DSR builds on infrastructure developed for the BRI to create internet connectivity, digital economies, smart cities and AI. The United States has also invested in Africa’s digital development, with the 2Africa cable system built by Meta in partnership with several African and global operators and Google’s deployment of the Equiano cable connecting Europe and the West African coast. In addition, the Biden administration launched a Digital Transformation with Africa initiative in December 2022, which aims to expand digital access, build human capital, accelerate closing the digital divide and strengthen digital-enabling environments across the continent.<sup>2</sup>

These Chinese and American initiatives driving technological development in African countries are setting the stage for dependence on foreign technology systems and providing an opportunity for foreign influence on African digital development. This idea of influence is best captured by Anu Bradford’s (2019) conceptualization of the “Brussels effect,” in which the European Union exerts global influence in digital regulation through rules and standards such as its General Data Protection Regulation (GDPR). Similarly, most of Africa’s digital regulations mirror those of the European Union (Ayalew 2023). For example, some sections of Nigeria’s 2019 Data Protection Regulation initially included identical phrasing from the GDPR (Bradford 2023, 335), although this legislation was later revised in the face of criticism from civil society organizations such as Paradigm Initiative.

The key issues shaping data governance debates in Africa are discussed below.

## Digital Infrastructure

The African continent faces both challenges and opportunities as it deepens its digital transformation. In March 2024, at least 13 countries in West and Central Africa experienced internet disruptions due to failures related to undersea cables (*The Guardian* 2024). Pressure from the disruptions was felt across the continent as networks attempted to reroute internet traffic to different cable landing points; similar disruptions had previously occurred in the same region in both 2018 and 2020. Internet disruptions resulting from the failure of submarine cables occur frequently around the world, with at least one of the hundreds of cables worldwide being damaged every few days due to underwater earthquakes, rock slides, anchors and boat activity (Matsakis 2018). In November 2022, damage to the SEA-ME-WE 5 subsea cable in Egypt caused disruptions in Djibouti, Eritrea, Yemen and beyond into Indonesia and Pakistan (Lipscombe 2024). Yet the widespread impact of the most recent incident in West and Central Africa brings to the fore key questions about the vulnerability of digital infrastructure and data governance challenges in the region.

In addition to digital infrastructure deficits, foreign influence on and control over the ways in which African data is collected, labelled, stored and used is also a critical concern. With Africa’s digital infrastructure being heavily dominated by

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<sup>2</sup> See [www.state.gov/digital-transformation-with-africa/](https://www.state.gov/digital-transformation-with-africa/).

foreign tech corporations, power rivalries are manifested through investments in undersea data cables, data centres, surveillance and technology hubs. While enhancing internet connectivity for many, thereby accelerating economic growth and prosperity, these multinational enterprises now also exert control at the architectural level of African digitalism through software, hardware and network connectivity (Kwet 2019). This foreign control could potentially undermine jurisdiction for African policy makers (Akwagyiram 2023) and limit their ability to ensure that data is used in ways that benefit African societies.

These tech power rivalries are also contributing to disinformation campaigns sponsored by external state actors in their attempts to assert influence over Africa (Africa Center for Strategic Studies 2024). Nearly 60 percent of disinformation campaigns on the continent have been reported to be foreign state-sponsored, aiming to “undermine democratic processes, promote coups in Africa, stoke anti-Western and anti-UN sentiment, and spread confusion about climate change science. While digital technologies are revolutionizing electoral campaigns and democracy on the continent (Omanga, Mare and Mainye 2023), there are also concerns about the proliferation of AI-powered malicious social botnets and disinformation campaigns. With as many as 19 African countries set to hold elections in 2024, discourse surrounding the political risks to African democracies posed by new generative AI and emerging technologies is gaining salience (Siegle and Cook 2024).

In the face of growing concerns about foreign influence and interference, a recent surge in the construction of local data centres across the continent — in countries both large (such as Egypt, Kenya, Morocco, Nigeria and South Africa) and small (such as Malawi) — is welcome news (Akwagyiram 2023). These data centres are posited to act as catalysts for economic growth by facilitating employment creation, boosting productivity and competitiveness (Mwenda et al. 2024). For example, laudable advancements have been reported in the use of African language data collection by local communities and initiatives enabling for the development of context-specific solutions by creating data that can be used to train technologies. Such advances are expected to ameliorate issues such as the growing use of AI-enabled social bots to generate content for disinformation (Yang and Menczer 2023) and the reproduction of biases in AI as demonstrated by research revealing how AI reproduces stereotypical global health tropes (Eubanks 2018; Alenichev, Kingori and Grietens 2023). It is reported that investment in Africa’s data-centre market is expected to reach US\$5 billion by 2026 (Akwagyiram 2023). Calls have also been made for the building of solar-powered data centres across the continent, positioning Africa as a pioneer for greener computing solutions in the future (Mwenda et al. 2024). With its lower reliance on fossil fuels compared to other parts of the world, Africa is reported to be home to 17 of the top 20 countries with the highest renewable energy consumption rates,<sup>3</sup> putting the continent in a good position to go beyond existing computing models in terms of minimizing environmental harms (ibid. 2024).

African countries need to develop and implement data governance frameworks that are informed by local knowledge and context; one important step in this direction is Nigeria’s National Policy on Blockchain (2023), which is designed to adapt blockchain technology to the country’s unique environments to ensure the

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<sup>3</sup> See [https://data.worldbank.org/indicator/EG.FEC.RNEW.ZS?most\\_recent\\_value\\_desc=true](https://data.worldbank.org/indicator/EG.FEC.RNEW.ZS?most_recent_value_desc=true).

attainment of maximum benefit and minimal risk (National Information Technology Development Agency 2023). The policy aspires to stimulate innovation through talent development strategies and by providing support for research and development in blockchain, creating regulatory sandboxes for start-ups, incubation centres and mentorship programs (ibid.). It has also led to the establishment of Nigeria's National Center for Artificial Intelligence and Robotics, the first of its kind on the continent.

## Data Sovereignty

Tech companies, both private and public, have gained enormous economic and political power in the digital economy. This power allows them to monopolize their markets, influence political decision making on regulation, control digital infrastructure and public discourse through their platforms and extract personal data for economic gain (Bradford 2023). In Africa in particular, dominance of digital infrastructure by foreign tech companies has rekindled concerns about the extraction and exploitation, suggesting that foreign companies continuing to feed on African data without adequate safeguards or benefits to local populations could amount to a form of data colonialism (Couldry and Mejias 2019; Kwet 2019; UN News 2024).

Concerns about the potential for big data, AI and algorithmic decision-making systems to perpetuate biases and discrimination or to be used as a weapon have long been raised by scholars and practitioners (Deibert 2013; Noble 2018; Eubanks 2018; Zuboff 2019). The growing salience of AI-generated disinformation and use of data for security considerations such as surveillance, profiling and political interference has made African states begin to regulate or even restrict cross-border data flows to ensure that data generated within their borders is stored, processed and controlled locally (Effoduh 2024).<sup>4</sup> Senegal, for example, is noted to be the first African country to require all servers to be located within its borders since the passing of Law No. 2008-12 on the Protection of Personal Data; Senegalese engineers are also involved in the planning and construction of projects on which the country partners with China (Soulé 2023). Similarly, Kenya's Data Protection Act, which was passed in 2019, requires data controllers and processors to ensure that personal data is processed lawfully, fairly and transparently. Egypt's Personal Data Protection Law (2020) requires licences for cross-border data transfers and gives the Egyptian government the power to mandate data localization for certain categories of data. South Africa's Protection of Personal Information Act (2021) also spells out specific requirements for cross-border flows of information: "personal data may only be transferred by a responsible party in South Africa to a party in a foreign country that is subject to law, binding corporate rules or a binding agreement that constitutes an adequate level of protection; that the data subject consents thereto; or that the transfer is required to conclude or perform a contract, or is for the benefit of the data subject and consent cannot reasonably be obtained" (van der Berg 2021, 4). African regulatory instruments have been evolving to address blind spots and to reflect realities on the ground: Nigeria's Data Protection Act (2023) replaces the Nigerian Data Protection Regulation (2019) and focuses on protecting the personal data of both individuals both residing in Nigeria and those

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<sup>4</sup> See also Research ICT Africa (2023).



abroad (KPMG Nigeria 2023). It also establishes a legal framework for data regulation, requiring that data controllers and processors host all personal data within Nigeria.

## Cross-Border Data Flows

The rapid expansion of the African digital economy necessitates having in place regulations that both facilitate and protect data flows. Cross-border policy coordination is important to building inclusive and vibrant digital economies (Internet & Jurisdiction Policy Network 2022). As more African countries invest in digital infrastructure, discussions about the need for interoperability and common standards have gained salience. In its efforts to create a consolidated data environment and to harmonize digital data governance systems, the African Union released its Data Policy Framework in July 2022. Through this framework, African countries have “agreed to put in place the needed mechanisms and regulations to cooperatively enable data to flow across Africa and pave the way to the achievement of the Digital Single Market” (African Union 2022). The framework builds on prior strategies and initiatives such as the Digital Transformation Strategy adopted in 2020, the Policy and Regulation Initiative for Digital Africa and the Africa Continental Free Trade Area (AfCTFA) Agreement.

After the AfCTFA agreement entered into force in 2019, data protection laws and agreements have had unintended consequences on cross-border data flows by increasing transaction costs, stifling innovation and hampering economic growth (van der Berg 2021; Ademuyiwa and Adeniran 2020). The implications of data localization and recommendations for policy trade-offs will be among the issues to be further explored in subsequent working papers in this series.

## Recommendations

- Data governance frameworks that are informed by local knowledge(s) and contexts need to be developed and implemented; one-size-fits-all measures do not adequately address the heterogeneity of African societies and the different maturity levels of their regulatory frameworks.
- Multi-stakeholder engagement and public consultations within communities, civil society, academia and the private sector are needed in order to shape data governance.
- Communities need to develop and implement local solutions to ensure that data is used in ways that benefit African societies.
- Countries participating in global fora and forging partnerships will help advance African interests.

# Conclusion

The rapidly evolving digital landscape in Africa presents both opportunities and challenges. Ongoing geopolitical technological rivalry enables African actors to enter into partnerships that offer the best terms to achieve their goals, a much better strategy than siding with one geopolitical rival to the exclusion of all others (Soulé 2023). As noted by Motolani Agbebi (2022), whether these digital technologies are provided by the Chinese, the European Union or the United States, how they are ultimately deployed is largely up to the Africans. While this paper situates the research within current debates on digital regulatory politics in Africa, two subsequent working papers will apply an AC theoretical framing to help to unpack what African agency is in terms of digital transformation and governance, as well as the extent to which African actors — both state and non-state — could navigate structural constraints in developing sustainable data governance frameworks. This will be done by examining implementation challenges and gaps in key data governance frameworks in the region to help inform recommendations for policy makers and other stakeholders in Africa and beyond.

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