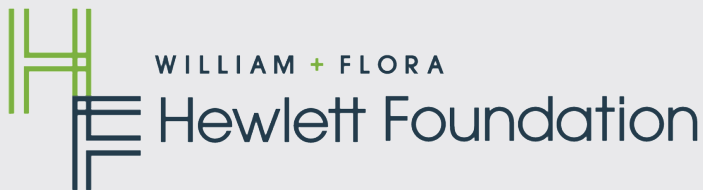




gender data

in evolving data ecosystems

A comparative study of the state of data governance in Ghana,
Kenya, Cote d'Ivoire & Zambia



POLLICY

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Review by:

Neema Iyer, Bonnita Nyamwire and Rachel Magege

Chennai Chair - Peer reviewer/Advisor

Acronyms

AU - African Union
CRVS - Civil Registration and vital statistics
DFS - Digital Financial Services
DPA - Data Protection Act
DCP - Digital Credit Platform
EAC - East African Community
ECOWAS - Economic Community of West African States
FSP - Financial Service Provider
GDPR - General Data Protection Regulation
G2C - Government to Citizen
GBV - Gender based violence
HIMS - Health Information Management System
HIS - Health Information System
ICT - Information Communication Technologies
KNBS - Kenya National Bureau of Statistics
MDA - Ministries, Departments and Agencies
ML - Machine Learning
M&E - Monitoring and Evaluation
MNO - Mobile Network Operator
NCA - National Communications Authority
NITA - National Information
NSO - National Statistics Offices
NRC - National Registration Card
NDP - National Development Plan
NIN - National Identification Number
ODPC - Office of the Data Protection Commissioner
PSP - Payment Service Provider
SDG - Sustainable Development Goals
SGBV - Sexual and Gender Based Violence
SADC - South African Development Community
UN - United Nations
WAEMU - West African Economic Monetary Union
ZICTA - Zambia Information and Communications Technology Authority

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Introduction

In roughly the last two decades, digitization efforts across Africa have in different ways transformed African economies but also the daily lives of African peoples especially as they generate ever increasing amounts of data. This wealth of personal and non personal data posits a data ecosystem and economy that across the continent is in some way being championed as prospective for more empowered and thriving African societies¹.

Nonetheless, harnessing the maximum benefits of the data ecosystem in Africa remains largely a point of contention between pessimists who view it as a pipedream and idealists who view it as an inevitable reality. The current reality however is more nuanced with country to country variations pointing to different levels of maturity² to their data economies but more importantly variations in the extent to which the data ecosystems place the significance of citizen's rights and liberties at their core.

To this end, we see efforts under the umbrella term of 'Data governance' aimed at ensuring that these rights and liberties are protected. Broadly speaking, data governance encompasses the people, processes, and procedures that promote availability of data, its security and ensure it is of high quality³. While data governance is understood in both contexts of the private sector and public sector, this report's focus is on the public sector.

Often ignored in the conversation around data governance however is the issue of gender data. Whilst there seems to be significant efforts towards addressing certain bottlenecks in the data ecosystem, a glaring gap remains when it comes to the collection and use of gendered data⁴ across the African continent which poses challenges in planning for women and girls who already exist at the margins of most societies. The effect of this is decision making that doesn't reflect the realities of women further alienating them from lives of agency, choice and dignity.

This expansive comparative report explores data governance across Ghana, Kenya, Cote d'Ivoire and Zambia with special interest in seeing its interplay with gender data. While gender data currently remains a starkly siloed effort under these four countries' ever evolving data ecosystems, its importance cannot be understated particularly in regard to equitable national planning and decision making.

Gender data is essential in creating policies that are gender responsive and are equitable which makes it an essential tool to evaluate progress on commitments made to advance gender equality⁵. UN Women reported that only 13% countries globally dedicate a regular budget for gender statistics⁶. The dire need to fill this gap is espoused in a number of global, regional and national instruments aimed at the promotion of gender equality such as the 1995 Beijing Platform for Action on women's rights to the AU's 2063 agenda which highlights gender equality.

In Africa, the Statistics Commission for Africa established in 2008 put in place the Africa Working Group on Gender Statistics (AGGES)⁷ aimed at addressing challenges related to the lack of gender statistics on the continent and ultimately guide the engendering of gender statistics in national statistic offices (NSOs).

¹ (n.d.). AU DATA POLICY FRAMEWORK - African Union. Retrieved July 13, 2023, from

<https://au.int/sites/default/files/documents/42078-doc-AU-DATA-POLICY-FRAMEWORK-ENG1.pdf>

² (n.d.). African Digitalization Maturity Report. Retrieved July 13, 2023, from <https://assets.new.siemens.com/siemens/assets/api/uuid:342ebb4f8c3596edb6ead62987e60ae6bea10e0d/version:1543065528/siemens-african-digitalization-report.pdf>

³ (n.d.). What is data governance? - IBM. Retrieved July 13, 2023, from <https://www.ibm.com/topics/data-governance>

⁴ (2021, March 3). Afrofeminist Data Futures Report ENGLISH - Pollicy. Retrieved July 13, 2023, from <https://archive.pollicy.org/wp-content/uploads/2021/03/Arofeminist-Data-Futures-Report-ENGLISH.pdf>

⁵ (n.d.). Commitments - Data2X. Retrieved November 4, 2023, from <https://data2x.org/state-of-gender-data/commitments/>

⁶ (n.d.). State of Gender Data - Data2X. Retrieved November 4, 2023, from <https://data2x.org/state-of-gender-data/>

⁷ (2011, December 13). Report of African Group on Gender Statistics (AGGES). Retrieved November 4, 2023, from

https://archive.uneca.org/sites/default/files/uploaded-documents/Statistics/statcom2014/documents/reportgenderstatistics_working-group.pdf

Whereas gender data leaning policies exist across these four states, it is apparent that it is barely a priority with the discussions to incorporate gender data into national planning spheres being either minimally singular based on donor conditionalities or being disparate and lacking cohesion.

Additionally, as Africa and the four countries in particular being explored keep undergoing changes in their data ecosystems particularly with the ongoing shift from these countries being digitised to them being datafied, not only does the pervasive value of data including gender data become more apparent but also the ability to categorise and intervene in decision making intensify data's capacity to induce inequity.

Another reason it is important to recognize this evolution of the data ecosystem is because earlier framing of data governance took an individualised approach which required abuses and harms be clear and visible which changes with the invisible, many to many nature of new data technologies⁸.

This makes the idea of gender data governance informed by frameworks from persons affected by these developments such as afro-feminism even more useful and urgent as a catalyst to bringing justice and fairness to the way "people are made visible and treated as a result of production of digital data" as they engage these technologies.

Considering all this, this report therefore aims to highlight the state of the intersection of data governance in evolving data ecosystems and gender data in the four countries with a hope to bring to light strengths, weaknesses, threats and opportunities in these four data ecosystems for the consideration of relevant stakeholders and most importantly to help realise data ecosystems that create lives of greater agency and freedom for all people.

⁸ (2017, February 16). What Is Data Justice? The Case for Connecting Digital Rights and Retrieved November 4, 2023, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2918779

Overview of domestic regulatory frameworks

Ghana

Data governance policy review

Data governance in Ghana is generally centralised in the sense that the decision making process as regards data stems from the central government through particular Ministries, departments and agencies with this mandate. Over the years, the government of Ghana has been enacting a number of statutes, laws, courses of action, and funding priorities directed towards what is largely considered 'digitalization'.

Accordingly, more widespread digitalization is hereby equated to a growing data ecosystem⁹. This goes along with the intersection of processes of data collection, processing, sharing and utilization which constitute the country's data governance ecosystem. Thus, Ghana's commitment to data governance is viewed through instruments, institutions and policies put in place towards this end.

Central regulatory institutions include the Data Protection Commission, National Cyber Security Centre and the National Information and Technology Agency(NITA). All of these operate under the leadership of the Ministry of Communications and Digitalization. NITA is very critical as it establishes the legal and compliance regime of ICTs plus connecting all government MDAs and hosting their applications. Similarly, the National Communications Agency also remains a central player in its regulation of electronic communications services and activities. NITA, the NCA and the line Ministry are also the digital infrastructure key stakeholders.

Other core data related institutions include the Ghana Revenue Authority, Ghana Statistical Services, the Electoral Commission, National Identification Authority which use personal data for various development and planning purposes.

Ghana interestingly is among the earliest African countries to invest in internet connectivity with surveys ranking it among the highest in e-government services¹⁰. With services such as the Ghana Identity card, e-justice programs, digital property, paperless health records, and the most advanced being e-financial services such as e-taxes, digital payments and the digital currency called e-cedi, the nation continues to lead in many efforts towards e-government. Interoperability of government systems is also ensured through Ghana's e-government Interoperability Framework (eGIF).

Despite this growth in Ghana's e-governance ecosystem, a disparity looms around citizen's interaction with these services. This has been attributed to the government's fixation on deriving revenue from these services as opposed to the delivery of basic services¹¹ and improving their functionality for citizen's access and usage. Taxes such as the 1.5% on all electronic transactions is a good example here.

As seen over the years, digitalization has been an evolutionary process of policy decisions and reforms, regulatory frameworks and investments mostly as a result of the liberalisation of the economy. At the outset, the ICT4AD Policy in 2003¹² was passed as a way of mainstreaming ICT in the country's socioeconomic growth as well as transforming Ghana into a knowledge based society drawn from

⁹ "Data Governance and Public Trust- Exploring the Sources ... - CIPESA." <https://cipesa.org/wp-content/files/documents/Data-Governance-and-Public-Trust-Exploring-the-Sources-of-Low-Trust-Levels-in-Public-Data-Controllers-in-Ghana-Report.pdf>. Accessed 28 Jul. 2023.

¹⁰ "UN E-Government Survey 2018 - the United Nations." 19 Jul. 2018, <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2018>. Accessed 28 Jul. 2023.

¹¹ (2022, October 6). Digitalisation of Basic Services in Ghana: State of Policies in Action Retrieved July 25, 2023, from <https://includeplatform.net/wp-content/uploads/2022/10/Digitalisation-of-Basic-Services-in-Ghana-State-of-Policies-in-Action-and-Lesson-for-Progress.pdf>

¹² (n.d.). THE GHANA ICT FOR ACCELERATED DEVELOPMENT (ICT4AD Retrieved July 27, 2023, from https://cdn.modernghana.com/images/content/report_content/ICTAD.pdf

Ghana's extant Vision 2020.

Hence, the governance of data largely started off as regulation aimed first at the promotion of adoption and development of ICTs in the country followed by the need for subsequent regulation aimed at protecting the fundamental rights of citizens and the state as they engaged with these ICTs. With the extremely dynamic nature of the data and digital sphere however, this has led to a level of incoherence in the integration of legislation at a national level.

In 2018 for example, the Government of Ghana engaged a multistakeholder group on a Ghana Digital Roadmap envisioned for 2020 to 2024. Following this, a Ghana digital agenda led by the NCA under the Ministry of Communications was rolled out "to support digitization of the Ghanaian economy in a manner that captures benefits for all citizens.¹³" This agenda specifically spoke to digitizing all government services, building a biometric National ID register, deploying a digital property addressing system as well as mobile money interoperability and paperless operations.

Additionally, as a result of the Ghana Digital Agenda, a NCA-Computer emergency response team (NCA-CERT) plus a Common Platform for both responding to cyberattacks and monitoring of government revenue in the telecommunications sector were both established.

In 2019, Ghana passed a Beyond Aid Strategy Document¹⁴ supplemented with specific goals towards a Beyond Aid digital economy with thirty seven proposed interventions towards developing Ghana's digital economy.¹⁵ These goals uniquely highlight topics such as digital services, the platform economy as well as the gig economy. It also speaks to the disruption of the traditional ICT industry by automation and emerging technologies such as cloud services, Artificial Intelligence and Internet of Things.

As regards statutory funding, the government of Ghana's priorities have been ICT infrastructure development, ICT capacity development as well as data management and regulation. According to the Medium term expenditure framework¹⁶ by the Ministry of Communications and digitalization, some of the projects the government hoped to fund included the Celebration of Girls ICT initiative which hoped to train girls in ICT skills, a Rural Telephony Project aimed at connecting more rural areas to the internet, an Integrated information management system, the roll out of a Ghana electronic procurement system as well as a data management system aimed at the registration of data controllers among other initiatives.

Overall, limited resources remain at disposal for the implementation of ICT regulation and subsequent interventions or initiatives. Research by the World Bank¹⁷ has for example indicated the need for Ghana to invest more in the foundational elements of its digital economy including areas such as digital infrastructure, digital platforms, digital entrepreneurship and digital skilling.

It is also remarkable that the government of Ghana has managed to create a fairly favourable environment for ICT Research and Development which has over the years resulted in investments not just from the government but also from Intergovernmental Organizations and private corporations. These have resulted in the creation of jobs for Ghanaians through the development of world class iHubs and other similar incubation hubs.

¹³ (2018, December 6). Ghana's Digital Agenda - National Communications Authority. Retrieved July 25, 2023, from <https://nca.org.gh/wp-content/uploads/2021/11/Key-NCA-Projects-2018.pdf>

¹⁴ (n.d.). Ghana Beyond Aid Charter and Strategy Document. Retrieved July 27, 2023, from http://osm.gov.gh/assets/downloads/ghana_beyond_aid_charter.pdf

¹⁵ (n.d.). Ghana Digital Economy Diagnostic - World Bank. Retrieved July 27, 2023, from <https://pubdocs.worldbank.org/en/412821598381054828/Ghana-DE4A-LOW-Res.pdf>

¹⁶ (2021, September 20). MINISTRY OF COMMUNICATIONS AND DIGITALISATION. Retrieved July 25, 2023, from <https://mofep.gov.gh/sites/default/files/pbb-estimates/2022/2022-PBB-MOCD.pdf>

¹⁷ (n.d.). Ghana Digital Economy Diagnostic - World Bank. Retrieved July 27, 2023, from <https://pubdocs.worldbank.org/en/412821598381054828/Ghana-DE4A-LOW-Res.pdf>

Arguably the most important and clearcut piece of data legislation in the country is Ghana's Data Protection Act of 2012¹⁸ which also established the Data Protection Commission aimed at protecting the privacy of the individual and personal data through the regulation of the processing of personal information. This tool primarily imparts the application of data protection principles.

Broadly, some of the principles laid out by the Act include accountability, lawfulness of processing of data, specification of purpose, consent, quality of information, openness and data security safeguards among other provisions. However, in spite of issues to do with the processing of personal data being explored in the Act, a critique remains to their robustness vis a vis their intended purpose.

For instance, issues such as datafication, surveillance arising from data collection and processing mechanisms, data ownership for example in citizens relations with Big Tech as well effects of automation and other emerging technologies on citizens are barely addressed. In many ways therefore, this Act is still rooted in the data privacy and protection approach and has not evolved much to capture the varying issues coming out of the ever evolving data ecosystem.

The Data Protection Commission is the statutory body established under the Act to protect the privacy of the individual and personal data by regulating processing of personal information. Generally, it is tasked with ensuring confidentiality of information, coming up with guidelines and best practices, public awareness of the rights and duties of all parties as well as promoting International cooperation within the data ecosystem.

The Data Protection Act also centres the role of data controllers and processors. Besides mentioning all government agencies being data controllers, the Act is quite vague on the totality of who these are. Additionally, studies have shown prevalence of mistrust for these by citizens who are the data subjects. Concerns for data security, little or no information provided on the use of data, perceived unauthorised access to data and a lack of knowledge of legislation are among the reasons cited for this mistrust¹⁹.

Enforcement of the Act is said to be through authorised officers as laid out in the Act as well as through notices and other similar or appropriate legal proceedings. Exemptions are also provided for within the Act for the processing of personal data including for public order and safety, public morality, public interest as well as national security purposes. Other reasons such as journalistic or art endeavours are given as reason for exemption too.

Lastly, the government of Ghana in 2012 enacted an Open Data Initiative(GODI)²⁰ spearheaded by NITA with the technical assistance of the Web Foundation. This was intended to support the government's creation of a locally sustainable long term open data initiative as a way of fostering transparency, accountability and efficiency in government. Due to fiscal constraints however, the initiative was discontinued by NITA in 2013 although more datasets have been uploaded onto the portal since.

All in all, these are some of the core efforts by the Ghanaian government towards data and digital governance over the years. While significant efforts and even successes have been realised along the country's data governance journey, much remains to be realised as reflected in the various ambitious policy documents and government interventions. Being a forerunner in this realm on the continent too, many lessons stand

¹⁸ (n.d.). Data Protection Act, 2012 - NITA. Retrieved July 27, 2023, from <https://www.dataprotection.org.gh/media/attachments/2021/11/05/data-protection-act-2012-act-843.pdf>

¹⁹ (n.d.). Data Governance and Public Trust- Exploring the Sources ... - CIPESA. Retrieved August 27, 2023, from <https://cipesa.org/wp-content/-files/documents/Data-Governance-and-Public-Trust-Exploring-the-Sources-of-Low-Trust-Levels-in-Public-Data-Controllers-in-Ghana-Report.pdf>

²⁰ (n.d.). Ghana Open Data Initiative. Retrieved July 25, 2023, from <https://data.gov.gh/welcome>

Gender aligned policies

In Ghana, considerable work has been done on paper in terms of ideating towards data governance approaches that incorporate and utilize a gender lens. It is not obvious however that these theoretical strategic documents prioritize gender data as a whole.

Ghana has a Ministry of Gender, Children and Social Protection established in 2001 replacing the former National Council on Women and Development. The Ministry has regional departments as well as a gender desk in various MDAs within government. However, it is a Department of Gender²¹ under the Ministry that leads in the role of fighting for gender equality and women's empowerment. Largely, the Department's mandate is to collect and compile documentation that contributes to the body of knowledge on gender and development.

Some of the projects under it include the Ghana National Household Registry meant to ascertain the appropriate allocation of welfare services to the most vulnerable for instance the proposition made for the National Health Insurance. The Social Welfare information Management Systems also called SWIMS is another project meant for the provision of social protection for example to GBV victims and survivors.

Ghana also had a five year strategic plan for gender statistics²² dated 2018 to 2021 aimed at improving gender statistical data production and promoting gender equality and sustainable development for all persons. One critique towards this strategy is its insistence on purely statistical data which negates other important forms of data particularly narrative based data which is in many ways the norm to the way women in Africa document their realities. While statistical methods based on "measurement" are great for generalisation purposes, having them as the only research approach overall impacts the very existence of gender data meant to uncover bias data.

This strategic plan also mentions some challenges to realising robust national statistical systems in Ghana and these include funding challenges, trained personnel and a minimal ICT infrastructure. Addressing these would therefore result in more relevant, timely, reliable, and user friendly statistical data.

As regards funding challenges for all the above initiatives, studies have cited entrenched patriarchal attitudes beyond a lack of political will as well as competing government priorities to fund gendered data that fit into the narrative of women's data being niche and not general.

Currently, there exists no standalone policy objective on gendered statistics with the Population and Housing census probably being the only platform which includes gendered data and the National Gender Policy barely addressing gender data issues directly. The absence of production of gendered data in MDAs has been premised on the need to mainstream gender more²³ across all these bodies and institutions and consequently the need to transform gender concerns into tangible policies.

Generally, a critique remains for the lack of baseline data on critical gender issues despite Ghana's commitment to gender data collection and use, the absence of measured progress on gender equality metrics in the country, insufficient knowledge on gender issues in especially the public sector, low capacities for analysing gender data, weak analysis capacities of policy makers, limited quality data that's also user friendly as well as few women involved in the decision making process. Access to data that exists is also difficult due to fragmented data sources that are barely integrated.

²¹ "Departments - Ministry of Gender, Children and Social Protection." <https://www.mogcsp.gov.gh/about/departments/>. Accessed 28 Jul. 2023.

²² "FIVE YEAR STRATEGIC PLAN FOR GENDER STATISTICS." 7 Sep. 2021, <https://www.mogcsp.gov.gh/mdocs-posts/five-year-strategic-plan-for-gender-statistics/>. Accessed 28 Jul. 2023.

²³ "Ghana - Country Strategy Paper 2019-2023." 24 Jun. 2019, <https://www.afdb.org/en/documents/document/ghana-country-strategy-paper-2019-2023-110049>. Accessed 28 Jul. 2023.

Case study 1: Financial sector data governance

Ghana's financial sector is comprised mainly of the banking sector, insurance and capital markets and is regulated primarily by four major regulatory bodies ie the Bank of Ghana, the National Pensions Regulatory Authority (NPRA), the National Insurance Commission (NIC) and the Security and Exchange Commission²⁴.

While the sector has for long been dominated by banks, in recent years it has been diversifying into an array of Digital Financial Services (DFS) due to a strong demand for financial technologies (fintechs) in the Ghanaian market. Perhaps the most significant advancement so far has been the growth of the Mobile money sector with Ghana being one of the biggest mobile money markets in Africa²⁵.

The government's Digital Ghana agenda has been greatly significant in enabling the enacting of important advancements which have further grown the DFS market in Ghana. For example, in 2018, the country launched one of the first interoperable systems in Africa which allowed transactions between different telecom service providers in Ghana²⁶. Additionally is the piloting of the digital cedi (e-cedi) intended to supplement and serve as a digital alternative to physical cash as part of the country's cashless economy drive.

Despite advances in DFS, a number of threats exist that could hamper inclusive financial growth including the current tech infrastructure's ability to support the advancements, the 1.5% e-tax levy on users and one of the most pervasive challenges to DFSs in Ghana which is fraud²⁷. Still, DFSs, especially fintechs are viewed as an opportunity to overcome several challenges and increase efficiency within the financial sector in Ghana.

Currently, DFSs are largely regulated by the four key regulators of the financial sector as well as other DFS facing regulators such as the National Communications Authority, NITA, NIC and NPRA. A number of guidelines including the Guidelines for e-Money Issuers (EMI Guidelines), the Strategy for Consumer Protection for financial services by the Bank of Ghana supplemented in 2017 by the Bank issued Consumer Recourse Guidelines for financial service providers and the Disclosure Rules for Credit Products are some of the guiding notes to DFSs. An implementation gap looms around these especially owing to a lack of specific enforcement measures.

In May 2020, Ghana passed the world's first Digital Financial Services Policy²⁸ under its Ministry of Finance. The policy broadly puts across the country's vision and ambitions for capitalising on digital technologies and the digital economy as a resource for a vibrant Ghanaian economy. Centering the importance of access to relevant and affordable financial services for all its citizens, the regulatory framework supports innovation, competition, financial inclusion, the strengthening of the monitoring capacity of regulators, enhancing the utility of digital infrastructure and consequently supporting the emergence and growth of fintechs. It also posits the opportunity to embrace Regulatory technologies (RegTech).

The policy also places emphasis on moving to digital payments reliant on a holistic digital payment ecosystem using national identification numbers with a biometric check or using contactless NFC enabled national ID. This emphasis is explained on the basis of envisioning digital payments leading to the formalising of data and therefore shrinking the informal economy as well as evolving into far reaching platforms for strengthening energy, food security, transparency and other core policies. The DFS Policy largely aligns with the Ghana Digital payments roadmap²⁹.

²⁴ (n.d.). Ghana's Financial Sector Report 01.11.22 (FINAL).pptx - GIPC. Retrieved November 4, 2023, from <https://www.gipc.gov.gh/wp-content/uploads/2022/12/Ghanas-Financial-Sector-Report.pdf>

²⁵ (2018, June 21). How Ghana Became One of Africa's Top Mobile Money Markets | Blog. Retrieved November 4, 2023, from <https://www.cgap.org/blog/how-ghana-became-one-of-africas-top-mobile-money-markets>

²⁶ (2022, September 19). Digital Financial Inclusion and Security: The Regulation of Mobile Retrieved November 4, 2023, from <https://carnegieendowment.org/2022/09/19/digital-financial-inclusion-and-security-regulation-of-mobile-money-in-ghana-pub-87949>

²⁷ (n.d.). Ghana's Financial Sector Report 01.11.22 (FINAL).pptx - GIPC. Retrieved November 4, 2023, from <https://www.gipc.gov.gh/wp-content/uploads/2022/12/Ghanas-Financial-Sector-Report.pdf>

²⁸ (n.d.). Ghana's Financial Sector Report 01.11.22 (FINAL).pptx - GIPC. Retrieved November 4, 2023, from <https://www.gipc.gov.gh/wp-content/uploads/2022/12/Ghanas-Financial-Sector-Report.pdf>

²⁹ (n.d.). Toward a Cash-Lite Ghana: Building an Inclusive Digital Payments Retrieved November 4, 2023, from https://mofep.gov.gh/sites/default/files/acts/Ghana_Cashlite_Roadmap.pdf

An approach that uses a gender lens is posited by the policy in its implementation meant as a way of advancing women's financial inclusion. Instances of gender data may therefore arise in its implementation through envisioned action plans such as understanding market perspectives using gender indicators and engaging local communities to grasp women's needs.

Overall, the governance of data under the financial sector which hosts an immense amount of data is largely disjointed, pointing to a need for a more harmonised and consistent framework covering the sector. Efforts such as the ongoing works to ensure the interoperability of the sector's infrastructure particularly through the operationalization of the national biometric ID are a step towards this harmonisation and integration that can aid greater transparency, data sharing and common policies guiding the sector.

Specific instances of this include the ongoing integration of mobile payments into the national switch as a way of addressing issues of fraud, liability, dispute settlement and consumer protection. The other example here is the ambitious idea of the 'digital locker' for storage of individual data that can be shared with FSPs and also double as a place where government agencies can issue official documents. This idea is referred to as a stack such as that of India and this stack is built on a biometric ID base and a virtual payment address system³⁰.

Case study 2: Health sector data governance

In 2008, the Government of Ghana issued a draft legal and policy framework³¹ for health information and data reporting which in great detail outlined a rationale behind the need to regulate this space. A major point of discussion leading to the regulatory rationale was the increasing need to show in a more precise way performance measurements of the sector. This need according to this report brought about an exerted pressure on the demand for information to show achievements in terms of national goals and SDGs by especially donors trying to demonstrate their contribution to the health sector.

Building on this rationale, the draft framework went on to point out the two core issues regulation of information generation and reporting should concern itself with as the right to privacy and its protection in relation to health information as well as the development of suitable standards for regulating the provision of healthcare services by the use of tech. In a sense, these two are viewed as competing interests that need to be balanced.

Over the years, the uptake of new technologies in Ghana has greatly facilitated the flow of information among different stakeholders in the health sector. Generally however, the culture of information use and generation remains underdeveloped and mechanisms for validating and ensuring reliability are not optimally functional.

Quite broadly, the healthcare information management system in Ghana largely focuses on routine activities captured on process, input, output, outcome and impact of services as well as Financial management information and information on drugs and logistics and stocks management. This data exists at five levels i.e. community, sub district, district, regional and national levels and is organised under sector wide indicators to enable capturing at high levels. However, the lack of a comprehensive framework for health data governance means public health data isn't being fully maximised for public good.

³⁰ (n.d.). DIGITAL FINANCIAL SERVICES POLICY - Ministry of Finance | Ghana. Retrieved November 4, 2023, from https://mofep.gov.gh/sites/default/files/acts/Ghana_DFS_Policy.pdf

³¹ (n.d.). Policy-and-Legal-Framework-for-HMIS.pdf - Ministry of Health, Ghana. Retrieved November 4, 2023, from <https://www.moh.gov.gh/wp-content/uploads/2016/02/Policy-and-Legal-Framework-for-HMIS.pdf>

Since 2012, Ghana has deployed a nationwide web based health information management system known as the District Health Information Management system (DHIMS2)³² which is a free and open source health management data platform used by multiple organisations and governments worldwide. It set out to integrate all health service data from all types of facilities and also set in motion the development of the Ghana HIMS Strategy Direction Guidelines and policies to clearly define interoperability measures as well as take inventory of all e-health initiatives in the sector.

This system has faced challenges especially in the gaining of trust of various stakeholders and inadequate local support for its initiatives. Although 93% of health facilities reported submitting data into the DHIMS, evidence suggested low usage of this in decision making especially at community level³³.

Furthermore, a number of Acts regulate the health information management system of Ghana including the Ghana Health Services and Teaching hospital Act, Public Health Act 851 and the National Insurance Act 2012 among others. Ghana is also currently moving towards Universal Health Coverage facilitated mainly by the National Health Insurance Scheme³⁴.

Additionally, whilst not comprehensive in its functionalities, a Centre for Health Information Management³⁵ exists under the Ghana Health Service. Currently, its core roles are the collection and compilation of basic health statistics for planning, M&E, medical research as well as development of ICT initiatives to improve health information management and the dissemination of health information among other functions.

Overall, the health information management system in Ghana remains plagued by a number of challenges critical among them being an overdependence on funding from donors as well as a lack of requisite data skills locally which make the system vulnerable. On the other hand though, a number of opportunities in terms of new technologies supporting the health information system to become more robust lie on the other end as well towards a more equitable health sector for all its citizens.

Case study 3: Digital ID systems and algorithmic harm

Ghana recently concluded a mass registration exercise for its digital national identity card called the Ghana card. This follows a long history of the nation attempting to overcome challenges in developing an effective national registry system. The card is a smart card with room for fourteen different register applications. It is also linked to an individual's biometrics such as fingerprints, facial images and eye colour³⁶.

Established in line with Ghana's DPA, the Ghana card is backed by a legal mandate although nothing suggests it is mandatory. The effect of this has been exclusion and discrimination harms arising from failure to access basic services due to mandatory uses of the ID even as impediments to getting the card still exist including the need for a physical address to enrol³⁷. The burden of this weighs heavier on persons already living on the margins of society such as the poor and rural dwellers. This exclusion of this demographic from such a national database means their invisibility when planning for the country further misaligning them from decision making that benefits them.

Additionally, the need to incorporate one's physical address before enrolling for the Ghana card is questionable in terms of the relevance of this information to obtaining an ID. Using a gender lens, this is problematic especially for women who already suffer cases of femicide and GBV. Any data breaches or leaks could therefore mean potential for these harms to be brought onto certain women.

³² (n.d.). DISTRICT HEALTH INFORMATION MANAGEMENT SYSTEM Retrieved November 4, 2023, from <http://static1.1.sqspcdn.com/static/f/752898/22436107/1365791405940/addressing-health-information-gaps-in-ghana-ict4d-2013.ppt?token=nBBMAMKvaBuUPLm6eRZRbVXjwr8%3D>

³³ (n.d.). Integrated Health Information Management - iDSI. Retrieved November 4, 2023, from <https://www.idsihealth.org/wp-content/uploads/2018/10/Kwame-Geegee-Adu.pdf>

³⁴ (n.d.). NHIS. Retrieved November 4, 2023, from <https://www.nhis.gov.gh/>

³⁵ (n.d.). Integrated Health Information Management - iDSI. Retrieved November 4, 2023, from <https://www.idsihealth.org/wp-content/uploads/2018/10/Kwame-Geegee-Adu.pdf>

³⁶ "The GhanaCard - National Identification Authority." <https://nia.gov.gh/the-ghanacard-introduction/>. Accessed 28 Jul. 2023.

³⁷ "Digital Identity in Ghana - Research ICT Africa." https://researchictafrica.net/wp/wp-content/uploads/2021/11/Ghana_31.10.21.pdf. Accessed 28 Jul. 2023.

Free access to the Ghana card, allowing others to vouch citizenship for those without proof of any ID as well as government setting up offices in all 275 districts of Ghana as way of ensuring decentralisation of the enrolment process for the ID are efforts that have in many ways fostered inclusivity of all people in accessing this critical service.

However, the issue of the Ghana card brings to light how the adoption of smart technologies such as the biometric ID and similar others such as facial recognition systems are currently envisioned by the existing policies pertaining to data and digital technologies. While certain aspects of smart technologies are addressed in the country's DPA with reference to the protection of personal data, there generally remains barely any regulation pertaining specifically to smart technologies. For example, regarding Artificial intelligence use and adoption, Ghana currently has no national AI strategy and does not appear to prioritise AI in its National development plan³⁸.

In light of that, Ghana's ID card being biometric poses risks to users where in the absence of any regulation violation of some of their most fundamental rights could happen. For instance, in the absence of meaningful consent of users giving away their biometric information to the government, a question looms around the enrolment process' legitimacy especially given the fact that the government doesn't fully notify card holders of how their data will be used, stored or protected. The mandatory uses of the ID also negate the consent principle.

³⁸ "AI Governance in Africa - Artificial Intelligence in Africa - ALT Advisory." <https://ai.altadvisory.africa/ai-regulation/>. Accessed 28 Jul. 2023.

Kenya

Data governance policy review

Kenya is undoubtedly one of the digital innovation leaders in Africa with its digital economy contributing 7.42% of its GDP and boasting a dynamic startup ecosystem and thriving e-commerce³⁹. This background sets the stage for what the country's data governance ecosystem encompasses which is increasingly tilting towards the foundational grounding of harnessing and growing a data and digital economy that is in harmony with Kenya's 2030 Vision⁴⁰ to become a competitive knowledge based economy.

Currently, the Ministry of Information, Communications and the Digital Economy in Kenya is the primary institution charged with the governance of data in its various forms. The Ministry has two key divisions which are the State department of Broadcasting and Telecommunications as well as the State department of ICT and the Digital economy with the latter division uniquely capturing the data economy as a distinct part of the data governance ecosystem which speaks to the government's direction with its data governance approach.

The Kenya Information and Communication Act of 1998⁴¹ is one of the most foremost pieces of legislation aimed at governing the data ecosystem as it has evolved over the years in the country. The Act was recently revised in 2012. Additionally, this Act was key in the formation of the Communications Commission of Kenya (now Communications Authority) which has been the primary regulator and licensor for telecommunications, broadcasting and electronic transactions in Kenya.

In 2019, National ICT Policy Guidelines⁴² were passed taking into account the economic, political and social ambitions of Kenya as well as towards the attainment of its SDG aspirations. The policy's overarching focus is to provide access to ICTs for all Kenyans, seamless connection to EAC and to be able to leverage Kenya's leading position in Fintech and capital markets.

Other specifics the policy captures are its aspirations to implement the nation's Big data strategy, enhance national cybersecurity, capture global technology trends such as ML and Blockchain, skilling and innovation and to seamlessly integrate all aspects of life into the digital economy. The innovation stands out so much for Kenya with the nation being a leader in this realm in sub saharan africa⁴³ so much so that its capital Nairobi has earned itself the moniker of the 'Silicon Savannah'. The springing up of innovation hubs has been made possible by robust innovation funding. These innovation initiatives are also supported by the country's National Innovation Agency⁴⁴.

The Constitution of Kenya guarantees the right to privacy as a fundamental right in Articles 31 (c & d) which consequently gave rise to the Data Protection Act of 2019.⁴⁵ The Act was enacted on the 11th of November 2019 and also established the Office of the Data Protection Commissioner (ODPC). The Act generally makes provision for the processing of personal data by providing for the rights of data subjects and the duties and obligations of data processors and controllers. The ODPC is granted clear mandates to sue and be sued in its overseeing and implementation of the DPA as well as the task to take measures to bring the provisions of this act to the knowledge of the public.

³⁹ (2023, June 6). Data Governance | CSEA AFRICA - CENTRE FOR THE STUDY OF Retrieved August 27, 2023, from <https://cseaafrica.org/category/data-governance/>

⁴⁰ (n.d.). Kenya Vision 2030. Retrieved August 23, 2023, from <https://vision2030.go.ke/>

⁴¹ (n.d.). the kenya information and communications act, 1998 - Ministry of ICT. Retrieved August 27, 2023, from <https://ict.go.ke/wp-content/uploads/2022/05/Draft-Kenya-Information-and-Communications-Interconnection-2022.pdf>

⁴² (n.d.). National Information, Communications and Technology (ICT) Policy. Retrieved August 27, 2023, from <https://www.ict.go.ke/wp-content/uploads/2019/12/NATIONAL-ICT-POLICY-2019.pdf>

⁴³ (n.d.). Data Governance Snapshot: The Kenya Report | CSEA AFRICA. Retrieved August 27, 2023, from <https://cseaafrica.org/data-governance-snapshot-the-kenya-report/>

⁴⁴ (n.d.). Kenya National Innovation Agency. Retrieved August 27, 2023, from <https://www.innovationagency.go.ke/>

⁴⁵ (n.d.). Data Protection Act. Retrieved August 27, 2023, from <https://www.odpc.go.ke/dpa-act/>

Broadly, the Act enlists principles of data protection including the right to privacy, lawfulness, fairness and transparency, purpose limitation, data minimization, accuracy, storage limitations, integrity and confidentiality and accountability. It also speaks to data subject's rights to object to data processing for example in instances of automated decision making including profiling with exceptions to this but also that the data processor or controller ought to inform a data subject when they are subject to automated decision making. The transfer of data outside Kenya is also restricted to where appropriate safeguards are provided for to this end.

On automated processing, the Act doesn't speak to 'regulatory checks' of the processing systems as for example is the case with the GDPR which leaves the question of AI accountability ambiguously to only to the realm of consent and the propositions made around it. As a result, issues of bias, surveillance and other such problems arising from automated systems are not catered to in the Act.

The ODPC is expected to issue data protection guidelines from time to time on various issues which it visibly has been doing with documents such as the Note on the access of personal data⁴⁶ during COVID-19 or the COVID-19 guidelines by the ICT Advisory committee established after the onset of the pandemic in cognizance of ICTs role in the pandemic. Other such notes include the Guidance on consent⁴⁷ note which elaborately breaks down how to approach consent issues under the DPA. The proposition that there is no such thing as evolving consent is one of the questionable ideals of this document though as feminist scholarship has shown the need for consent in any realm to be ever-changing based on both actors where otherwise a power imbalance exists therefore making consent illegitimate.

Away from the DPA, Kenya also launched a ten year Digital Master Plan of 2022 to 2032⁴⁸ whose four key pillars are digital infrastructure, digital services and data management, digital skills and driving digital innovation. Some more concrete plans under this master plan include developing a government cloud, installing 25,000 hotspots in key business centres, laying 100,000 kilometres of fibre optic cable as well as accelerating the Kwanza technopolis.

Additionally, the Computer Misuse and Cybercrimes Act⁴⁹ was passed in law in May 2018 to protect against, investigate and prosecute cybercrime plus engage in international co-operation in combating cybercrime. Lastly, In terms of infrastructure, the Kenya National Broadband Strategy⁵⁰ was launched in 2013 by the MoICT to provide requisite infrastructure and regulatory reforms to this end.

A number of programmes can be cited in the Kenyan government's efforts in data governance. For example, government efforts to improve service delivery to its citizens include G2C platforms such as the e-citizen platform which has a wide range of government services as well as the Huduma⁵¹ centre where one can pay their taxes, renew their licences and so forth. During the COVID-19 pandemic, the ICT cabinet secretary appointed a task force in January 2021 to identify gaps and inconsistencies in the DPA and come up with useful implementation frameworks. Together with the ODPC, they produced the Data Protection general regulations as well as the Complaints handling and enforcement procedures regulations which both came in effect after publication⁵².

⁴⁶ (n.d.). GUIDANCE NOTE ON PERSONAL DATA PROTECTION ON COVID Retrieved August 27, 2023, from <https://ipkenya.files.wordpress.com/2021/01/draft-data-request-review-framework-jan-2021.pdf>

⁴⁷ (n.d.). Kenya - Data Protection Overview | Guidance Note - DataGuidance. Retrieved August 27, 2023, from <https://www.dataguidance.com/notes/kenya-data-protection-overview>

⁴⁸ (n.d.). Kenya - Data Protection Overview | Guidance Note - DataGuidance. Retrieved August 27, 2023, from <https://www.dataguidance.com/notes/kenya-data-protection-overview>

⁴⁹ (2018, May 16). The Computer Misuse and Cybercrimes Act No. 5 of 2018 - Kenya Law. Retrieved August 27, 2023, from <http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/ComputerMisuseandCybercrimesActNo5of2018.pdf>

⁵⁰ (n.d.). National Broadband Strategy | Communications Authority of Kenya. Retrieved August 27, 2023, from <https://www.ca.go.ke/index.php/national-broadband-strategy>

⁵¹ (n.d.). Huduma Kenya. Retrieved August 27, 2023, from <https://www.hudumakenya.go.ke/>

⁵² (n.d.). Kenya - Data Protection Overview | Guidance Note - DataGuidance. Retrieved August 27, 2023, from <https://www.dataguidance.com/notes/kenya-data-protection-overview>

As regards Open data, the Kenya Open Data Initiative⁵³ was established in 2011 to make key government data freely available to the public through a single online portal. This was the first of its kind in sub saharan africa⁵⁴ with datasets ranging from health to education to infrastructure. This initiative aligns with the Constitution granting rights to access to information for Kenyan citizens. Nevertheless, the platform has been plagued by challenges such as limited sharing of data by government bodies especially due to corruption which creates the need to keep information secret from the general public hindering the platform's full activity. In 2015, the Global Open Data Index reported that over 27% of Kenya's government datasets were publicly available.

All in all, these efforts are very important in raising critical awareness on varying data governance issues within the public realm. A lot stands to be learnt from Kenya's data governance journey and its many successes but also a lot still needs to be done by the country to further realise the country's big vision for its digital and data ecosystem.

Gender aligned policies

The Republic of Kenya has put in place a number of instruments aimed at directly working towards gender parity in the country. The Ministry of Public Service, Gender and Affirmative Action pretty much oversees much of these efforts both in policy formulation and in programmatic implementation and evaluation. Under the Ministry is the State Department for Gender and Affirmative Action which is charged with promoting gender mainstreaming in national development processes as well as championing socio economic empowerment of women. The department draws its mandate from several articles of the Constitution which highlight equality, equity, inclusiveness and non discrimination⁵⁵.

In gender policy making, one of the functions of the Department is the undertaking of research on gender issues which in some way speaks to gender data production. This includes the generating of data and indicators that are disaggregated by sex, age and disability. A Gender management database is alluded to by the Department of Gender in the documentation of this research and the resultant M&E although this is not currently traceable. Gender responsive budgeting is mentioned too although no further information such as country gender budgets are provided.

Additionally, a number of guidelines have been passed by the Department to steer its mandate forward such as the National Policy for the Prevention and Response to GBV of 2014 as well as the National Policy on Gender and Development of 2019⁵⁶.

Furthermore, the Kenya National Bureau of statistics produces the 'Women and men in Kenya booklet' which provides facts and figures on the status of both sexes in Kenya making it a useful resource for gender programs in the country. National Census sex-disaggregated data is similar to data presented in this booklet. However, this data is typically not readily available like other datasets such as that on price indices which are updated monthly. The Kenya Strategy for Development of Statistics⁵⁷ is another instrument by the KNBS which is geared towards addressing gaps between what is currently available and what data is required to inform policy making, advocacy and accountability so as to provide monitoring of progress of national policy making goals.

All these guidelines and instruments are purported to be aim towards creating a just, fair and transformed society free from gender based discrimination in all spheres of life. However, one wonders whether statements such as one the National Policy on Gender and Development puts across on 'achieving gender equality and women's empowerment in national development so as to enhance participation of women, boys and girls' does not essentially water down the drive towards gender parity efforts. This statement contravenes commitments such as the country's Women's Bureau which "acknowledges women as a population category with special needs that require special attention".

⁵³ (n.d.). Kenya Open Data Initiative - - Data Portals. Retrieved August 27, 2023, from https://dataportals.org/portal/opendata_go_ke

⁵⁴ "The Kenya Open Data Initiative | Centre For Public Impact (CPI)." <https://www.centreforpublicimpact.org/case-study/open-data-kenya>. Accessed 27 Aug. 2023.

⁵⁵ "State Department for Gender and Affirmative Action." 17 May. 2023, <https://gender.go.ke/>. Accessed 27 Aug. 2023.

⁵⁶ "NATIONAL POLICY ON GENDER AND DEVELOPMENT."

<http://psyg.go.ke/wp-content/uploads/2019/12/NATIONAL-POLICY-ON-GENDER-AND-DEVELOPMENT.pdf>. Accessed 27 Aug. 2023.

⁵⁷ "Kenya strategy for the development of statistics | UN Women Data Hub." 10 May. 2021,

<https://data.unwomen.org/publications/kenya-strategy-development-statistics>. Accessed 27 Aug. 2023.

Kenya is also signatory to different global policy directives and frameworks as a commitment to gender equality. Similar to the other three countries, key thematic areas explored in relation to gender parity are poverty reduction, access to labour, access to education and healthcare, participation in national decision making, SGBV and access to ICTs among other factors.

According to UN Women, 66.7% of legal frameworks that promote, enforce and monitor gender equality under the SDG indicator are in place in Kenya with only 41.8% of these indicators being available as of December 2020⁵⁸.

Additionally, as of February 2021, only 26.1% of seats in parliament were held by women which speaks to the disparity in the decision making element in terms of women leaders influencing gender mainstreaming at the policymaking level.

Overall, understanding of gender data seems low from the way it is elucidated in the various policy instruments which don't have a specific focus on gender data. For instance, even if the KNBS has a Gender statistics sector⁵⁹, there remains a lack of infrastructure to coordinate, collect and use gender data. This is consequently a major challenge to gender mainstreaming efforts in Kenya.

Case study 1: Financial sector data governance

The Central Bank of Kenya (CBK) oversees financial transactions in Kenya. Through it, legislation including the Constitution of Kenya 2010, the Central Bank of Kenya Act 2015, the Banking Act 2015, the National Payment Systems Act 2011 and the Kenya Deposit Insurance Act of 2012 are some of the regulatory guidelines to the sector. Prudential reasons highlighting reduction of risk to depositors, systemic risk reduction and avoiding the misuse of banks for instance for criminal purposes are some of the functions of these pieces of legislation.

Following M-Pesa's overpowering success, Kenya now boasts one of the most vibrant digital financial sectors led by the fintech market. At the forefront of fintech regulation in Kenya is the Central Bank of Kenya with all fitechs required to obtain a licence to operate. The Capital Markets Authority also oversees fitechs which offer investment products or services ensuring compliance with securities laws, especially peer to peer lending platforms which have gained popularity in Kenya. The Communications Authority is responsible for regulating Mobile network operators (MNOs) offering mobile money services in conjunction with the National Payment System Department (NPSD) which regulates payment systems to make sure they are safe, efficient and transparent.

The National Payments Systems Regulation (2014)⁶⁰ is a crucial piece of regulation here which puts across rules of engagement between Payment service providers (PSPs) and their customers. Among these is the requirement for PSPs to be able to avail an accurate and fully accessible audit trail of all transactions as well as keep records of every transfer for at least seven years as well as a requirement for PSPs to submit to the Central bank monthly information regarding volumes and values of e-payments and incidents of fraud, theft, major security breaches, complaints reported and remedial measures.

⁵⁸ "Kenya - Country Fact Sheet | UN Women Data Hub." <https://data.unwomen.org/country/kenya>. Accessed 27 Aug. 2023.

⁵⁹ "Gender Sector Statistics Plan - Kenya National Bureau of Statistics." 16 Dec. 2020, <https://www.knbs.or.ke/gender-sector-statistics-plan/>. Accessed 27 Aug. 2023.

⁶⁰ (2014, August 1). NPSRegulations2014.pdf - Central Bank of Kenya. Retrieved November 4, 2023, from <https://www.centralbank.go.ke/images/docs/legislation/NPSRegulations2014.pdf>

The Kenyan government has also established a regulatory sandbox⁶¹ allowing fintech companies to test their products and services in a controlled environment before going into the market. This sandbox is overseen by the Central Bank and fintechs have the opportunity to collaborate and develop innovative solutions that meet regulatory requirements. The Financial Services Act of 2019 is another crucial component of fintech regulation in Kenya promoting innovation and competition in the sector as well as safeguarding consumer interests. The Data Protection Act is also crucial with obtaining a Data protection licence being obligatory for the obtaining of a DFS practitioner licence⁶².

Furthermore, in 2022, the Central Bank issued the Digital Credit Providers Regulations⁶³ which is one of the core pieces of legislation to Kenya's evolving financial sector that has greatly matured over the years to evolve from just e-money issuance to a growing digital credit market. In general, it stipulates the obligation for all digital credit businesses in Kenya to be licenced by the Central Bank and in a number of procedures presents the Data protection policies and procedures, consumer redress mechanisms, credit policies and a code of ethics for market conduct among other principles.

The licence once granted isn't transferrable and can be revoked if the DCP conducts business in a manner that's detrimental to the interests of the customers or members of the public. A DCP is also required to at least have a physical office and also put in place appropriate policies to ensure the confidentiality of customer information and transactions and also be bound not to share customer's information unless by their consent or by court order.

Uncertainty lingers around provisions such as the need for the DCP to have credit policies setting parameters for determining borrower credit limits especially in the instances where automated credit scoring systems are used. The need to register new digital credit products before they are introduced in the market also seems like an avenue to likely stifle innovation.

Generally however, the policy in great detail lays out parameters for information sharing and customer protections ranging from how credit should be collected back to the necessitation to establish a complaints redress mechanisms, to the requirement to use systems that are safe and secure to ensure information confidentiality as well as enacting conditionalities that shall guide access of customer's information among other considerations. Duties such as the need for the DCP to disclose their identity and educate its customers on prices, risk, terms and conditions for engagement and how to keep their personal information safe are all stipulated as well.

Case study 2: Health sector data governance

In 2013, Kenya shifted to a devolved system of governance with two tiers ie the national and county level. Health is now largely managed by County governments and the national government oversees health policy.

The Kenya HIMS started in 2011 primarily for HIV/AIDS data and has undergone three phases which are the digitising of HIV paper records and deploying a HIS to HIV Clinics, expanding the HIS to cover all HIV services and increasing access to data and lastly improving the demand and use of patient level data. The project is supported by the National Data Warehouse⁶⁴ which is a centralised repository from diverse e-medical records in Kenya to support analytics. The Kenya HMIS also developed an interoperability layer to facilitate data exchange between disparate health systems to promote clinical data sharing and automated reporting.

⁶¹ (n.d.). REGULATORY SANDBOX POLICY GUIDANCE NOTE. Retrieved November 4, 2023, from <https://dfsobservatory.com/sites/default/files/Regulatory%20Sandbox%20Policy%20Guidance%20Note%20-March%202019.pdf>

⁶² (2023, March 14). REGULATION OF FINTECH COMPANIES IN KENYA. Retrieved November 4, 2023, from <https://www.cradvocatesllp.com/-regulation-of-fintech-companies-in-kenya/>

⁶³ (n.d.). Digital Credit Providers Regulations 2021 - Central Bank of Kenya. Retrieved November 4, 2023, from https://www.central-bank.go.ke/uploads/banking_circulars/673866074_DRAFT%20DIGITAL%20CREDIT%20PROVIDERS%20REGULATIONS%202021%20-%20December%202021.pdf

⁶⁴ (n.d.). Kenya HMIS Documentation: Home. Retrieved November 4, 2023, from <https://kenyahmis.org/>

Significant pieces of legislation overseeing Kenya's HIMS include the Health Sector ICT Standards and Guidelines (2013), Kenya National eHealth Policy (2016 to 2030), SOPs in the Handling of health records and information management during COVID as well as the Data Protection Act which provides for penalties for non compliance, privacy by design as well as subjects' data rights among other things.

The overarching piece of legislation here though is the 2017 Health Act⁶⁵ which provides for a framework for the Kenya Health Sector regulation as well as the realisation of the Ministry mandate. The Act provides a number of guidelines that are meant to steer how health data is obtained, shared and stored in a safe and secure way that ensures the confidentiality of users is maintained. Provisions for filing for complaints are also stated within as well as the overall rights and duties of health service users, health professions and the regulators. The act also legislated the doctrine of informed consent in the health sector.

However, some issues have been pointed out regarding the Act that are likely to hamper its operability. Key here is the issue of upturn of regulatory balance that has hitherto existed because certain professional supervisory functions are to be exercised by new regulatory bodies although the current ones still exist. This is viewed to create an interpretative burden on not only courts but also more significantly the implementing authorities⁶⁶. For example, the Act empowered the Cabinet Secretary to establish the National Health Research Committee and also work with the already existing Kenya Medical Research Institute which itself is directed to attain its research mandate accord with the health interest of the population.

The government is also currently in the process of drafting an e-health bill largely called the Digital Health Bill⁶⁷ providing for a framework for the provision of digital health services and the establishment of a comprehensive integrated Data health information management system. Overall, the bill considers health data a strategic national asset and provides for internal data standards for managing the availability, usability, integrity and security of data within the health system.

The COVID-19 pandemic left many lessons regarding health surveillance through contact tracing and how citizens data was managed. A number of violations such as data rights violations were registered, a lack of oversight and transparency of data management systems was witnessed as well as a blatant disregard for data protection principles especially regarding confidentiality concerns. Such a case study sheds light on the robustness of the policies surrounding health data and its governance in Kenya.

Case study 3: Digital ID systems and algorithmic harm

In 2019, Kenya announced its central master population database called the National Integrated Identity Management System (NIIMS) which would be a "single source of truth" on personal identification in Kenya.⁶⁸ This replaced the Integrated Population Registration System (IPRS) under which the manual paper based National IDs were issued. Each registration under NIIMS would generate a unique ID number called Huduma Namba. The process of registering for the Huduma namba involved the collection of biometric data to generate the unique number required to access different critical government services. Huduma also consolidated all the different forms of ID and was slated for all Kenyans aged six and above. Foreigners who are residents were also mandated to register under Huduma.

⁶⁵ (n.d.). THE HEALTH ACT - Kenya Law. Retrieved November 4, 2023, from <http://kenyalaw.org:8181/exist/rest/db/kenyalaw/Kenya/Legislation/English/Acts%20and%20Regulations/H/Health%20Act%20-%20No.%2021%20of%202017/docs/HealthAct21of2017.pdf>

⁶⁶ (2018, March 1). A Critical Overview of the Health Act 2017 - SSRN Papers. Retrieved November 4, 2023, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3126423

⁶⁷ (2023, September 12). The Digital Health Bill, 2023 (national Assembly No. 57) Of 2023. Retrieved November 4, 2023, from <http://www.parliament.go.ke/sites/default/files/2023-09/THE%20DIGITAL%20HEALTH%20BILL%20%202023%20%28NATIONAL%20ASSEMBLY%20NO.%2057%29-1.pdf>

⁶⁸ "Huduma Namba – Huduma namba kwa Huduma bora." <https://www.hudumanamba.go.ke/>. Accessed 27 Aug. 2023.

However, following the challenging of the Huduma Namba in court after the announcement to commence registration of persons for it in March 2019, the High court later ruled validating the legitimacy of the Huduma namba challenging the petition against it on grounds of inadequate public participation, inadequate data protection measures and supposed violation of children's rights. As part of the ruling though, the court banned the collection of DNA and GPS coordinates⁶⁹.

In an unprecedented turn of events however, the new regime post the 2022 elections in Kenya announced their intention to roll out a new digital ID system that is not Huduma. This system will produce Unique Personal Identifiers (UPI) from biometric processing that will replace Huduma⁷⁰. Since over 38 million Kenyans had registered for Huduma under NIIMS, a lot of confusion remains around how this new development is going to happen since this turn of events appears to be politicking.

All in all, Kenya has made some of the most significant strides in rolling out a digital ID system in the previous years. The use of biometrics to identify citizens however brings to question the protection of such sensitive data by the government as well its transparency in how this information will be stored and used. Additionally, the mandatory nature of the registration may contravene the consent clauses in the country's Data Protection Act.

Finally on the issue of biometrics, Kenya has recently been dealing with the perilous and near dystopian situation of a tech corporation scanning irises of citizens in exchange for tokens. The company, WorldCoin, trading cryptocurrency tokens worth about \$54 in Kenya which is very appealing to much of the population who are simultaneously not fully aware of their digital rights has faced legal opposition to its biometrics collection activities with reasons such as unethical and illegal data collection⁷¹ having been cited. This case sets precedent for such developments by tech corporations and their increasingly data-hungry machine learning systems and how countries particularly from the global south will navigate the dilemma of unalienable rights such as privacy and monetary benefit for their populations.

⁶⁹ "COVID-19 Data Governance in Kenya - CIPESA." <https://cipesa.org/wp-content/files/COVID-19-Data-Governance-in-Kenya.pdf>. Accessed 27 Aug. 2023.

⁷⁰ "Kenya targets Feb. 2024 for new digital ID rollout, sign-up optional."

<https://www.biometricupdate.com/202308/kenya-targets-feb-2024-for-new-digital-id-rollout-sign-up-optional>. Accessed 27 Aug. 2023.

⁷¹ (2023, August 2). Kenya bans Worldcoin activities as citizens trade biometrics for tokens. Retrieved January 16, 2024, from <https://www.biometricupdate.com/202308/kenya-bans-worldcoin-activities-as-citizens-trade-biometrics-for-tokens>

Zambia

Data governance policy review

The public governance of data in Zambia is primarily centralised with specific institutions and instruments having been enacted over the years to this end. The overarching ideology guiding data governance in the country seems to be data for development particularly in line with the attainment of Zambia's 2030 Vision⁷² of becoming a knowledge based economy as well as attainment of the UN Sustainable Development Goals. More specifically, the country's aspirations envision an information environment that responds to national and global imperatives⁷³ such as poverty reduction, sustainable development and economic growth which require data.

Policywise, Zambia has and continues to predominantly approach data governance in practice through the regulation of electronic communications. Along with this approach, data privacy and protection remain the principal guiding concepts in the execution of data governance⁷⁴ in Zambia. Little else exists that aptly captures the evolving data ecosystem. For instance, issues to do with the data economy are barely addressed anywhere in its current data governance policies.

From the earlier years of the country's digitization journey, efforts such as the ICT Act of 2009⁷⁵ have been put in place to safeguard citizens rights in their engagement with ICTs. This Act also established ZICTA⁷⁶ which is the statutory body mandated with regulating the ICT sector as well as providing oversight on cybersecurity in Zambia. Other such similar pieces of legislation include the Electronic Government Act no 41 of 2021⁷⁷.

This Act is charged with the management and promotion of e-government services and processes and is as such one of the most fundamental instruments in Zambia's data governance today. This is because e-governance is one of the key parts of digitization in the country presently. The Act also put in place the E-Government Division under the Office of the President which is responsible for enacting this Act as well as ensuring public data is preserved in secure government designated areas, the establishment of key public infrastructure, promoting ICT education, designing information management systems as well as undertaking research on ICTs as part of its mandate.

Additionally, the country has the Zambia Statistics Act Of 2018⁷⁸ that established the National Statistics Systems run by the Zambia Statistics Agency which integrates, manages and disseminates national statistics⁷⁹. The Act also gives effect to the UN Fundamental Principles on Official Statistics as well as the Principles on the African Charter on Statistics. More to that is the Financial Services Act of 2020 which deals with the confidentiality of information obtained in provision of a service to customers as well as the Cybersecurity and Cybercrimes Act of 2021 which criminalises the interception of communications except by law⁸⁰.

⁷² (n.d.). The Vision 2030 | Embassy of the Republic of Zambia in Washington Retrieved August 22, 2023, from <https://www.zambiaembassy.org/document/the-vision-2030>

⁷³ (2023, July 4). State of Land Information Reports Unveil Insights on Botswana and Retrieved August 27, 2023, from <https://landportal.org/news/2023/07/state-land-information-reports-unveil-insights-botswana-and-zambia>

⁷⁴ (n.d.). Zambia - Data Protection Overview | Guidance Note - DataGuidance. Retrieved August 27, 2023, from <https://www.dataguidance.com/notes/zambia-data-protection-overview>

⁷⁵ (2009, August 28). Information and Communication Technologies Act, 2009. Retrieved August 27, 2023, from <https://www.parliament.gov.zm/sites/default/files/documents/acts/Information%20and%20Communication%20Technologies%20Act%2C%202009.pdf>

⁷⁶ (n.d.). Zicta. Retrieved August 27, 2023, from <https://www.zicta.zm/>

⁷⁷ (2021, May 20). Act No. 41 of 2021, The Electronic Government Act, 2021.pmd. Retrieved August 27, 2023, from https://www.parliament.gov.zm/sites/default/files/documents/acts/Act%20No.%2041%20OF%202021%2C%20THE%20ELECTRONIC%20GOVERNMENT%20ACT%2C%202021_0.pdf

⁷⁸ (n.d.). The Statistics Act 2018 - National Assembly of Zambia. Retrieved August 27, 2023, from <https://www.parliament.gov.zm/sites/default/files/documents/acts/The%20Statistics%20Act%202018.pdf>

⁷⁹ (n.d.). Zambia Statistics Agency – Quality Statistics for Development. Retrieved August 27, 2023, from <https://www.zamstats.gov.zm/>

⁸⁰ (n.d.). The Cyber Security and Cyber Crimes Act, 2021 | National Assembly Retrieved August 27, 2023, from <https://www.parliament.gov.zm/node/8832>

Furthermore, Zambia embarked on a strategy to improve access to data and digital services termed the Smart Zambia Agenda in 2015⁸¹ predicated on cloud computing which firmly placed both data and digital services at the core of the country's development strategy. Improvement of service delivery and the attainment of the country's socio-economic development are some of the key propositions the strategy advances.

More essential and guiding to data governance in Zambia is the country's Data Protection Act no 3 of 2021⁸². This Act seeks to provide an effective system for the use and protection of personal data including the use, collection, transmission and storage of personal data. Furthermore, the Act establishes the Office of the Data Protection Commissioner, provides for the duties of data controllers and data processors and overall for the rights of data subjects. ZICTA is the institution responsible for enacting this Act.

Largely, the Act speaks to principles of respect for privacy of data subjects, consent of data subjects, automated decision making such as profiling and data subject's rights under these circumstances, third party and cross border data transfers, the right to erasure, data portability and rectification. In instances where a data controller processes personal data using new technologies, an impact assessment to the rights of data subjects shall be conducted. The impact assessments add a layer of robustness to the Act strengthening its desired result to safeguard citizens freedoms within the data ecosystem.

Notably, the DPA insists on Zambia's data being stored in the Republic when it comes to cross border data transfers with an unmissable tilt towards data localization. Still, a number of exceptions are listed in the Act vis a vis all the principles therein.

The institution leading the enactment and implementation of these policies and frameworks is the Ministry of Technology and Science which oversees ZICTA and other such bodies. Overall, there appears to be an overlap in the mandates of the regulatory bodies and authorities. For instance, ZICTA and the Office of the Data Protection are both charged with enacting the DPA which could lead to discordance or clashing in the absence of clearly differing regulatory roles.

Finally, Zambia has been developing and improving its legal frameworks for the opening up of access to information to the general public taking from the Constitution which imparts the proactive provision of the public with timely, accessible and accurate information in Article 173 (1).

Some of these laws include the E-Government Act no 41 of 2021 which mandates the Smart Zambia Institute with the goal of providing efficient, relevant and transparent services built on affordable and available information. In 2016, Zambia was ranked as number 72 out of 194 countries under the Global Open Data Index on the basis of elements such as online accessibility of its data, timeliness and open licences for data.

On the whole, these are some of the most critical steps being taken by the Zambian government towards ensuring a more wholesome and vibrant data governance ecosystem even when it isn't exactly conceptualised like that internally. Despite the clear shortcomings in between ideation and implementation, there are still important elements of Zambia's policymaking that could serve as lessons to the rest of the continent in their data governance approaches and mechanisms.

⁸¹ (n.d.). Adoption and diffusion of cloud computing in the public sector. Retrieved August 27, 2023, from https://researchictafrica.net/wp/wp-content/uploads/2018/01/2017_Adoption-and-diffusion-of-Cloud_Zambia_RANITP.pdf

Gender aligned policies

For Zambia, much work still needs to be done to achieve gender equality. As a result, it has enacted a number of pieces of legislation to ensure effective mainstreaming of gender in all sectors ranging from policies, laws, plans and programs. Among these are the Zambian Constitution which highlights elements of non discrimination based on gender, the Gender Equity and Equality Act of 2015⁸³ as well as the National Gender Policy⁸⁴.

The National Gender Policy of 2014 was put in place to aid in the attainment of gender equality and redressing existing gender imbalances. The provision of equal opportunities for women to equitably benefit from national development is a major cornerstone of this policy.

The Gender equity and equality act of 2005 domesticizes international and regional gender instruments. The act also put in place the Gender equity and equality commissioner whose key functions are to put in place measures for strategic decisions to ensure gender equality as a cross cutting issue in society whilst also eliminating all forms of discrimination against women as well as empowering women to achieve gender equality.

The Ministry of Gender and Child Development which broadly oversees all country efforts to mainstream gender parity stipulates women's rights for example to property, education, non discrimination in employment, prohibition of violence against women as well as stipulations for funding of gender equality policies and programs. There is no explicit mention of gender data in its mandate on its own though.

Under the Ministry, a Gender status report has been published periodically together with the Zambia Statistics Agency showing progress of implementation of the various instruments for gender equality and consequently, the status of gender equality in Zambia. Challenges arising from institutional capacities, scanty funding, patriarchal norms and beliefs as well as Zambia's dual legal system which previously allowed for customary law continue to constrain efforts towards gender parity in Zambia.

The 2017 to 2019⁸⁵ report offers a critical analysis of gender equality in Zambia showing intersectional discrimination and gaps addressed around key thematic areas over the years. Accessibility to these reports remains a challenge with only few of them available as open data by the government. The report also expressly states that it'll continue to be a challenge to finance the Gender equality policies in place.

Programatically, the Zambian government has also tried to ensure institutional strengthening for effective implementation of gender equality programs for example with the establishment of fast tracking courts that deal with GBV. Another example here is the Social Cash Transfer program by the government launched in 2003 and operated by the Ministry of Community Development and Social Services. The program aims to reduce the intergenerational transfer of poverty in recipient households that receive a bi-monthly 400 kwacha. The beneficiaries of this program have been recorded to be primarily women bridging the gap in income access between men and women⁸⁶.

Similarly, the Central Statistical Office of Zambia has shown its commitment to gender data through the publication of guidelines on the analysis and presentation of gender data. National databases contain a relatively high number of gender indicators although Zambia still lacks data on key aspects of women's lives for instance 15 of the gender indicators lacking any sex disaggregated data. However, on the upside, they also contain 79 out of 104 gender indicators which is one of the highest in Africa⁸⁷.

⁸² (n.d.). The Data Protection Act, 2021 | National Assembly of Zambia. Retrieved August 27, 2023, from <https://www.parliament.gov.zm/node/8853>

⁸³ "The Gender Equity and Equality Bill, 2015.pdf." 24 Dec. 2015, <https://www.parliament.gov.zm/sites/default/files/documents/acts/The%20Gender%20Equity%20and%20Equality%20Bill%2C%202015.pdf>. Accessed 27 Aug. 2023.

⁸⁴ "Gender Acts & Policies." https://www.gender.gov.zm/?page_id=1629. Accessed 27 Aug. 2023.

⁸⁵ "Republic of Zambia Ministry of Gender GENDER STATUS REPORT" https://www.giz.de/en/downloads/giz2021_en_Zambia_Gender_Report_2017-2019.pdf. Accessed 27 Aug. 2023.

⁸⁶ "Social Cash Transfer Factsheet (2022) | UNICEF Zambia." 1 Mar. 2022, <https://www.unicef.org/zambia/reports/social-cash-transfer-factsheet-2022>. Accessed 27 Aug. 2023.

⁸⁷ "Bridging the Gap: - Data2X." <https://data2x.org/wp-content/uploads/2019/11/Zambia-Country-Profile-2019.10.23.pdf>. Accessed 27 Aug. 2023.

The Zambian Republic is also party to a number of regional and international protocols on gender equality such as the SADC Protocol on Gender and Development, the ACHPR, the Maputo Protocol on the Rights of women in Africa, CEDAW and the Beijing Declaration among others.

Data shows women continue to lag behind in all social indicators and mostly live in rural areas in Zambia. However, there is not much available gender data with most of the available datasets scoping issues such as poverty, GBV and HIV/AIDS. Still, research and information are listed as objectives in realising gender parity policies. The proposed M&E mechanisms are also ideally meant to help in the generation and dissemination of data on performance of gender equality targets.

Furthermore, data exchange among government agencies is mostly informal and on demand and although UN agencies have helped install data dissemination platforms in different ministries, they are not typically designed for interoperability. Dissemination also majorly happens through a site called the Zambia Information Highway⁸⁸. Lastly, a lot of the published data series are outdated as well.

Case study 1: Financial sector data governance

The overall coordination and strategic guidance for the financial sector in Zambia is done by the Ministry of Finance primarily through the National Financial Sector Development Policy (2017)⁸⁹ and the National Financial Inclusion Strategy (2017-2022) whose vision is to achieve universal access to and usage of a broad range of quality and affordable financial services.

The National Financial Sector Development Policy of 2017 primarily focuses on stipulating legal reforms, guidance pertaining to payment systems and other considerations such as market efficiency, financial education and access to financial markets. Its core guiding principles are inclusiveness, fairness, competitiveness, objectivity, interagency complementarity, ethics and integrity and transparency.

The National Financial Inclusion Strategy⁹⁰ on the other hand identifies gaps to consumer protection in the financial sector including but not limited to infrequent use of internal or external dispute resolution mechanisms, the lack of a clear institutional mandate for the financial sector, the lack of transparency with information across the sector, limited technical capability to oversee consumer protection as well as the limited use of data and research to inform design among other factors.

In addition to these broader strategic guides is the Banking and Financial services act of 2017⁹¹ which puts in place clear mechanisms for corporate governance and consumer protection. Importantly, in relation to other Acts, to the extent of inconsistency, it is the Act that prevails.

The core regulators of the financial sector are the Bank of Zambia which oversees all banks and other financial services institutions registered under the Banking and Financial Services Act and Chapter 387 of the Laws of Zambia, the Securities and Exchange Commission which oversees the Zambia capital markets primarily through the Securities Act No 41 of 2016 and the Pensions and Insurance Authority which regulates the conduct of the pensions and insurance industry through the Pension Scheme Regulatory Act No 28 of 1996.

As the financial sector in Zambia has expanded to include DFSs, other partner regulators now also oversee the sector including the Competition and Consumer Protection Commission (CCPC), ZICTA, the Patents and Companies Registration Agency (PACRA).

⁸⁸ "Zambia Information Highway: Home." <https://zambiainfohighway.opendataforafrica.org/>. Accessed 27 Aug. 2023.

⁸⁹ (n.d.). NATIONAL FINANCIAL SECTOR DEVELOPMENT POLICY 2017. Retrieved November 4, 2023, from <https://www.boz.zm/National-Financial-Sector-Development-Policy-2017.pdf>

⁹⁰ (n.d.). National Financial Inclusion Strategy 2017–2022 - Bank of Zambia. Retrieved November 4, 2023, from <https://www.boz.zm/National-Financial-Inclusion-Strategy-2017-2022.pdf>

⁹¹ (n.d.). Banking and Financial Services Act 2017. Retrieved November 4, 2023, from <https://www.boz.zm/TheBankingandFinanceActNo7of2017.pdf>

With the growth of mobile money usage in the country as well as the overall evolving of cash systems in Zambia to digital or e-oriented systems, the Bank of Zambia in conjunction with the Zambia Electronic Cleaning House and the Bankers Association of Ghana continue to work on the implementation of the National Financial Switch enabling interoperability of various payment systems including mobile payments. This is envisioned to contribute to the increasing level of financial inclusion by extending access to the underbanked population⁹².

Fintech is generally governed by different legislation depending on the financial service offered although generally it is governed by the same laws governing the traditional financial sector. Specifically, it is primarily governed by the Banking and financial services act no7 of 2017, the National Payment Systems Act no1 of 2007, the Insurance Act chapter 392 of the laws of Zambia, the Data Protection Act no3 of 2021 and the various regulations issued pursuant to the foregoing.

The Bank of Zambia has also put in place regulatory sandbox⁹³ guidelines providing a framework for market introduction and testing of innovative products and services without the need to strongly adhere to regulatory requirements. To be eligible for the sandbox, a product must be innovative and significantly different from what is available on the market currently and must also promote financial inclusion. Additionally, innovative capital market fintechs are tested in the SEC Sandbox⁹⁴.

Lastly, subject to the Financial Intelligence Act of 2010, a FSP shall maintain confidentiality of information obtained in the provision of a service and shall not divulge it except with the customer's consent or by court orders.

Case study 2: Health sector data governance

Zambia currently employs the District Health Information Management systems (DHMIS2) as its primary HIMS. The main sources of routine health information are facilities reliant on this DHMIS2 as well as other sources such as the Integrated Diseases Surveillance and Response (IDRS), the Drugs and Logistics Management Information Systems (DLIMS), the Financial and administration management information system as well as the Smart Care system. Non-routine sources of health information include the Zambia Demographic and Health Survey.

The legal frameworks guiding health data governance in Zambia include the Constitution and Laws of Zambia, the National Health Policy, ZICTA Act No 15 2009, National ICT Policy, National Health research Act, the Electronic Communications Act of 2006 and of course the country's Data Protection Act. Among these, it is the National Health Policy that makes a case for the cognisance of 'emerging issues' such as gender equality in the broader health sector considerations.

Away from these legal provisions are some broad strategic papers issued by the Zambian government over the past years that in many ways underline health information and how it ought to be governed. Critical among these are the e-Health strategy (2017-2021) as well as the National Health Strategic Plan (2022-2026).

The e-Health strategy⁹⁵ was issued by the Zambian government primarily in recognition of the potential for ICTs to transform health care for example by enabling information access in supporting health care operations and decision making. This strategy however notes that the sector is currently characterised by a fragmented landscape of numerous e-Health initiatives and varying data HISs. In a bid to change this, it states its core interventions to be the establishment of governance structures, the development of an e-Health centre as well as the development of the interoperability layer within the sector.

⁹² (n.d.). NATIONAL FINANCIAL SECTOR DEVELOPMENT POLICY 2017. Retrieved November 4, 2023, from <https://www.boz.zm/National-Financial-Sector-Development-Policy-2017.pdf>

⁹³ (n.d.). REGULATORY SANDBOX - Bank of Zambia. Retrieved November 4, 2023, from https://www.boz.zm/FAQ_BoZ_Regulatory_Sandbox.pdf

⁹⁴ (n.d.). REGULATORY SANDBOX GUIDELINES FOR CAPITAL MARKETS Retrieved November 4, 2023, from http://www.seczambia.org.zm/wp-content/uploads/2020/12/Draft-Guidelines-for-Regulatory-Sandbox-Framework-for-Capital-Markets_2020.pdf

⁹⁵ (n.d.). ZAMBIA_eHealth_Strategy_2017.pdf - Health Data Collaborative. Retrieved November 4, 2023, from https://www.healthdatacollaborative.org/fileadmin/uploads/hdc/Documents/Country_documents/Zambia/ZAMBIA_eHealth_Strategy_2017.pdf

Additionally, the strategy's key objectives are to improve data availability through the development of a national data warehouse, increasing the utilisation of e-Health data for research by fostering collaborations among partners as well as to promote research into innovative interventions for health service delivery.

The National Health Strategic plan (2022-2026)⁹⁶ on the other hand calls for the need to further strengthen harmonisation of health information systems in order to scale up access and utilisation of quality and timely health information.

Across the board, the country's health sector views public-private partnerships as a potential tool to quicken development of high tech infrastructure in the health sector. This is also visible in the predominance of donor funding for the country's HIMs which however poses a burden on the sector in terms of vulnerabilities in the event of withdrawal of this funding as well as concentrating a lot of efforts on donor specific projects that often times don't align with the nation's health care priorities.

Viewing the country's health information data governance through the lens of the COVID-19 pandemic, similar trends are observed as in various other African countries including issues to do timely data due to constraints in the reporting system. However, the private sector and development partners chimed in and tried to alleviate some of these issues through a number of interventions. An example here is the use of geospatial data by GRID3 during the pandemic⁹⁷ which data was used to generate and validate data on population settlement, migration, infrastructures and boundaries which data was used to support the government's covid response. Still, a gap in the robustness of the protection of citizen's rights such as privacy under the deployment of such emerging technologies remains to be fully understood.

Case study 3: Digital ID systems and algorithmic harm

For Zambia, the nation too predicates that proof of identity is fundamental to accessing a wide range of services. The government has been exploring efforts to improve its Civil Registration and Vital Statistics (CRVS) processes including birth registrations and certification which are also simultaneously required for one to register for a National Registration Card(NRC). The NRC is the key personal identifier in Zambia. Currently however, the country is overhauling its NRC model and infrastructure to focus on the development of an electronic NRC⁹⁸. Reports on the progress of this digitization process are generally scanty though.

The government's NDP of 2017 to 2021 includes ensuring the national implementation of a digitised NRC for all citizens aged 16 and over. Zambia's citizens have had national ID schemes since independence in 1964 which was the same year the National Registration Act was enacted founding the NRC as a the key document in proving Identity and accessing services. The NRC grants a unique NIN to each holder.

Towards digitization of citizen's identity, the proposed Integrated National Registration Information System under which the e-NRC will be developed allows for fingerprints to be collected to avoid duplication in issuance. This poses issues to do with data protection of sensitive data as well as surveillance and automated processing of citizens which ultimately will be addressed by how effective the country's DPA will prove to be.

⁹⁶ (n.d.). 2022-2026 Strategic Plan National Health. Retrieved November 4, 2023, from <https://www.moh.gov.zm/wp-content/uploads/2023/02/National-Health-Strategic-Plan-for-Zambia-2022-to-2026-revised-February-2023-lower-resolution.pdf>

⁹⁷ (n.d.). Putting geospatial data to use for communities in Zambia during Retrieved November 4, 2023, from <https://resources.hygienehub.info/en/articles/4535724-putting-geospatial-data-to-use-for-communities-in-zambia-during-covid-19>

⁹⁸ "Digital Identity Country Profile: Zambia - GSMA."

<https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/Digital-Identity-Country-Report-Zambia.pdf>. Accessed 27 Aug. 2023.

Government had announced that the first e-NRC cards would be ready by quarter one of 2018 which didn't come to pass. However, work to enact the INRIS started with biometric registration underway which once fully implemented will ensure production of the digital ID cards⁹⁹. More to that, the INRIS contains both National ID and birth and death certifications. It'll also be assigned at birth as opposed to the manual paper based system granted at 16 years of age.

With women already living at the margins of Zambian society as shown in the available socio-economic gender datasets but even more enduringly with the oppressive patriarchal attitudes which have held more women from accessing the NRC, little is left to wonder on how the digital NRC may carry on some of these state of affairs. For example, the perception that women don't need the NRC as much as men for example to open a bank account, travel or take part in wider public life has alone led to gaps in possession of the card and resultantly active participation in society for women¹⁰⁰.

Broadly, given that digital identification is still predominantly at either the ideation or piloting phase, the country has the opportunity to do a critical analysis of its manual paper based IDs and how they have or have not been inclusive to society as a whole with keen focus on Zambia's marginalised groups and how the existing disparities can be addressed.

For example, besides the NRC, other Zambian functional identification registers include the voter registry which is a vehicle for NRC registry for which the government has announced its plans to digitise before the country's next election. Additionally is the recent introduction of a Smart ID card to allow citizens access to the Smartcare system¹⁰¹. The government has also mandated the registration of SIM Cards by all their holders which has created an impasse for women because of unlikely ownership of an NRC or passport data.

Similarly, birth registration has been low because of constraints for a majority rural dwelling population to access the registration centres. To rectify this, a National Strategy Action Plan for reforming and improving CRVS 2014-2019 was enacted to guide better equipped digital registry for CRVS. Patriarchal norms such as a mother is meant to present their child's father's NRC for birth registry and certification and are meant to re-register after marriage because of Zambia's patrilineal society are some more of the challenges to birth registration.

⁹⁹ "Biometrics registration for Zambia's new national ID system underway." 14 Mar. 2022, <https://www.biometricupdate.com/202203/biometrics-registration-for-zambias-new-national-id-system-underway>. Accessed 27 Aug. 2023.

¹⁰⁰ "Digital Identity Country Profile: Zambia - GSMA." <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/Digital-Identity-Country-Report-Zambia.pdf>. Accessed 27 Aug. 2023.

¹⁰¹ "CIDRZ partners with the Ministry of Health to develop Differentiated" 3 Jun. 2022, <https://www.cidrz.org/2022/06/03/cidrz-partners-with-the-ministry-of-health-to-develop-differentiated-service-delivery-reports-using-the-national-electronic-medical-record-smartcare/>. Accessed 27 Aug. 2023.

Cote D'Ivoire

Data governance policy review

Cote d'Ivoire's data governance ecosystem is quite difficult to ascertain due to a dearth in information pertaining to it plus a lot of the information still being held manually on paper. However, although seemingly not very cohesive, the country has put in place policies, instruments and interventions aimed at the governance of data over the years.

Since the 1970s, Côte d'Ivoire has taken steps to ensure being up-to-date with developments in ICTs. The Ivorian government considers ICT a priority and has conceived a national strategic plan for the development of ICT infrastructure in Côte d'Ivoire which however has been largely unclear. This plan identified five strands of ICT development which are infrastructure development, access, training, digital content development and legal and regulatory aspects¹⁰².

In 2012, the government passed an updated version of the ICT policy¹⁰³ which more specifically addressed the regulation of telecommunications and ICT activities. This strategic document in depth explores issues such as licencing of telecommunications and ICTs, interconnection of networks, competition mechanisms, the institutional framework mentioning the state as the principal regulator, pricing of services as well as the idea of universal service which speaks to user's rights and inclusion of all in usage of ICTs.

The most recent however includes the National Digital Development Strategy which is part of the 2021-2025 National Strategic plan as well which the government hopes to be adopted by 2025 as well as plans to build a National Data Centre¹⁰⁴ which the government centers as routes to the digital transformation of the country and the centralization of public services respectively.

The institutions that deal with and govern data and data infrastructures are led by the Ministry of Communications, Digital Economy and the Post. Other bodies include the National Institute of Statistics (INS) which is dedicated to collecting national statistics on various elements including the National census such as the 2021 census.

In spite of all these efforts by the Ivorian government, the fact that the country has been facing political and post conflict challenges over the past decades in many ways has broadly hindered the very existence of a robust data ecosystem. For instance, the National Identification body ,ONI, has had challenges due to the in-country turmoil over the years having a complete civil registration base including the most basic information like births and deaths. It is estimated that 40% of the population is not in any national register¹⁰⁵. Additionally, migration and emigration statistics also remain unclear especially with instability looming on in her neighbouring countries¹⁰⁶.

However, despite all this, the country has been issuing different identification documents over the years many of which are still being used to date. For example, a biometric ID was first launched in 2010 however it is only recently that the government is getting more citizens to sign up for these. Attestation of ID documents were being popularly used as an interim ID document. The biometric ID was also made available at a fee of 5000 CFA.

¹⁰² (n.d.). cote d'ivoire : ict and education - WikiEducator. Retrieved July 27, 2023, from https://wikieducator.org/images/9/94/Ivory_Coast.pdf

¹⁰³ (2023, March 21). office of the president of the republic - ICT Policy Africa. Retrieved July 27, 2023, from https://ictpolicyafrica.org/api/documents/download?_id=5d9432a89b93fa001b803e9c

¹⁰⁴ (n.d.). Côte d'Ivoire to build a national data center for efficient public services. Retrieved July 27, 2023, from <https://www.wearotech.africa/en/fils-uk/news/public-management/cote-d-ivoire-to-build-a-national-data-center-for-efficient-public-services>

¹⁰⁵ (n.d.). Country Diagnostic: Côte d'Ivoire - ID4D. Retrieved July 27, 2023, from https://id4d.worldbank.org/sites/id4d/files/2018-04/Cote%20d%27Ivoire_ID4D_Diagnostic_Web040618.pdf

¹⁰⁶ (2023, March 7). Country Office Annual Report 2022 - Cote d'Ivoire - UNICEF. Retrieved July 27, 2023, from <https://www.unicef.org/media/135841/-file/Cote-d-Ivoire-2022-COAR.pdf>

More centrally, the ideological predisposition of data governance in Cote d'Ivoire generally centres data protection practices and approaches with the country having had personal data protection laws for almost ten years. The core governing text is Law 2013-450 on the Protection of personal data¹⁰⁷. It is also commonly referred to as 'the Law'. This law is a presidential act which stipulates how the collection, treatment, transmission, storage and any other use of personal data by natural persons, the state and public or private companies ought to happen.

The regulator charged with enforcing this law is the Autorite de regulation des Telecommunications de Cote d'Ivoire or the Telecoms/ICT Regulatory Authority of Cote d'Ivoire commonly referred to as ARTCI. Its primary roles are a public awareness obligation towards informing them of their rights plus the roles of the data controllers. Some of the rights here include the right to be informed, access to data among other rights.

Summarily, the key principles of the Law can be summed up as the legality principle which speaks to the processing of data being licit, the finality principle which is about responsible data collection in terms of its usage for a predetermined purpose, the proportionality principle which emphasises relevant and non excessive data use and collection as well as the legitimacy principle which highlights consent of data subjects in the collection and usage of their data¹⁰⁸.

More elaborately, the Law elaborates principles including informed and free consent of concerned persons, cross border data flows which stipulate operation of data in countries outside the ECOWAS as third parties, the processing of biometric data and other sensitive data such as genetic data, automated decision making, freedom of privacy and the right to digital oblivion among other principles.

Furthermore, the government of Cote d'Ivoire has attempted to launch public data openly through for instance joining the Open Government Partnership whose efforts have however been constrained and unrealized at the moment. A study for instance ascertained that the country's efforts and impact towards open government data were zero¹⁰⁹. The government continues to pledge commitment towards this end though.

Lastly, the country's data governance is also in many ways reliant on its membership in a number of regional bodies it is signatory to. Some of these bodies include the West African Monetary and Economic Union or UEMOA which is made up of seven countries using the CFA franc. It is also part of the Organization for the Harmonization of Business law in Africa as well as the African Intellectual Property Organisation. Under these bodies are codes relating to the use of data which Cote d'Ivoire is bound to.

On the whole, the Ivorian data governance ecosystem can be viewed as steadily developing over the recent years. Still, a lot needs to be done to address the setbacks to its advancement especially in relation to the continental and global data ecosystem which is always evolving particularly away from classical issues of data protection.

Gender aligned policies

In Côte d'Ivoire, the government has also adopted policies and action plans to promote gender equality. Some of these directly speak to addressing issues of gender data production and usage although on the whole, barely any details of the implementation of these programs are found as open data which renders their evaluation in terms of progress difficult.

¹⁰⁷ (2013, June 19). official part. Retrieved July 27, 2023, from https://www.artci.ci/images/stories/pdf-english/lois_english/loi_2013_450_english.pdf

¹⁰⁸ (n.d.). Ivory Coast - Data Protection Overview | Guidance Note. Retrieved July 27, 2023, from <https://www.dataguidance.com/notes/ivory-coast-data-protection-overview>

¹⁰⁹ (n.d.). Global Report - Open Data Barometer. Retrieved July 27, 2023, from <https://opendatabarometer.org/4thedition/report/>

From 1976, a Ministry for the Condition of Women (Ministère de la Condition de la femme) was created to promote gender equality. It has however since been plagued by budget constraints to operate effectively as well as limitations in institutional capacities to run it. For instance, from 1976 to 2012 only 1% of the National budget was allocated to gender policy making¹¹⁰.

Additionally, a Gender Policy was passed in 2009 changing the former Ministry's title to the Ministry for Family, Women and Children. This policy aims at ensuring just and equitable development for both men and women. It also highlights the need to achieve gender mainstreaming in decision making processes by focusing on women's participation in these processes which is a positive towards improving data practices that center gender. The numbers still remain so low¹¹¹ though for any real impact to be realised yet.

The Ministry's scope also poses issues too in regard to women's issues being bundled up as family rooted which is not only a patriarchal attitude but also deprioritises further policymaking that could centre women's needs independently.

Interventions over the years towards gender parity include a Strategy to fight GBV¹¹² established in 2012 which ensures that victims of GBV get access to medical care and justice guided by data collected and analysed on GBV countrywide. This was very critical due to the surge in GBV during the conflict and to date this remains the most active gendered initiative by the government. Another is the 'gender groups' under different ministries. These have however been largely non functional with no budget allocations but also due to limited coordination between them and the higher levels of policymaking.

Data sources such as National census data are also not as robust in capturing gender data as it is barely gender disaggregated. The long periods between the 1998 census to the one of 2013 meant that a lot of data being used by the government in their evidence based decision making was out-dated and therefore of a low quality. Statistics by the INS also are mostly trade related with their Open Data portal being non functional as well.

Low literacy levels among women worsened by years of conflict as well as their low socio-economic status even worsens their engagement with some of these interventions. Even worse is the country's deeply ingrained religious and traditional norms that place women even further at the margins of the Ivorian society. All of this has an impact on the government's commitment to engendering data practices that are gender sensitive.

Case study 1: Financial sector data governance

Cote d'Ivoire's monetary policy is conducted regionally by the BCEAO which is the West Africa Economic and Monetary Union (WAEMU)'s Central Bank. Shared by eight countries in the region, the bank provides frameworks and provisions guiding the member states' financial sector.¹¹³

Despite years of instability slowing Cote d'Ivoire's financial sector advancement, the country stands out as a regional leader in DFSs in the WAEMU region particularly in the use of mobile money. This growth has largely been aided by a high rate of mobile penetration that is estimated at about 113%¹¹⁴.

¹¹⁰ "Country Gender Profile: Côte d'Ivoire." <https://openjicareport.jica.go.jp/pdf/12121877.pdf>. Accessed 28 Jul. 2023

¹¹¹ "Côte d'Ivoire: Women underrepresented in parliament despite 2019" 16 Feb. 2021, <https://www.theafricareport.com/65880/cote-divoire-women-underrepresented-in-parliament-despite-2019-law/>. Accessed 28 Jul. 2023.

¹¹² "UN supports Ivorian national strategy for the fight against ... - ONUCI." 12 Sep. 2014, <https://onuci.unmissions.org/en/un-supports-ivorian-national-strategy-fight-against-gender-based-violence>. Accessed 28 Jul. 2023.

¹¹³ (n.d.). Cote d'Ivoire - Banking Systems - Data Privacy Framework. Retrieved November 4, 2023, from <https://www.privacyshield.gov/ps/article?id=Cote-d-Ivoire-Banking-Systems>

¹¹⁴ (n.d.). Regulatory Framework for Digital Financial Services in Côte d'Ivoire. Retrieved November 4, 2023, from <https://www.cgap.org/sites/default/files/publications/Regulatory-Framework-for-DFS-in-Cote-dIvoire.pdf>

In 2015, two notable directives to the sector were passed towards the broader regulation of DFSs in the region. These were the e-money issuance instruction and the AML-CFT directive.

The e-money instruction necessitates issuers such as banks and payment financial companies to obtain a deposit taking licence from the Central bank. It also overall highlights fair and transparent dealing, channels for consumer protection and how client data is to be treated. This is through mandatory disclosure of limits, risks, caution and procedures in case of fraud and loss as well as routes for addressing customer complaints¹¹⁵.

The AML-CFT directive provides for anti money laundering and combating the financing of terror safeguards for the financial sector. Know your customer (KYC) procedures are also strongly spelled out in the directive. For example, before any business is transacted, all covered entities must identify their clients whether they be individual or organisational. Additionally, this identity information is to be collected at various points and retained over the course of the business relationship.

Such guidelines from BCEAO are complemented locally by in-country regulation overseeing data governance in the financial sector and currently, the ARTCI leads on this. With the enacting and enforcing of laws that specifically provide for protections of customer data in DFSs such as the 2012 telecoms ordinance, the 2013 law on e-transactions and the 2013 personal data legislation, the ARTCI concerns itself with the handling of sensitive data under DFSs.

It is also important to note that consumer exposure to DFSs risks such as fraud and a lack of transparency shows gender disparity in effect. For instance, while women reported having received fewer scams (25% women versus 30%men), they are slightly more likely to have lost money as a result of the scam (16% women versus 12%men) underscoring their greater vulnerability¹¹⁶.

Case study 2: Health sector data governance

The responsibility of provision of healthcare as well its regulation sits with the Ministry of Health, Public Hygiene and Universal Healthcare (Ministere de la Sante, de l'Hygiène publique et de la Couverture Maladie Universelle). Under the Ministry, the health information system is structured under three tiers i.e. the tertiary or central level, the secondary or regional level and the primary or district level all across which the health information is managed.

Initially, the country's Ministry of Health had developed a standardised paper based collection tool to improve the existing SIGVISION data platform which supported the country's development of its first longitudinal HIV/AIDS patient data management tool SIGVIH. Both these tools were however soon overwhelmed with data which led to the Ministry in 2013 deploying a new open source software called DHIS2 that features interoperable applications¹¹⁷.

DHIS2 therefore currently functions as the country's National health data management system deployed and used nationwide in conjunction with the Electronic Logistics management and supply chain system (eLMIS). This transition critically aided the coming up of governance documents and setting of standards and policies for these information management systems.

It is important to note that a lot of these efforts happened under the auspices of a program called MEASURE Evaluation¹¹⁸ funded by USAID in the country from 2004 to 2019 aimed at supporting health information systems' strengthening and to improve the available data and use of high quality health data. The program also coordinated stakeholders across various subsystems to harmonise national health indicators and ensure regular use of data to inform and support program policies and actions. Through this, the sharing of data was encouraged across entities.

¹¹⁵ (2019, July 2). Regulations Drive Success of Digital Finance in Côte d'Ivoire - CGAP. Retrieved November 4, 2023, from <https://www.cgap.org/blog/regulations-drive-success-of-digital-finance-in-cote-divoire>

¹¹⁶ (2022, September 29). Growth of Digital Finance in Côte d'Ivoire is Not Without Risks - CGAP. Retrieved November 4, 2023, from <https://www.cgap.org/blog/growth-of-digital-finance-in-cote-divoire-is-not-without-risks>

¹¹⁷ (n.d.). Integrating Data Systems in Côte d'Ivoire Will Improve Health Retrieved November 4, 2023, from https://www.measureevaluation.org/resources/publications/fs-19-380/at_download/document

¹¹⁸ (n.d.). Côte d'Ivoire — MEASURE Evaluation. Retrieved November 4, 2023, from <https://www.measureevaluation.org/countries/cote-d-ivoire.html>

Case study 3: Digital ID systems and algorithmic harm

Côte d'Ivoire restarted its push for the biometric ID enrolment by citizens in 2020 with the intention to phase out all the older IDs. The process of enrolling for the ID has been made easy for citizens for example through establishing multiple registration points including at police stations, consulates in France, Belgium and Senegal as well as mobile bus registration centres in villages¹¹⁹. This definitely makes the process more inclusive to the majority of the citizenry. The fact that the ID costs about \$8.6 makes it costly to the low income citizens which could potentially alienate them from key services impacting their livelihoods.

Away from the national ID card though, the country has enacted other compulsory initiatives that use biometrics such as the Universal health insurance register called CMU¹²⁰ aimed at improving access to affordable health care for all. A smart card is provided to whoever gets enrolled onto this system. Whilst this initiative can indeed bring better healthcare closer to all citizens, issues of privacy of sensitive data shared by citizens are plausible. How this data is shared and with whom, how it is stored and protected are all issues that need to be addressed by the government.

Issues of meaningful consent also remain when it comes both to this smart card as well as the national ID card for Cote d'Ivoire.

¹¹⁹ "Côte d'Ivoire final push for biometric registration as third national ID" 11 Mar. 2022, <https://www.biometricupdate.com/202203/cote-divoire-final-push-for-biometric-registration-as-third-national-id-extension-deadline-approaches>. Accessed 28 Jul. 2023.

¹²⁰ "Digital ID in Africa this week: biometric registration of HIV patients in" 25 Nov. 2019, <https://www.biometricupdate.com/201911/digital-id-in-africa-this-week-biometric-registration-of-hiv-patients-in-kenya-new-public-healthcare-scheme-in-cote-divoire>. Accessed 28 Jul. 2023.

Recommendations

From this study's analysis, these are some recommendations proposed towards governments to realise more robust data governance ecosystems that prioritise gender data and can also harness the full potential of the ever changing data and digital realm.

Firstly, governments need to conduct more research in their countries to track the evolution and development of their data and digital economies regularly. This research would help steer more evidence based policy and decision making in relation to data governance. Comprehensive datasets that are gender sensitive would help nations concentrate their efforts where it's most needed.

In relation to the above point, there is also a need for countries' data governance policies to capture evolving data ecosystems in their mandate. Given the fact that this is ever changing, it becomes important for governments to proactively commit to updating their policies and action plans to reflect the changes. This can also help guide governments in ascertaining how they can best benefit from this ever ever evolving data ecosystem. For instance, almost all the Data Protection Acts have not caught onto issues of datafication, platform economics, cross border data flows and regulation of Big Tech as well as the regulation of emerging technologies such as Artificial Intelligence.

Furthermore, governments could come up with a multidisciplinary independent working group charged with leading efforts to capture the changing data ecosystem and how to best tap into it. This would directly address the issue of policymakers lacking capacities to legislate the evolving data economies but also in addressing the limitations in capacities of persons in the collection and analysis of gendered data. In many ways, such a group would also be representative of citizen's hopes, fears and interests when it comes to gender data and the evolving data ecosystem.

There is also a need for governments to integrate their data governance policies and action plans as incoherence only leads to stagnation of their implementation. Several studies have echoed this for a while and continued disjointed policymaking could prove to be even more fruitless over time.

Funding as a priority in the national budgets is key towards engendering gender data collection and usage. This route would be a more concrete action plan in realising the prioritisation of gender data. In the absence of this, not much will continue to happen.

There is also a need to move away from patriarchal views of gender data such as gender data is 'niche' or 'not general'. Additionally, gender data should not only be looked at through the lens of what is typically considered 'women's issues' such as GBV. Instead, a more comprehensive approach towards gender data should be taken right from the methodologies leading to its collection to its usage.

Finally, governments ought to commit more effort towards open data since citizens have a right to public information but even more importantly because the data has the potential to improve citizen's livelihoods. With the amount of data governments have, this could be combined with that of private sector players such as CSOs or private corporations to enable Big Data analytics in various sectors that could ultimately address many existing gaps and challenges. Such a case example is being championed for many data ecosystems globally towards more beneficial data governance.