



Strathmore University

*Centre for Intellectual Property and
Information Technology Law*

The Advancing Data Justice Research and Practice Project

Objective of the Project

The aims of this project are to determine (i) the current data landscape in East and North Africa, (ii) the current understanding of data justice in the regions of interest, (iii) the suitability of the six guiding principles of data justice as detailed in the project materials provided by the Alan Turing Institute, and (iv) possible revisions to the guidelines to better align them with the on-the-ground realities in the regions of interest.

The objectives of the project were attained through comprehensive desktop research in the area of study, a series of interviews with data practitioners in the regions of interest, and a validation workshop.

Introduction

The statement “data is the new oil,” is often uttered, and just as often debated, these days. Since it was first put into the public sphere in 2006 by British mathematician and Tesco marketing mastermind Clive Humby, an incalculable amount of data has been, and continues to be, collected, processed and produced by platforms such as Google, Facebook, Amazon, Twitter, governments and non-governmental organizations, private businesses, and humanitarian organizations. This data is collected from wearable devices (fitbits or Apple watches, for example), mobile applications, digital ID programs, search engines, surveillance systems, online business transactions, and a myriad of other technological activities. Digital transactions, and the resultant data, has transformed global economic, social, and political structures. Data aides in medical and scientific research; creation and transformation of public policy; delivery of public services, and may be used to provide transparency and accountability to traditionally opaque practices. The positive impact of data is well documented.¹ However, in the past few decades, concerns of data exacerbating existing socio-economic inequalities have been raised by activists. Bias, racial and gendered, has made its way into emerging technologies such as AI.² The increasingly ubiquitous

¹ United Nations Department of Economics and Social Affairs, “World Economic and Social Survey 2018: Frontier Technologies for Sustainable Development.”, 2018, https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESS2018_full_web.pdf

² Dastin, Jeffrey; “Amazon scraps secret AI recruiting tool that showed bias against women.”, Reuters, October 11, 2018, <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G>; Buolamwini, Joy;

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612

Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu



nature of surveillance systems, ostensibly to combat crime, is also raising ethical concerns, primarily: the possible impact of biases present in this technology and the possibility of authoritarian governments exploiting AI surveillance in the name of public safety. Additionally, the role of colonial legacies on current data practices is an area that is rarely investigated or discussed even though these legacies significantly impact the data sphere in post colonial nations.³ It is in this environment that the concept of data justice is discussed.

What is data justice? Some see justice as a legal or philosophical theory by which fairness is administered. While others define it as fairness of an action or circumstance, and others see it as an adherence to the law since formulation, ratification and enactment of laws are guided by principles of fairness or justice. Fairness, therefore, is often equated to legality. It is, however, important to acknowledge that not all who are governed by laws believe them to be fair or just. In this context then, data justice may be defined as the exploration of the exploitative nature of data and digital technologies and the formulation of viable solutions. Arne Hintz and Lina Dencik from Data Justice Lab at Cardiff University describe data justice as the study and practice of datafication from the perspective of social justice.⁴ Social justice highlights aspects of equality and fairness. Data justice can be characterized by the presence of data injustices which then prompts the requirements for data justice.⁵ The Alan Turing Institute breaks down data justice into six pillars: access, identity, knowledge, power, equity, and participation, to be used as guidelines in the creation of a just and equitable data ecosystem.

In the subsequent sections, this report discusses the concept of data justice contextualized to Kenya; assess the validity, viability and possible efficacy of the 'six pillars', and provides recommendations on how to tailor the concept of data justice to better serve the Kenyan populace. Section A, 'Internal Assessment', outlines the researchers' understanding of data justice underpinned by literature review, work and research experience on data centric matters, and an understanding of the on-the-ground realities in Kenya. Section B, 'Interview Analysis', is a comprehensive analysis of the responses from a select group of AI developers, policymakers,

Gebru, Timnit, "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification.", *Proceedings of Machine Learning Research*, 81, (2018), 1 - 15; Schwarz, Oscar, "Microsoft's Racist Chatbot Revealed the Dangers of Online Conversation", November 25, 2019, <https://spectrum.ieee.org/in-2016-microsofts-racist-chatbot-revealed-the-dangers-of-online-conversation#toggle-gdpr> .

³ Couldry, Nick, and Mejias, Ulises A.; "Data colonialism: Rethinking big data's relation to the contemporary subject." *Television & New Media*, (2019), 20 (4), pp 336-349.

⁴ Dencik, Lina; Hintz, Arne; Redden, Joanna; Treré, Emiliano; "Exploring Data Justice: Conceptions, Applications and Directions", *Information, Communication & Society*, (2019), 22 (7), pp 873-881, DOI: 10.1080/1369118X.2019.1606268

⁵ https://www.researchgate.net/publication/322931374_Data_Justice_The_Kenyan_Context

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612

Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu



and civil society activists interviewed for the study. Section C, 'Workshop Analysis', details and analyzes the information relayed to the team in a validation workshop held earlier this year. Finally, the conclusion addresses ways in which the concepts of data justice and the guidelines provided by the Alan Turing Institute may be adjusted to best serve the Kenyan community.

A. INTERNAL ASSESSMENT

Understanding the Data Landscape in East Africa

The East African region is an emerging hub for digital innovations and is at the forefront of research and policy development on data. Kenya, for example, is one of the global leaders in the use of digital finance platforms such as M-Pesa, PesaLink, PesaPal and Mula; these digital fintech solutions offer novel ways of conducting cross-border banking and micro financing.⁶ It is also home to a thriving technology scene that has led it to be dubbed the 'Silicon Savannah' - this scene is home to some of the most cutting edge start-ups on the African continent.⁷ In response to the COVID-19 pandemic, East African countries increased their reliance on digital platforms to facilitate the provision of services to its citizenry. The Kenyan courts, for instance, embarked on a bold digital transformation.⁸ The judiciary deployed various digital platforms to facilitate access to online judicial services. These platforms allowed lawyers to file cases electronically; judges were empowered with equipment, facilities and training to deliver justice digitally, and advocates and litigants were able to track their cases online. Nairobi courts went paperless on July 1, 2020 - services such as e-filing, e-service, e-payment are now offered online. One by-product of such digitization schemes is that a large amount of data is collected, processed and produced.

There is very little understanding in East and North Africa by the public of their data rights. The consensus for the general populace seems to be that most actions pertaining to data are benign or have no impact on their day to day activities - indicating a clear lack of knowledge or appreciation of the current datafication of society and its implications. There is, however, growing interest in matters relating to data among civil society and advocacy groups. Governments too are taking more stringent measures to ensure digital activities and data processes do not violate citizens' rights. 52% of African nations have enacted some version of data protection legislation.⁹

⁶ Ministry of Information Communications and Technology. "National Information, Communications and Technology (ICT) Policy 2019" November 2019, Accessed March 11, 2022, <https://www.ict.go.ke/wp-content/uploads/2019/12/NATIONAL-ICT-POLICY-2019.pdf>

⁷ Ibid

⁸ Mutambo, Aggrey. "COVID - 19 Speeds Up Digital Judiciary.", Reporting on Good Governance Kenya (RoGGKenya), August 24, 2020, Accessed: March 9, 2022, <https://roggkenya.org/2020/08/24/covid-19-speeds-up-digital-judiciary/>

⁹ Open Government Partnership, "Data Protection in Africa: A Look at OGP Member Progress.", Open Government Partnership, August 11, 2021, Accessed: March 8, 2022, <https://www.opengovpartnership.org/documents/data-protection-in-africa-a-look-at-ogp-member->

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612

Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu



The efficacy of these legislative measures and policies is still largely unclear, although, in recent years, cases testing their robustness have arisen. In Tunisia, for example, concerns about citizen tracking schemes, generated by a comment from the nation's Prime Minister, bubbled to the top of public discourse in 2020¹⁰ - necessitating action by the Ministry of Communication and Digital Economy to allay citizens' fears. The ministry clarified that the tracking relied only on general data from mobile phones between regions and respected legal requirements for personal data protection. Furthermore, the Ministry had consulted the National Authority for the Protection of Personal Data (NAPPD) when implementing the program. The NAPPD also released a statement confirming that it had advised the government regarding the deployment of a number of tracking applications. Both bodies assured the public that as long as individuals' anonymity is ensured, the program does not violate the legal provisions related to the protection of personal data."¹¹ In the same vein, in a landmark ruling in 2021, the Kenyan High Court ruled that the government's digital enabled biometric scheme, the Huduma Numba, was unconstitutional, halting its implementation.¹² The case against the government was initiated by two advocacy groups, the Nubian Rights Forum and the Kenya Human Rights Commission, who raised numerous issues of concern, including a lack of legislative frameworks to govern the digital ID system, particularly with regard to data protection, and a lack of assessment by the government on the impact of the scheme as mandated by Kenya's Data Protection Act (DPA).¹³ The judgment required the creation of adequate regulatory frameworks for the National Integrated Identity Management System (NIIMS) which have since been enacted. It also required the government to conduct an assessment of the Huduma Numba scheme before further rollout, and to create safeguards to protect Kenyans' data, for cards that had already been issued.¹⁴ Kenya's Data Protection Act (DPA) was enacted while the Huduma Numba case was ongoing. The DPA is the most significant legislative instrument enacted to govern data-centric processes in the country. The Data

[progress/#:~:text=Of%20OGP's%20fourteen%20African%20members,%2C%20South%20Africa%2C%20and%20Tunisia.](#)

¹⁰ Freedom in the World: Tunisia 2020 Report, (Freedom House, 2020)

<https://freedomhouse.org/country/tunisia/freedom-world/2020>

¹¹ Tunisia Rights and Inclusion 2020 Report, (Paradigm Initiative, 2020) <https://paradigmhq.org/wp-content/uploads/2021/05/Tunisia-Digital-Rights-Inclusion-2020-Report.pdf>

¹² Privacy International, "Kenyan Court Ruling on Huduma Namba Identity System: the Good, the Bad and the Lessons.", February 24, 2020, Accessed: March 8, 2022, <https://privacyinternational.org/long-read/3373/kenyan-court-ruling-huduma-namba-identity-system-good-bad-and-lessons>

¹³ Ibid

¹⁴ Ibid; Kiplagat, Sam; "High Court Declares Huduma Numba Illegal.", Business Daily, October 24, 2021, Accessed: March 8, 2022, <https://www.businessdailyafrica.com/bd/news/high-court-declares-huduma-namba-illegal--3582926>

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612

Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu



Protection (Civil Registration) Regulations 2020,¹⁵ enacted as a result of the Huduma Namba case judgment, provides the required regulatory framework to proceed with the scheme.

Other instances of data injustice observed in the Eastern and Northern Africa regions include, but are not limited to:

- using digital tools to hack, track and harass potential political opponents;
- using mobile phone call details without consent under the guise of solving local issues;
- and, launching AI technologies into the marketplace that lack the linguistic and cultural capacity to serve the local populace.

It is in this context that the concepts of data justice are introduced and discussed.

Understanding Data Justice in East and North Africa

Africa remains primarily a consumer of technologies, Artificial Intelligence (AI) enabled platforms included. Most AI technologies developed on the continent utilize open - source algorithms and 'non-local' training datasets. In a sense, neither the AI tools developed or adopted on the continent are fully contextualized to local demographic, social, economic, or geopolitical environments. For example, the default for most voice recognition technology imported into the continent is English. Most people in Africa are not native English speakers. Additionally, AI platforms are often not able to parse most African accents even when the speaker is communicating in English. East Africa and North Africa are diverse regions and each country in these regions has its own cultural and linguistic nuances that need to be acknowledged when developing or adopting AI tools. There is a risk, then, that these technologies do not fully account for national priorities and needs. Furthermore, undetected racial, ethnic or gender biases present in AI platforms will impact their output. Biases harmful to communities prevalent in north and east African countries may have a ruinous effect on individuals, communities, and even society at large. In this context, data justice must mean an inclusion of a diversity of voices in the development and adoption of AI technology. Without the adoption of a multistakeholder, multinational, and multi-regional approach to global AI discourse, AI processes and tools will continue to empower only a portion of the population (usually those already in power or otherwise advantaged) and disenfranchise the rest. More African voices need to be included in the dialogues around AI to ensure that the African perspective is taken into account. There is a need to listen to end users, especially those from marginalized communities because they often suffer the most harm from new technologies with little to no access to justice. Adopting a ground - up, inclusive, human-centered approach in the creation of development and governance frameworks and processes for AI will ensure that these technologies account for the needs and priorities of all.

¹⁵ The Data Protections (Civil Registration) Regulations 2020, <https://ict.go.ke/wp-content/uploads/2020/02/THE-DATA-PROTECTION-CIVIL-REGISTRATION-REGULATIONS-2020.pdf>

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612

Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu



National laws and regulations in individual East and Northern African countries impact their citizens' ability to access data justice. In Algeria, for example, the existing procedural requirements for the biometric National ID registration for women is exclusionary. Married women's application requirements for national IDs differ from their male counterparts. Married women must include their husband's information when applying for an ID; a step not required of married men.¹⁶ Married women's visibility and participation in processes is impacted because their registration data is not deemed complete without their husband's information. On the other hand, in Morocco, a harmonized policy framework for open data and access to information has been recommended to support proactive access to and disclosure of public information.¹⁷ Kenyan communities use a wide variety of digital platforms, some not domiciled in Kenya. Data collected from Kenya citizens on these international platforms is transferred to servers outside of Kenya and processed there. This can mean that users do not have control over their data or the ability to obtain legal justice for data violations. The DPA provides some protections and recourse to its citizens but, as is the case with many data protection legislation, it is unclear how enforcement would occur for international cases.

Kenya's police surveillance system went live in 2015. Safaricom, the nation's largest mobile provider (and data collector and processor), was awarded a government tender in 2014 to install Closed Circuit cameras in the city of Nairobi and Mombasa as well as help in setting up a National Surveillance, Communication and Control System. The government claims that the overarching goal of the project is to assist police and other law enforcement agencies with combatting terrorism and other criminal activity. The surveillance systems provide real time footage to the National Police Operation center. There is a concerning level of opacity shrouding the current surveillance scheme. The amount and type of surveillance data collected is unknown. There is concern of targeted surveillance, i.e., focused surveillance on certain groups of people - individuals from certain communities or religions, political opponents, etc. - and exploitation of the surveillance data collected. The efficacy of this project is also a point of contention. Several high level executions, the killing of businessman and blogger Jacob Juma and Member of Parliament for Kabete George Muchai, for example, captured on surveillance cameras are yet to be solved. The spread of this technology in the region without adequate checks and balances may lead to

¹⁶ Identification for Development World Bank, "Achieving Universal Access to ID: Gender Bases Legal Barriers Against Women and Good Practice Reforms." International Bank for Reconstruction and Development/The World Bank, 2019, <https://documents1.worldbank.org/curated/en/606011569301719515/pdf/Achieving-Universal-Access-to-ID-Gender-based-Legal-Barriers-Against-Women-and-Good-Practice-Reforms.pdf>

¹⁷ World Bank. "Data Governance Practices in Mena: Case Study Opportunities and Challenges in Morocco.", November 2020, <https://openknowledge.worldbank.org/bitstream/handle/10986/35312/Data-Governance-Practices-in-MENA-Case-Study-Opportunities-and-Challenges-in-Morocco.pdf?sequence=1&isAllowed=y>



oppression of certain groups.¹⁸ An independent investigation determined that Ugandan intelligence officers had enlisted the help of Huawei technicians to intercept encrypted communication and cell phone data to track political opponents, for example.¹⁹ Concerns surrounding surveillance systems in Kenya are reflected in countries across the East African region. It is critical, then, that going forward these surveillance schemes are governed by social and data justice tenets.

The growing digitization and datafication of every sphere of life in east and north African regions coupled with a limited understanding of the importance of data issues by the general public could be a recipe for disaster. There is a need for strategies to educate the public on issues of data and data justice; policy frameworks and governance structures that define data justice principles and ensure access to data justice, and creation of venues for redress in the case of data injustice. This can only be accomplished through the cooperation of civil society organizations, policy makers, developers, and the general public.

B. INTERVIEW ANALYSIS

CIPIT held interviews with 8 stakeholders who worked in the fields of AI development, policymaking, or worked with marginalized communities on data centric matters. Of the 8 stakeholders interviewed, 4 worked in civil society organizations that worked with marginalized communities, 3 worked in the technological sector, and 1 worked as a policymaker. Unfortunately, the organization was unable to obtain ethical approval from its host university, Strathmore University, within a suitable time frame; consequently, the interviews were conducted by Dr. Thompson Chengeta, a research and operations consultant from the Alan Turing Institute. Dr. Chengeta recorded the interviews and submitted them to the CIPIT research team for analysis.

Interviews with AI Developers

Amongst the interviewed subjects, there were varying opinions on the existence, causality, and impact of power asymmetries between AI developers, service providers, and end users. The interviewees either believed that such power imbalances do not exist or are mostly a result of poor data practices. Data processes are initiated from corporate or government entities rather than communities. Corporations control the data collection process and can, as a result, create, structure, and control narratives from this data. Vulnerable groups - women, displaced persons,

¹⁸ Jili, Buleini; "The Spread of Surveillance Technology in Africa Stirs Security Concerns.", African Center for Strategic Studies, December 11, 2020, <https://africacenter.org/spotlight/surveillance-technology-in-africa-security-concerns/>

¹⁹ Parkinson, Joe; Bariyo, Nicholas; Chin, Josh; "Huawei Technicians Helped African Governments Spy on Political Opponents." Wall Street Journal, August 15, 2019, <https://www.wsj.com/articles/huawei-technicians-helped-african-governments-spy-on-political-opponents-11565793017>



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religious minorities, queer people, etc. - are not consulted when decisions around data are made. Their needs and priorities are not taken into account when developing AI technologies, data governance structures, or data legislation further exacerbating existing power imbalances amongst stakeholders. The interviewees were doubtful that stronger oversight would eliminate these power imbalances rather developers (and funding organizations) must make a concerted effort to design inclusive processes and products. Digital and data illiteracy was also cited as a contributing factor. End users may not have the capacity to provide informed consent when utilizing AI platforms or other digital tools.

The consensus amongst the interviewed subjects was that the technologies they develop assist in breaking down existing power structures either by increasing AI access to traditionally underserved communities, democratizing big data enabled decision making, or increasing access to services that might otherwise be out of reach to individuals. In terms of the decision making processes, all of the interviewees agreed that diversifying those in the seats of power will ensure more inclusive and equitable practices. Issues of active informed consent were also discussed, both in the context of consent given when utilizing a particular platform but also in the more general sense of opting in or out of the current datafication of social and economic activities. Only the privileged (socially, economically or politically) have the option to opt out of the current datafication of society. It is, therefore, incumbent upon those who are knowledgeable in issues of data justice, have power or access to the levers of power in the data ecosystem, and those who advocate for those who cannot 'opt out' to determine the approaches that would create systems (data and digital) that minimize harm to the most vulnerable.

The effect or impact of data on identity was difficult to determine from this particular set of interviews. Interviewees pointed out that many identifying characteristics, e.g., race, gender, sexuality, are protected classes in many nations and collection of this data is highly regulated. Self identification and anonymization of identifying data are strategies employed by the interviewees' organizations to mitigate bias while also aiding marginalized groups identify and take control of their data narrative.

In the context of bias and inclusivity, interviewed subjects acknowledged the role of training datasets in mitigating or exacerbating issues of bias. One of the interviewees gave the example of a facial recognition software they had developed that was unable to read faces wearing spectacles and more caucasian skin tones since the datasets used in training did not include these variables. Similarly, noted interviewees, AI technology imported into African countries are likely to have bias due to the training datasets utilized. An interviewed subject pointed out that some AI developers, as a way of protecting their intellectual property from being stolen, restrict access to their designs and code. These 'black box' scenarios hinder identification of biased

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612

Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu

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systems. The originating countries of imported AI technology may have laws that protect vulnerable groups against discriminatory practices that are absent locally. Laws and greater regulation are necessary to combat exclusionary practices in the development and adoption of AI. Inclusion was at the forefront of the design criteria of the interviewees' developed platforms. Platforms were designed to recognize local languages and accents, and platform text incorporates national and tribal languages eschewing practices in the USA and Europe where the default for most AI technologies is English. There is also a concerted push by the interviewees' organizations to improve participation of marginalized communities in the process of data collection by mobilizing and empowering these communities through training, community events, and advocacy. All of the interviewees agreed that while these inclusive design practices are a sign of progress in guaranteeing equitable access to AI technologies there is still a long way to go before everyone can fully participate in this digital ecosystem.

Finally, the consensus among the participants was that consideration of Sustainable Development Goals (SDGs) did not greatly impact development considerations of AI tools. Likewise, the impact of AI technology on national SDGs was unknown.

Interviews with Members of the Community

The interviewees believed that the power to influence data policies largely lay with government agencies and public administrators, such as the Kenyan Commission on the Administration of Justice, the Kenyan Human Rights Commission and the Kenyan Police Services. Unfortunately, many of these public offices do not have comprehensive policies on data justice, particularly as it relates to data collection. The concept of data justice is not in itself well understood in the country; there is very little information or literature available on it. Furthermore, even in countries with data protection laws, like Kenya, data subjects do not know their rights in terms of the law. Data subjects often do not know how their data is being used and by whom. This knowledge gap is a form of data injustice according to the interviewees.

The interviewees believed that control of the benefits and risks of data collection lay with the entities that control the data, including corporations, regulatory bodies, government entities, humanitarian agencies, and research institutes, to the exclusion of the general population, and especially vulnerable groups. Structural biases in the system mean that the disenfranchisement of certain groups, such as displaced persons, continues (or even increases) with digital technology. Displacement is a complex concept with varying origins. In Kenya, displacement may be attributed to physical boundaries defined by colonialism that did not consider pre-colonial demographic distribution, political instability, natural disasters, and tribal conflicts. The geographical regions occupied by displaced persons are often suboptimal - dry, arid areas with low resources - exerting a further toll on these groups. Political tensions further exacerbate their

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612
Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu

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plight. One of the interview subjects related the case of displaced persons from the Dadaab refugee camp in Kenya's north eastern region who are still suffering the effects of incorrect data entry into the national identification system that occurred in the 1990s. As a result of this incorrect data, the affected persons are unable to access government services or obtain essential documents like passports, driver's licenses, social security cards, or more recently, the Huduma Numba card.

Data collection practices in certain communities are mired by historical prejudices - extra vetting for some groups, for example, when collecting and processing information to generate national identification cards. Misclassification of individuals using incomplete data often occurs within these communities and can have significant, detrimental consequences. Collected data may also not accurately reflect the identities of individuals. For example, the photo, name, and location of origin included in Kenya's national identity cards might lead to assumptions of a person's tribal or religious affiliation.

The interviewees agreed that power asymmetries are definitely present in Kenya's digital and data ecosystem. Displaced persons are sometimes victims of predatory behavior when it comes to collecting their data - an exchange of food for the permission to collect an individual's data, for example. Marginalized communities are often excluded, intentionally or unintentionally, from public participatory forums to discuss proposed data legislation. As a result, these communities' needs are often not given due consideration when crafting data policies and laws. In order to redress these power imbalances and break down existing power structures, the represented organizations compiled information on data abuses from non-compliant businesses into a report that the public could access. Additionally, these organizations continue to argue for the rights and inclusion of vulnerable groups in decision making processes that relate to data and for the creation of humanitarian data practices i.e., data practices that acknowledge and account for the humanitarian status (e.g., refugees), experience and needs of people.

The general consensus amongst the participants is that policies and policymaking practices reinforce the prevailing power structures. The fact that innovation far outpaces legislation and data governance structures was also of concern to the interviewees. In Kenya, where the Data Protection Act and the Office of the Data Commissioner are relatively new, people are still adjusting to the protections offered under the law when it comes to matters pertaining to data. Legal loopholes, vague laws (regulations that support the core Act are still pending) and policies, and poor enforcement structures also hinder access to data justice. Data regulatory bodies are not as independent or autonomous in discharging their duties as they ought to be. Issues of data exploitation (contact details of webinar participants shared without prior consent, for example)

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612
Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu

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were also raised. Policy making activities must interrogate these imbalance power structures and hierarchies and must be an inclusive process.

International organizations, per the interviewed subjects, intentionally adopt data practices that ensure historical injustices are not replicated. The organizational policies are designed to engender trust and accountability between the organization and the communities they serve. These practices ensure that historically disenfranchised groups are part of local or national dialogues on data and are part of the governance structures. Interviewees stated that any successful mobilization efforts must include training and upskilling of community members to allow them to navigate and participate in the digital sphere. Civil society organizations are also embarking on community mobilization efforts to increase participation of vulnerable groups in data centric activities. These organizations are engaging with local community and council leaders to exchange information on data matters that are important to their communities. They are also working with national ministries to influence data policies and legislation.

Interviews with Policy-makers

Unfortunately, the center managed to interview only one individual working within the East African policy sphere. Analysis of the interview subject's responses are detailed below. However, we acknowledge that a lone interviewee does not present sufficient data to form an informed opinion on data and data justice in this sector.

Per the interviewee, the current policy and legal frameworks for data protection and data collection in East Africa are not sufficient to create an environment that allows for data justice. The most powerful stakeholders have the greatest influence in policy making decisions. As a result, current policies disadvantage the most vulnerable in the community. For example, in Uganda one cannot buy land, travel, or even open a bank account without a national identity number. During COVID vaccine rollout the Ugandan government initially mandated that only those with national identity numbers should be able to receive vaccines. This led to a public outcry. Civil society organizations instituted a series of actions that led to the government reversing their initial stance.

Targeted interactions with marginalized communities are part of the inclusive policy practices deployed by the subject's organization. The organization focuses on data protection regulation from a gendered perspective. It raises awareness of the issue through research and engagement with relevant stakeholders. Largely, though, laws are created and enacted without the participation of the public or marginalized communities. Moreover, colonization divested power from traditional seats of power in communities; these structures and policies persisted post-colonialism which resulted in the exclusion of certain groups of people in policy making decisions to this day. Communities negatively impacted by policies are usually those that have little to no

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agency in the planning and implementation of data systems other than in the very preliminary stages. When governments develop data protection laws, they will request members of the public to join these public discussions to debate the proposed bill. However, these calls are not well publicized and only those involved in data centric activities are aware of them. The truth is that not many people participate in these public discussions, let alone those that are most negatively impacted by these harms.

C. WORKSHOP ANALYSIS

CIPIT held a workshop on February 24, 2022 to disseminate and validate project findings. The workshop participants (21 participants in total) included members of civil society organizations that work with members of marginalized communities on data centric matters and AI developers. The participants were carefully selected to avoid power asymmetries and allow for a free exchange of ideas. Findings from the project were detailed to the participants and thereafter questions around each one were posed to the participants. The participants in the workshops were encouraged to offer their insights, based on their on-the-ground experiences in Kenya's digital and data ecosystem, as a way to validate, or invalidate, data justice as conceptualized in the report.

The points of note from the workshop are detailed below:

- i. **Specifying data types as it pertains to data justice** - the importance of specifying the type of data when discussing issues of data justice or injustice was raised in the workshop. Participants argued that data type is intricately tied to specific data justice issues. In other words, the kind of justice applied for depends on the kind of data one is dealing with. For example, data justice concerns are different when it comes to personal versus non-personal data. In the case of personal data, one is primarily concerned with justice as it relates to privacy e.g. data subject rights, legitimate uses of personal data and avenues for redress while in non-personal data cases the areas of concern might deal with population data or justice might be connected to the constitutional right to health, the right to development, etc. These differing types of cases would require different strategies. However, it is important to acknowledge that personal and non-personal data may have overlapping or unforeseen ramifications - a breach of privacy rights might have implications beyond the realm of privacy, i.e., the right not to be discriminated against.
- ii. **Human centered AI solutions** - the need for a greater focus on human centered rather than a commercial centered approach in the development of AI solutions was discussed. In the implementation of an AI solution, the greatest consideration must be given to the interest of citizens. The general consensus was that development of and collection and processing of data by these technologies can be done in a manner beneficial to both local communities and commercial interests - AI enabled health projects deployed across East



- Africa during the COVID pandemic, for example - but there must be oversight to ensure that all stakeholders benefit and there is no exploitation of any individual or community.
- iii. **Protecting against data exploitation** - apprehension over the abuse or misuse of data management systems was discussed. Participants expressed concern that current gaps in policies and laws on data management might be exploited by individuals or organizations. These gaps also mean that current data legislations do not offer adequate protection of citizen's data privacy. To strengthen existing policies and laws, the following issues need to be addressed:
- how data may be used for the mutual economic benefit of data processors and data subjects;
 - how to prevent the exploitation of data subjects from data mined without their consent, e.g., price discrimination of consumers using AI enables devices like Amazon's Alexa to search for or order products;²⁰
 - how to protect sensitive data, such as an individual's genetic information, during collection, processing, and utilization;
 - and, how to increase the transparency of organizations that collect, process and store data, including but not limited to, ways to ensure these organizations disclose what specific data that is collected; how the data is stored; who has access to this data, and what the data is used for?
- iv. **Inclusive data collection practices** - participants noted that there was a need for inclusive data collection and to guard against injustice caused by biased data collection practices against marginalized groups, especially in the agricultural sector. Women are the primary labor force in Africa's agricultural sector yet data narratives still largely focus on male farmers on the continent. Training datasets for AI algorithms must mirror local African contexts; agricultural AI tools, for example, must not be based entirely on crop information from regions like Latin America or Europe.
- v. **Data justice as it pertains to displaced peoples** - the punitive measures in place that prevent displaced peoples from accessing digital services and tools were also discussed. Refugees in the North Eastern province of Kenya cannot receive important national documents like identity cards because of incorrect or missing government data or harmful government practices. As an example, a participant relayed the case of the United Nations High Commissioner for Refugees (UNHCR) and the Kenyan government. The UNHCR

²⁰ Liu, Yi; Yildirim, Pinar; Zhang, John Z.; "Artificial Intelligence and Price Discrimination.", Preprint, December 2019; Gautier, Axel; Ittoo, Ashwin; Van Cleynenbreugel, Pieter; "AI algorithms, price discrimination and collusion: a technological, economic and legal perspective." *European Journal of Law and Economics*, (2020), 50 (3), pp 405-435; Azzolina, S., Razza, M., Sartiano, K., & Weitschek, E; "Price Discrimination in the Online Airline Market: An Empirical Study.", *Journal of Theoretical and Applied Electronic Commerce Research*, (2021), 16 (6), pp 2282-2303.

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612

Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu



collected and shared (though this is contested by some in the organization) biometric data from refugees seeking aid at the Dadaab refugee camp with the Kenyan government. The Kenyan government used this data in its direct dealings with the refugees. Unfortunately, profiling enabled by this data has made it difficult for individuals to receive basic documents and services in the country. In the humanitarian aid context, this participant stated that data justice must consider:

- the use of data obtained from displaced persons;
- how historical injustices, like those detailed above, affect and will continue to affect data subjects;
- and, how humanitarian aid biases might influence biases in AI interventions.

- vi. **Redressing historical data injustices** - historically, the same groups of people are continually disenfranchised by digital policies, e.g, displaced persons unable to acquire necessary documents due to their refugee status or a lack of required documentation. Injustices are thus cyclically perpetuated and become systemic. Any AI interventions will likely be infected or corrupted by these endemic discriminatory policies and practices. AI interventions, for vetting, for instance, are likely to be biased if the algorithms and training datasets are not adequately investigated for fairness and there are not sufficient checks and balances in the process. Accordingly, data justice would require that historical injustices are acknowledged and addressed before technological interventions are implemented.
- vii. **Data injustices that affect young people** - this concern focused particularly on data injustices that affect youth (late teens to early twenties) during the electioneering period. People in this age group are often victims of political manipulation. In past Kenyan election cycles, they would be targeted to receive customized texts from political actors seeking their support without prior consent or knowledge of how their contact information was obtained. This data is often transferred to third party organizations as well. Participants also highlighted instances of data discrimination against youth in the administration of justice. Specifically, data is used by the police to confirm existing biases that a young person is a criminal based on incomplete or biased data.
- viii. **Government as an author of data injustices** - Kenya's Huduma Numba case (discussed in earlier sections of this report) was used as evidence that governments are the biggest perpetrators of data injustices. Governments tend to be the biggest violators of data privacy due to their capacity for surveillance - the Chinese government allegedly incorporating backdoors into mobile devices to facilitate surveillance, for example. More recently, the illicit use of data by political parties in Kenya to register persons without their consent in order to meet party membership quotas. This data was harvested from a data leak in the Office of the Registrar of Political Parties. Although persons illegally registered to political parties can resign, the person is recorded in the national database as a 'former



member'. The injustice is not really rectified. Tribal identification is requested when registering a political affiliation on Kenya's national online portal, raising concerns of tribalism or other nefarious purposes.

- ix. **Viability and efficacy of the six pillars of data justice in Kenya** - on whether the six established pillars of data justice are sufficient given the on-the-ground-realities of the data landscape in Kenya,
- the pillars seem to cut across every aspect of data collection, management and use;
 - the pillars may be applied to all (or at the very least, most) economic sectors;
 - the pillars do not account for the dominant data collection practices in the country, i.e., data collection takes a top to bottom as opposed to bottom-up approach;
 - the pillars should better incorporate and outline strategies for empowerment and capacity building;
 - and, finally, the pillars should include resources as an individual pillar as it is a significant factor in capacity and access for digital technologies and data matters.
- x. **Impact of legislation on data justice** - participants agreed that while laws may be facilitators they are not guarantors of data justice. Article 31 on privacy in the Constitution of Kenya, the Data Protection Act, and the Political Parties Act did not stop political parties from illicitly using voter data to register them as political party members without their consent. A strong nation wide culture of protecting citizens rights across the spectrum of socio-economic and political issues may be more effective. Another point of concern was that laws often do not keep pace with technological innovations.
- xi. **Data justice education and training** - the need for education on data and data justice for the public as discussed. Participants mentioned the increasing number of data centered courses on offer in the region. The Haki na Sheria Institute, CIPIT, and Lawyers Hub in Kenya all offered data courses in the past 12 months. There is increased research on data centric issues as well. Civil society organizations have also initiated community forums featuring data experts to discuss topics of concern with local communities. These forums are part of community mobilization efforts which involve teaching communities about their rights in regards to data and emerging issues in the digital field.

The findings from the workshops aligned with those from the interviews conducted. It is worth noting that a significant portion of the workshop participants had not been interviewed prior to the session.

D. CONCLUDING REMARKS



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Desktop research and engagements with stakeholders from the regions of interest indicates a greater number of similarities in the understanding of data justice between these two regions than there are differences. The understanding of data justice in the regions also aligns with global views on the subject. Issues of power asymmetries, digital and data illiteracy, disenfranchisement of vulnerable groups by current data policies and legislation, and ongoing historical data injustices are prevalent in the East African region. The six pillars of data justice provided by the Alan Turing Institute were deemed sufficient by the interviewed stakeholders and participants in the workshop. The only recommendation was the inclusion of 'resources' as a separate pillar.

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034612
Email: cipit@strathmore.edu Website: www.cipit.strathmore.edu

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