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Episode Summary:

Artificial intelligence's acceleration has increased the need for data regulation and privacy protections globally. Chinasa Okolo joins host Landry Signé to discuss AI's impact on the African continent and the continent's current policy landscape. Okolo explains why a lack of policy and privacy protection is harmful, and how to design an inclusive AI regulation framework beneficial to all.

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SIGNÉ: Hello, I am Landry Signé, senior fellow in the Global Economy and Development Program and the Africa Growth Initiative at the Brookings Institution. Welcome to *Foresight Africa* podcast, where I engage with contributors to our annual *Foresight Africa* report, as well as with policymakers, industry leaders, and other key figures. You can learn more about this show and our work at Brookings dot edu slash Foresight Africa podcast.

Today on the podcast, I'm pleased to welcome Chinasa Okolo. Chinasa Okolo is a fellow in the Center for Technology Innovation in Governance Studies here at Brookings. She recently received her Ph.D. in computer science from Cornell in 2023. Her work is centered around AI, from AI governance and policy to AI implications for global health and development. Doctor Okolo is an expert in the field.

Welcome to the show, Doctor Okolo.

OKOLO: Thank you, Landry. Very happy to be here today.

SIGNÉ: Chinasa, you have a bachelor's and master's and now a Ph.D. in computer science. What led you to a policy-related career at a think tank, as opposed to in another sector, such as at a tech company or a university?

[1:54]

OKOLO: Yeah, I would honestly say freedom and independence are probably two of the most important factors to me. I wasn't familiar with think tanks until I started applying for postdoctoral positions and was attracted to Brookings because I saw how I could translate my research and expertise on AI and global development into insights that would have a significant impact.

Additionally, I was very impressed by the reach and span of Brookings's platform and thought that it would be a great place to start my career as well.

And also, when it came to other positions I was considering in academia and also in industry, I honestly would have said that when I was thinking of places to be after my Ph.D., I ideally would have gone into a tech-based position, but many of the positions at the time that I was applying focused on aspects of large language models or generative AI. And honestly, this is something that I didn't necessarily want to work on or be the sole focus of my work.

And also, after being so hyper focused on sociotechnical AI topics for the past five years doing my Ph.D., I also wanted a break and just explore some of my new policy centered research interests, which I felt like I wouldn't have been able to do easily in an academic position or even a tech-based position.

SIGNÉ: Fantastic, Chinasa. You have worked on AI for most of your career, but it has garnered attention more recently in mainstream culture, especially with the emergence of technology like ChatGPT. How do you explain the AI's acceleration over the last few years?

[3:27]

OKOLO: Yeah, I honestly say that major advances in computing infrastructure like GPUs, which stands for graphics processing units, and also advances in algorithms like Google's BERT—this algorithm examines bidirectional context of words within text and has been foundational to the field of natural language processing and is also one of the most prominent, large language models—I would say these advances have significantly helped accelerate AI over the past few years.

But I would honestly say public engagement with AI tools like ChatGPT has significantly driven interest in corporate and institutional adoption of AI. I think just having people experience the power of AI firsthand—and people that are just like regular people and not necessarily scientists or researchers or engineers—has really shown companies how they can adopt AI and also leverage its potential use cases as well.

SIGNÉ: Has AI had a major impact on the continent of Africa?

[4:19]

OKOLO: So, it's a little bit hard to say. Honestly, I see that there's been very limited impact in more smaller areas through more niche tools that's been developed for specific use cases like finance, baking, agriculture, education, for example.

I would say the largest impact I've seen has been within the natural language processing field of research, or NLP. There's been a lot of progress from local African, or startup organizations, and also just grassroots research communities that are focused on preserving and also having machine learning and AI tools be able to understand African languages. And so, I've seen a lot of impactful research come out of that space.

But again, we don't really have good statistics on the adoption and also like how well integrated AI is into different aspects of African cultures, societies, and institutions. And I also think that there are many other factors, mainly infrastructural and socioeconomic that inhibit the effective adoption of AI as well.

I think there is a lot of promise for it to be used to complement and also augment human work, and also help address challenging development issues in agriculture, healthcare, and education. But overall, I think that there is much more progress that needs to be made in infrastructure, for example, and also in skills development to ensure that we have the proper human talent base to help build these tools responsibly as well.

And I think also governance is a big factor in the development, adoption of these tools as well.

SIGNÉ: Fantastic, Chinasa. Would you mind sharing with our audience specific illustrations of countries or of sectors or of technologies where AI had a major impact on the continent? What are the specific technology or the countries leading the way?

[6:08]

OKOLO: I would honestly say South Africa. That's where a lot of the most prominent AI research institutions like universities are based. And then also a large percentage of AI startups are based within the country as well.

And I would say most point to Lelapa AI, they recently launched I would say early last year or so, or even a little bit before that. And they're focusing on building an African language large language model, or LLM. And so, I think their work is really important just because we haven't really seen any significant, or many significant, AI models come out of the continent. This is the work that's been done by the Stanford HAI Institute in their recent AI Index Report that shows that there's a very small-scale AI adoption or even, like, AI development happening.

And so, I think that companies like Lelapa AI are focused on trying to kind of shift that narrative. And also, I would say focus on building AI that meets the needs of Africans, because many of the prominent large language models from ChatGPT, Google, Anthropic, or OpenAI in particular, they don't necessarily represent African languages very well.

And so, I think it's important that the continent with the largest population of young people actually be represented in this; this will be very important to ensuring that Africans can also leverage these tools effectively for their expected needs.

SIGNÉ: Absolutely. I really like this. And Chinasa, it's true that South Africa is leading the way. Of course, your own country is Nigeria, but also Egypt, Kenya, Morocco, Ghana, Tunisia, Cameroon, Tanzania are also some of the countries where we have a growing number of AI companies which are prominent.

Turning to your *Foresight* viewpoint, Chinasa, entitled "Reforming data regulation to advance AI governance in Africa," can you explain what you mean by data regulation?

[8:02]

OKOLO: Yeah. So, I consider data regulation just to be governance and also oversight of all aspects of data from its production to its use. In my viewpoint, I specifically aim to highlight the need to focus more so on data privacy protections for consumers and also larger entities alike.

SIGNÉ: How strict are data privacy or data sharing laws in comparison to, for example, Europe or the United States?

OKOLO: Yeah. So, I would say within 36 out of the 54 African countries that have data protection regulation, I would say their regulation is actually quite robust and has comprehensive protections. However, I think that more continental or wide efforts like the Malabo Convention, which is the African Union Convention on Cybersecurity and Personal Data Protection, have failed to see widespread adoption. And technically, only 15 AU member states have ratified this convention.

But I think that it honestly is hard to say if this is a good thing or bad thing, just because the vast majority of African countries already had data protections before this convention was ratified.

But I think the AU has an important role to play in terms of helping ensure that data protection and data privacy protection is enforced. I think GDPR does a very good job with this. And I would like to see more governments have that kind of enforcement capacity to ensure that these regulations are being followed.

I've seen recent developments from countries like Kenya, for example, that have been very active in finding people who violate these laws. But again, like, if you look at the scale or just like the range of bad practices and data privacy happening, we're not really seeing a lot of enforcement. And so, that's where I would like to see the protections that are already in place really come into play.

SIGNÉ: Fantastic. Why do you think certain African governments have been slow to implement legislation, despite data and AI being extremely popular topics?

[10:06]

OKOLO: Yeah. So, I would say most prominently is that there's a lack of skilled knowledge on AI and data topics within government. African leaders themselves and also, you know, the government structures, tend to have individuals who are much older and don't necessarily represent their respective populations. And being older, you know, doesn't necessarily prohibit you from understanding about technology. But I think that, this is probably the biggest factor as well.

And then also, I would say a lack of prioritization to some extent. And this is also not necessarily, like, a bad thing just because I think ensuring that people have access to education and health care, honestly, should take priority over trying to implement AI and systems that are not functioning well.

And, you know, obviously there are also many countries going through civil unrest, war, genocide, etcetera. And so, I don't think that many countries actually have the capacity to handle all of these different aspects at once.

And I also want to say that being slow to regulate AI is not necessarily a bad thing, because it's something that should be taken carefully just because we've seen how these tools could have a negative impact, you know, on people and also on communities and countries as well. And so, it's really important that as African countries start to make progress, that they not rush to develop these regulations because it's a very sensitive topic as well.

SIGNÉ: What will therefore be an appropriate speed?

[11:28]

OKOLO: I think it's hard to say because it really depends on governments themselves. I think Nigeria has taken a more rapid approach to AI development, or excuse me, the development of AI regulations or policies as well. And I think that this could be good; it could also be bad.

There was recently a policy development or AI strategy development workshop that happened in mid-April. And the Nigerian government brought in different stakeholders within Nigeria and also across the Nigerian diaspora to help develop an AI strategy. Again, I'm really stressing the importance and ensuring that careful development is taken to ensure that you can actually produce robust and comprehensive documents.

And I would say other countries like Rwanda actually are very impressive in this space because they've been the first African country, to my knowledge, that have produced a draft document for a national AI policy rather than focusing on a strategy. And so, I think that we would probably, hopefully see more progress within the next, maybe even couple of months to a year or so.

[12:27]

But when it comes back to your original question about the speed, again, I think it's very important to understand that African countries have different capacities, but I think they should also take advantage of different resources available to them. I think that the Nigerian diaspora approach is very, you know, it's important and I think that other countries could adopt similar measures as well, along with I would say rely on help, from global expertise bodies like the UN High-Level Advisory Body [on Artificial Intelligence], for example, are also developing advisory bodies of their own. And so, the speed, yeah, I can't really provide like, a definitive estimate onto how long AI regulation development should take.

SIGNÉ: And, Chinasa, what are the potential side effects of not reforming data regulation in some of those African countries.

[13:13]

OKOLO: Yes. So, as AI adoption and integration continues to increase, there are concerns that marginalized communities could increasingly become targets for external entities that are looking to source data to build and refine their AI tools. Thus, that's why I believe it's very important for African countries to reform existing regulations to account for their nuances and intricacies that AI has brought to data sharing and privacy.

I think it's also important that African countries look at existing policies in other areas like health care, labor, and education to understand what gaps exist there. And I think this is important because I understand that it will take a while for African countries to build out formal and comprehensive AI regulation. And I think that focusing on these existing policies, especially data privacy protection policies, in terms of reforming them and helping bolster some of those missing links will actually be very important in ensuring that for the meantime, we know that we're doing the best that we can to protect consumers before we actually have formal AI regulation implemented.

SIGNÉ: Fantastic. And what African countries have adopted and are reaping the benefits of quality AI regulation and governance?

[14:29]

OKOLO: I would honestly say none so far, just because we haven't seen a formal AI policy enacted within the continent. Again, as I mentioned, Rwanda has been the first African country to draft an AI policy versus all the other strategies that we've seen over the past couple of years or years or so. But there isn't really indication that an AI policy has been formally passed or enacted within Rwanda or any other African country.

And so, again, I say this is not necessarily a bad issue just because we just saw that the EU AI Act was passed this year. So, progress is really relative. But I think that to ensure that African countries can reap the benefits of quality AI itself, I think that regulation and governance will have to play a big factor.

And that just because we're seeing large adoption of external tools within the continent, and so we have to ensure that both foreign tools that are being used by Africans and also native AI tools that are being developed and used act in responsible ways and then also serve the needs of Africans well.

SIGNÉ: And what will you think about the AI strategy adopted by the government of Mauritius? Or the National Strategy for Artificial intelligence in Egypt, or even in South Africa, some of the initiative related to AI, which were adopted, including by the Presidential Commission on the Fourth Industrial Revolution, which acknowledged AI as one of the high technology industries?

[15:59]

OKOLO: Yeah, I think all these strategies are great, especially with Egypt and Mauritius, honestly, leading the way and throughout the continent for being one of the some of the first countries within Africa and also in the world to develop strategies. I think this is very important. And I think this has also played a big factor, especially for Egypt in seeing their progress in developing AI. They have also very strong academic institutions and research labs in AI. And I think that this is very important as well.

But I think that, again, it's really hard to understand the impact of these strategies just because a lot of them have targets. For example, some of them are trying to have AI be a big part of the economy by 2030, 2045, 2050. And so, we're still a bit away from those respective year deadlines or so. And so, again, I think that they're very ambitious. But it'll, it'll take a while to understand how impactful they are.

And again, I just also want to say that AI strategies cannot take the place of effective AI regulation. And so, we really want to see countries start moving towards regulation.

SIGNÉ: And what will you expect to see in the AI regulation framework?

[17:04]

OKOLO: Very big question. But I think that for me, I think it's really important to understand that the limitations of AI be addressed in regulation. I think that people have misunderstand what AI can be used for, especially in a very sensitive contexts,

like warfare, policing, the legal field as well. And so, I think that there should be restrictions, to a certain extent, on how AI can be used for these sensitive use cases.

And I think that it's also important that within AI regulation, that there be clauses to help ensure that countries can develop their respective AI economies. And so, I think that it's important that AI or more so let's say like computational thinking and STEM education be a center part of this just because many African countries don't necessarily have the best educational systems to educate their students in advance computing and machine learning topics locally. And so, we are seeing a lot of outsourcing, of this. So, I think that it will be important for countries to build their respective educational systems to meet these needs.

And then also, when it comes to other aspects, I think that focusing on startups, I think that will be an important part of AI regulation providing I would say mostly funding. I think that will be very central to both startups and also to research labs to help address some of the pressing issues that we're seeing in the lack of funding. And it's very expensive to train and develop in AI models. And so, I think that is why AI funding or funding is so important.

[18:29]

And then also, I think that there should be clauses for infrastructure as well. I know a lot of the AI strategies already from the continent and also outside of the continent talk about some of these issues. But I think that, you know, again, we're seeing a lot of African researchers and developers have to rely on external sources like Google Cloud and AWS. And a lot of their data centers are actually hosted outside of the continent.

I think this also comes with some issues around data privacy protections as well. And so, countries should also invest in building this local infrastructure at home. And this also helps in the speed of how AI can be developed as well, because it does take time to store your data on external servers and etcetera.

And so, these are just some of the few aspects I believe. I know there's much more, that should be addressed in AI regulation. And that's why I'm really adamant and, you know, stressing my viewpoint that to ensure that AI regulation is the best that it can be, you actually have to account for data privacy regulation. And then also you have to account for AI, or issues of AI, and of any existing policies as well.

SIGNÉ: Fantastic, Chinasa. And in my recent book, *Africa's Fourth Industrial Revolution*, I explore numerous of those variables by categorizing them, whether we speak about the human capital, the technology, capital infrastructure, or physical capital, financial capital, among others, which is synthesized in another publication to be released soon.

As you know from the previous episodes of Foresight Africa, we are asking the guests a couple of questions. AGI looks at Africa from an economic perspective, and we focus on the how to accelerate economic growth and structural transformation while fostering inclusion, especially for youth and women on the continent.

Building on your work and experience, what is one piece of advice you would give to African and global policymakers to ensure the best outcome for data privacy and AI regulation on the continent?

[20:43]

OKOLO: Yes. I think it's really important that policymakers engage with a wide variety of stakeholders, especially civil society organizations, to inform their policy processes and also to help develop robust governance mechanisms.

AI and data privacy regulation should not be developed in silos. And we see that it affects many aspects of society. So, I think that it's important for policymakers to not just be based in government and actually be engaging with people.

Again, I mentioned civil society organizations, but I think that it's really important to also engage the general public because these are, you know, the people that will be most affected by these tools and also by regulation itself. And so, there should also be ways to ensure that public input is a part of the process in developing regulation throughout the continent.

SIGNÉ: Fantastic, Chinasa. Given your successful career and impact, what advice would you give to youth and woman hoping to follow in your footsteps?

[21:43]

OKOLO: So, I'm fortunate to have grown up as a child of Nigerian immigrants who prioritized education. And despite growing up in a low-income household, my parents invested in providing me with access to the educational opportunities that, honestly, I can say helped shape the trajectory of my life. However, I still had to do the hard work to get into prestigious institutions and also to graduate from them.

And so, as a young professional now, I'm still curious and very eager to learn. And this also pushes me to apply to opportunities where I can grow my skillset and also to engage with different people to grow my network as well.

I would encourage African youth and women to first conduct research on the opportunities that are available to them. I think there's so many that's out there and people honestly, if you just take a little bit of research, you can help educate yourselves about them.

And then also, I think that mentoring is very important. I've been fortunate to, you know, to mentor different students throughout my career, particularly in applying to graduate school, but also for just other aspects as well. And I think that mentoring is probably something that can help strengthen your career the most.

Also, I would say that finally you have to put in the work. I think that African students and youth are faced with a lot of difficult challenges. But this doesn't replace the work that you have to put in. And again, I think that having access to mentoring can help you with some of these aspects as well.

SIGNÉ: Thank you so much for joining us today, Chinasa.

OKOLO: Yeah, thank you again for having me on the podcast. Very happy to be here.

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SIGNÉ: I am Landry Signé, and this has been *Foresight Africa*. To learn more about this show and our report, visit Brookings dot edu slash Foresight Africa podcast.

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