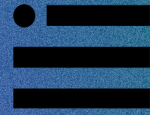


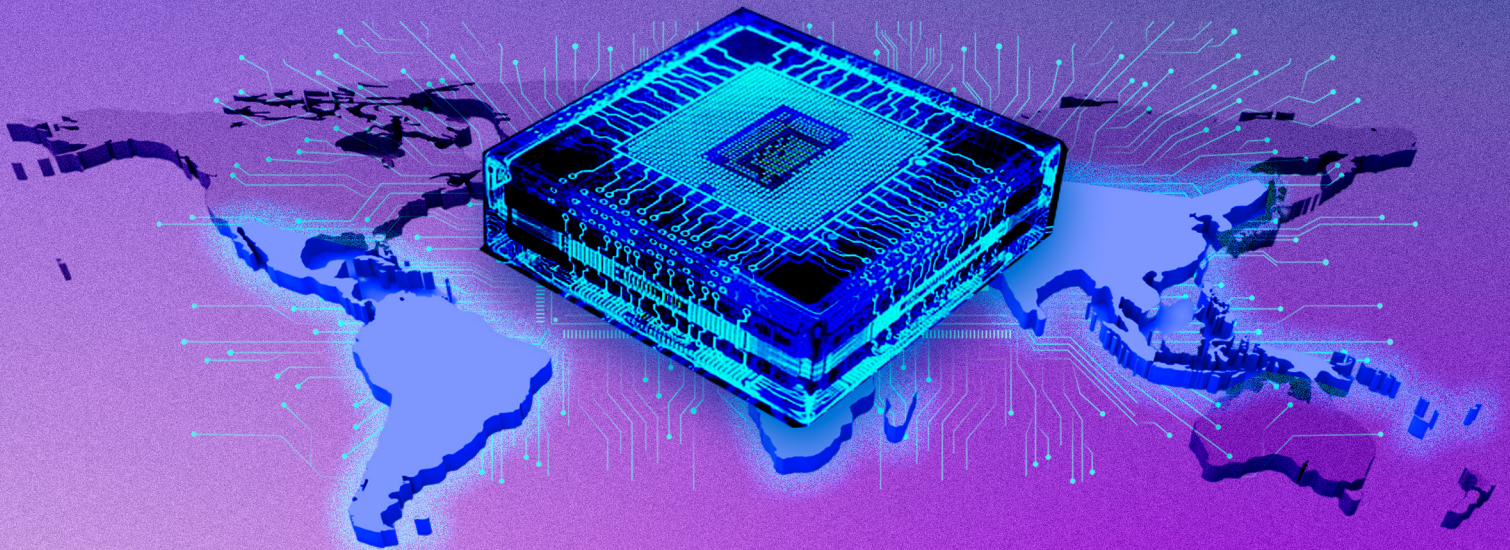


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NEW
AMERICA

Global Futures Bulletin



**RESPONSIBLE
ARTIFICIAL
INTELLIGENCE
EFFORTS IN THE
GLOBAL SOUTH**

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Global Futures Bulletin

RESPONSIBLE ARTIFICIAL INTELLIGENCE EFFORTS IN THE GLOBAL SOUTH

Introduction¹

The promise and perils of Artificial intelligence (AI) dominated the global agenda in 2023. As advances in general purpose and generative AI accelerate, interest in its power and potential will persist in 2024. This is no surprise given the technology's vast implications for the future of work, healthcare and diagnostics, and virtually every political, economic, and social issue of the contemporary era. With the market for AI growing at breakneck speed – AI is estimated to contribute \$15.7 trillion to the global economy by 2030² – policymakers are moving increasingly quickly to understand and regulate AI risks.³ Their shared goal is to harness AI's potential for positive impact while minimizing unintended consequences for countries, communities, and individuals.

Notwithstanding widespread anxieties about AI-related technologies, there is a fundamental inequity when it comes to the development of AI policies. Today, a handful of wealthy countries and multinational companies dominate the debate about AI regulation, which also gives them the power to set *de jure* and *de facto* standards for the rest of the world.

The first-mover advantage means that high-income countries are setting the global rules of the game for AI policy and practice.⁴ These rules and guidelines are unlikely to adequately anticipate and respond to the needs and differentiated contexts of developing countries. To ensure that AI policies are truly equitable and tailored to the political, economic, social, and technological concerns of the Global South, developing countries will need to increase the speed at which they are engaging with AI and releasing their own AI policies.

This Global Bulletin presents a preliminary introduction to responsible AI policy and to international efforts to set guardrails for AI technology. It is based on insights generated by a Global Task Force on Predictive Analytics overseen by the Igarape Institute and New America.⁵ The Bulletin considers the global AI landscape – asking *who* is producing AI policy and *how* that policy differs across countries. It features insights generated from a new dataset of AI policies from around the world produced by the Institute. The Bulletin concludes with a shortlist of implications and recommendations for policymakers, advocates, and industry representatives on how to approach responsible AI regulation in developing economies.

Context: What is Responsible AI?

Broadly, AI is technology that can perform tasks usually reserved for humans.⁶ When people refer to AI in contemporary discourse, however, they are typically referring to “machine learning,” a type of AI that uses algorithms to identify and predict patterns from data, enabling it to mimic or “learn” autonomously.⁷ This predictive ability gives AI the power to detect patterns humans sometimes cannot, to assist with complex mathematical tasks or technical challenges, and to streamline workflows and make our lives easier. Yet AI’s immense power also comes with significant risks to issues including privacy, civil rights, and online and physical safety.⁸

In addition to existential preoccupation about the rise of sentient AI, there are a host of more practical concerns about the ways AI can perpetuate and accentuate discrimination. For example, AI-powered facial recognition technology and certain forms of predictive analytics can reproduce racial bias: in 2018, MIT researcher Joy Buolamwini found that AI recognized white faces and male faces with far more accuracy than darker-skinned or

female faces.⁹ These kinds of embedded bias have severe real-world impacts, particularly when facial recognition is used by military, law enforcement, and immigration services. Other risks posed by AI include AI-enabled disinformation and misinformation by poorly trained chatbots, mass autonomous surveillance, and the upheaval of labor markets due to AI-powered automation.¹⁰ Indeed, Generative AI alone is expected to affect as many as 300 million jobs in the coming years, especially those requiring physical labor, administrative support, legal and clerical activities, social sciences, and business and financial operations.

When discussing ways to mitigate these and related risks, AI regulators and thought leaders often use the language of “Responsible AI.” Responsible AI is designed and developed in ways that are aligned with a set of core ethical tenets, including those set out in the 2019 Organization for Economic Co-operation and Development (OECD) AI Principles (see Box 1). Responsible AI principles can be encoded into the design of AI technologies and applied by policymakers and industry actors seeking to protect from AI risks.

Reviewing the basic code of responsible AI

Several efforts are underway to “align” AI and ensure it follows values-based principles and recommendations. The 2022 AI Bill of Rights and 2023 Executive Order on AI issued by the US White House, the 2023 European Union AI Act, and the 2019 OECD Principles are just a few examples. Private sector actors, ranging from tech giants like Google and Microsoft to consulting firms like McKinsey, have also issued their own principles. Some representative principles and recommendations for Responsible AI efforts are listed below.

A) OECD Responsible AI Framework¹¹

Principles:

- Inclusive growth, sustainable development and well-being
- Human-centered values and fairness
- Transparency and explainability
- Robustness, security and safety
- Accountability

Recommendations:

- Investing in AI research and development
- Fostering a digital ecosystem for AI
- Shaping an enabling policy environment for AI
- Building human capacity and preparing for labor market transformation
- International cooperation for trustworthy AI

B) White House AI Bill of Rights¹²

Principles:

- Safe and effective systems
- Algorithmic discrimination protections
- Data privacy
- Notice and explanation
- Human alternatives, consideration, and fallback

C) Microsoft Responsible AI Principles¹³

Principles:

- Fairness
- Inclusiveness
- Reliability and safety
- Transparency
- Privacy and security
- Accountability

AI standard setting is speeding up in countries that dominate the AI space. Between 2022 and 2023, for example, China introduced new rules to regulate recommendation algorithms; oversee synthetically generated images, video, audio, and text; and manage developers and deployers of generative AI. New interim AI rules published in July 2023 also require the labeling of AI content, non-discrimination, and the protection of privacy and intellectual property. China will continue refining its standards over the coming year. It is worth noting that China emulated aspects of the EU's 2018 General Data Protection Directive in its 2021 Personal Information Protection Law.¹⁴

And in 2023, the EU published a draft AI Act, the world's first *comprehensive* and binding regulatory framework for AI. Although China was the first country to create enforceable AI laws, the AI Act will take regulation a step further by creating a cross-sectoral, comprehensive AI regime.¹⁵ Once formally passed, the landmark Act will generate global impact: the bill will give Europe a first-mover advantage on comprehensive standards for AI, and other countries are likely to emulate its approach.¹⁶ Moreover, industry actors will extend protections stipulated by the Act to other markets, since it will drive up costs significantly to create different AI models for different countries or legislative areas.¹⁷

Also in 2023, the US White House issued an executive order on Safe, Secure, and Trustworthy AI.¹⁸ The Order establishes new standards for AI safety and security and includes several provisions to tackle different aspects of the issue. Specifically, it requires developers of the most powerful AI systems, or "foundation models," to share safety test results with the US government. It also mandates developing standards, tools, and tests to help ensure that AI systems are safe, including via extensive red-team testing. Alongside developing a National Security Memorandum to direct safe and ethical AI in the military and intelligence services, the Order also establishes standards and best practices for detecting AI-generated content and authenticating official content.

The OECD AI Principles, Chinese AI rules, EU AI Act, and US Executive Order were forged by wealthy, large Western countries. This is to be expected. Higher-income countries are far better positioned than lower- and middle-income countries to develop and regulate AI for structural reasons. After all, relative to developing countries, they tend to have far stronger and better-funded technology sectors, as well as more robust democratic and legislative frameworks.¹⁹

The developing world faces several disadvantages that make it more difficult for countries to formulate and enforce responsible AI policies. The Global South lacks a strong AI market – as of September 2023, half of the world's 300 AI large-language models (LLMs) were built by Americans, and another forty percent were Chinese-made.²⁰ Of the \$15.7 trillion in global gains mentioned above, just \$1.7 trillion is expected to go to the 152 countries and more than 6.8 billion people living in the Global South.²¹ Problems such as weak digital infrastructure and a lack of educational programs that can produce AI researchers significantly complicate the production of AI in the developing world.²² Moreover, many lower-income countries lag behind North America, Western Europe, China, Japan, and South Korea when it comes to technology regulation, a foundation for the AI principles outlined above.²³

There appear to be several basic preconditions that have helped higher-income countries set the pace on AI regulation. They include a strong AI sector, in-country expertise, and foundational technology regulation. Also needed is political will and pressure from academics and digital rights activists who can help facilitate the prioritization of AI regulation and the passage of comprehensive, informed policy. Policymakers may not always choose to regulate AI – there is currently heated debate in Kenya regarding the merits of regulating the technology and potentially limiting the growth of the country's budding AI space – but they can at least evaluate potential policy steps and prepare to deal with eventual AI risks if needed.²⁴ The current disjuncture in

structural capacities around AI, both in terms of technology and regulatory capacity, is undermining the ability of governments in the Global South to benefit from AI's economic gains and to protect its citizens from context-dependent AI risks. There is a threat that these gaps may create insurmountable digital – and indeed AI – divides.

The problem of structural inequalities around AI is compounded by the fact that low-income countries' needs cannot be fully met by simply adopting principles set by developed countries. Indeed, certain AI and technology-related challenges are specific to countries in the Global South.²⁵ Consider the recent controversies around the mistreatment of Kenyan data labelers — individuals who perform the vital preparation of data that is then used to train AI models — who faced union-busting tactics, workplace harassment, and harmful exposure to graphic photos and language in their work.²⁶ Data labeling is a key AI function mostly outsourced to the Global South, and it is yet unregulated by purportedly “global” AI policies created in the developed world.

The Global Responsible AI Landscape

Notwithstanding the significant disparities highlighted above, there is evidence that AI regulation is speeding up worldwide. Stanford University's Center for Human-Centered Artificial Intelligence detected more than 123 AI-related national policies issued between 2016 and 2022, with 37 laws passed in 2022 alone.²⁷ This figure does not even cover the hundreds of AI recommendations advanced by multilateral organizations and the private sector over the past half-decade.

To better understand the pace and distribution of global AI regulation, the Igarapé Institute compiled a dataset listing global policy efforts,

categorized by country and type, ranging from the years 2011 to 2023. As of December 2023, the database²⁸ contains 473 AI policies and recommendations from around the world, published by governments, private sector actors, and civil society. Data is sourced primarily from repositories held by The OECD Artificial Intelligence Policy Observatory,²⁹ Algorithm Watch,³⁰ the Berkman Klein Center for Internet and Society,³¹ Jobim, Ienca and Vayena (2019),³² and it is supplemented by individual policies detected through active search and news media. The dataset presents a holistic snapshot of the AI policy landscape over time — spanning sectors, types of commitment, and regions. The analysis below highlights several findings relating to AI policy's scope, scale, and distribution.

AI Policy by Region

To date, Western European countries have issued at least 207 AI policies — by far the largest share of AI regulations, recommendations, and strategies of any region. Trailing Western Europe and approximately tied are North America and Asia, with 91 and 92 policies respectively. There are also 28 international AI policies sourced from international organizations. By comparison, few AI policy initiatives are emerging from Africa, Oceania, and Latin America — each region has only 11, 18, and 26 policies, respectively.

Table 1. Geographic distribution of AI regulations

Lead entity/ issuer (type)	Africa	Asia	Europe	International	Latin America	North America	Oceania	Total
Academic and research institution		2	15	5		9		31
Civil society/ Non-profit organizations/ Charity	1	1	17	7	2	14		43
Governmental agencies/ Organizations	10	83	119		23	42	18	295
Intergovernmental or supranational organizations		1	30	11				42
Private companies/ Alliances/ Federations		5	26	5	1	26		63
Total	11	92	207	28	26	91	18	473

Source: Igarapé Institute AI regulation database (2024)

Notwithstanding the dearth of standards and regulation, AI is nevertheless widely used in developing countries. There, it has the potential for widespread positive impacts across all sectors of society, from agriculture and healthcare to education and public safety. Moreover, AI development and deployment are expanding – there is a growing ecosystem of AI startups working in Africa and Latin America to develop proprietary AI systems and build local expertise in AI technology. Likewise, international technology giants such as IBM, Intel, and Microsoft are increasing their footholds in countries including Brazil, Costa Rica, Kenya, and India.³³

Though the AI landscape in the Global South is still modest, it is broadening rapidly, and correspondingly the Igarapé Institute's data shows that policymakers in low- and medium-income settings are making the necessary efforts to engage with AI policy, albeit more gradually than in developed economies (see Table 1). Even so, regulatory efforts in the Global South are still concentrated in several countries where AI has a stronger foothold and where structural capacity is greater. For example, there appears to be a clustering of policies emanating from countries such as Colombia (10), Singapore (19), and India (12).

AI Policy Over Time

To better assess the scale and distribution of the AI regulatory ecosystems, it is useful to monitor AI regulation development over time (see Table 2). For example, the total number of AI global policies started increasing steadily in 2017 – perhaps sparked by new interest in AI stemming from Canada’s issuance of the first national AI strategy that same year.³⁴ A 2023 AI Safety Summit held in the UK in 2023, also brought together over 27 governments and leading AI companies and led to several novel innovations, including a new AI Safety Institute.³⁵

Table 2. AI regulation over time, by region

Year	Africa	Asia	Europe	International	Latin America	North America	Oceania	Total
2011			1			1		2
2013			1					1
2014			3			2		5
2015			2			1		3
2016			1	1		6		8
2017		14	19	5		10		48
2018	2	16	55	9	6	23	5	116
2019	3	26	58	9	7	16	2	121
2020	2	11	43		7	13	1	77
2021	3	15	14	2	6	5	7	52
2022	1	7	8	1		6	1	24
2023		3	1	2		8	1	15

Source: Igarapé Institute AI regulation database (2024)

AI policy development precedes 2023, with peaks registered between 2017 and 2019, with a gradual decrease in regulation since then (see Table 2). This apparent decrease could have several explanations: it is possible that most countries capable of or interested in regulating AI in its current form have already done so, or it is possible that there are some policies not reflected in the Institute’s dataset. Regardless, it is likely that the rate of AI regulation will increase in 2024, as countries may take inspiration from the EU AI Act, the US White House Executive Order, China’s evolving AI rules, and the UK AI Safety Summit.

Key Characteristics of AI Policy

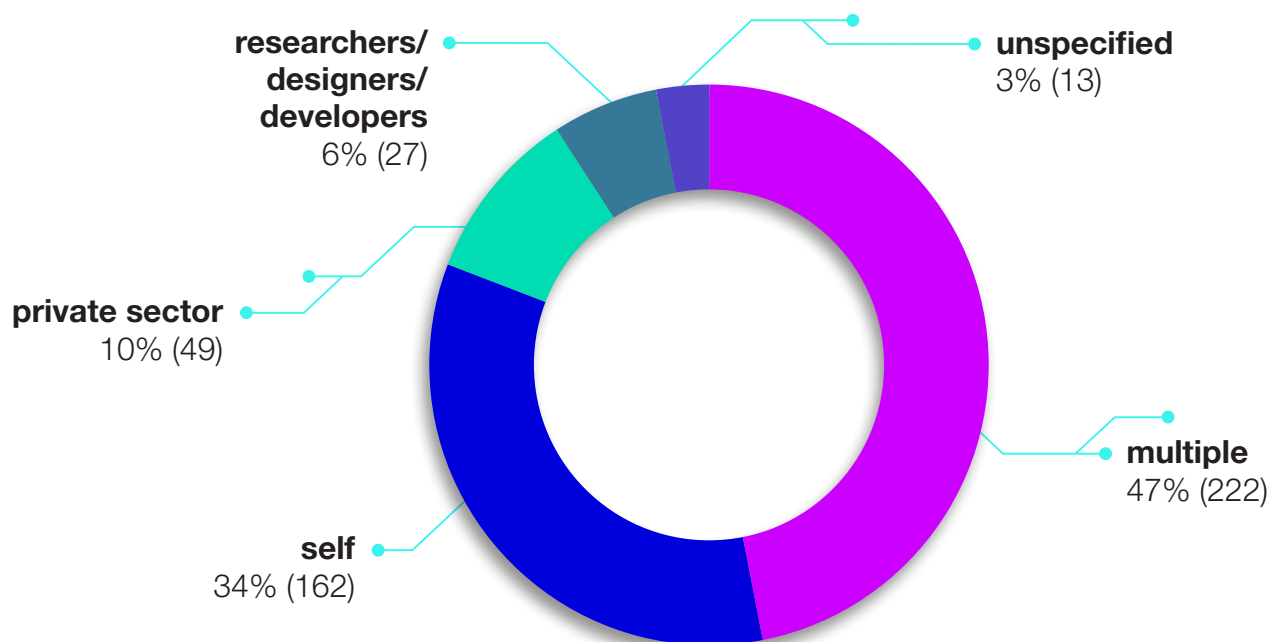
AI policy can also be categorized according to several key characteristics, including the type of policy, intended target and issuer entities, and key principles under consideration. Several distinct patterns emerge when it comes to disaggregating key features and characteristics of AI policies:

- **Recommendations versus voluntary commitments.** The vast majority of AI policies listed are purely voluntary – most are government programs or recommendations, and a smaller number are voluntary commitments. Government programs, though technically binding, generally focus on creating policy and R&D environments that enable AI development or on facilitating the study of AI-related risks, and therefore do not constitute regulation of AI risks. Global policymakers – notably in China³⁶ – have only recently begun to issue binding AI regulations, with the EU AI Act being the first comprehensive regime.
- **Strong private sector presence.** The number of AI policies issued by the private sector is large, surpassing the amount issued by civil society. This heightened interest from the private sector is partly because AI is relatively unregulated around the world – to mitigate organizational risks and prepare for potential future regulation, individual companies are preemptively creating their own AI frameworks to guide internal practices.³⁷
- **Broad target audience.** A plurality of policies addresses multiple audiences, across private and public sectors. This aligns with the greater pattern of non-specificity and prevalence of recommendations in AI policy – in other words, it reflects that AI policies are often an expression of support for responsible practices rather than genuine regulation. Many policies also are internally-facing – that is, a government or private sector entity may issue internal regulations or guidelines related to AI that do not impact the development, design, or deployment of the actual technology.

Table 3. AI regulations by lead entity/issuer (type)

Lead entity/issuer (type)	Number	%
Academic and research institution	31	7%
Civil society/Non-profit organizations/Charity	42	9%
Governmental agencies/Organizations	295	62%
Intergovernmental or supranational organizations	42	9%
Private companies/Alliances/Federations	63	13%
Total	473	100%

Source: Igarapé Institute AI regulation database (2024)

Figure 1. AI regulations by target audience

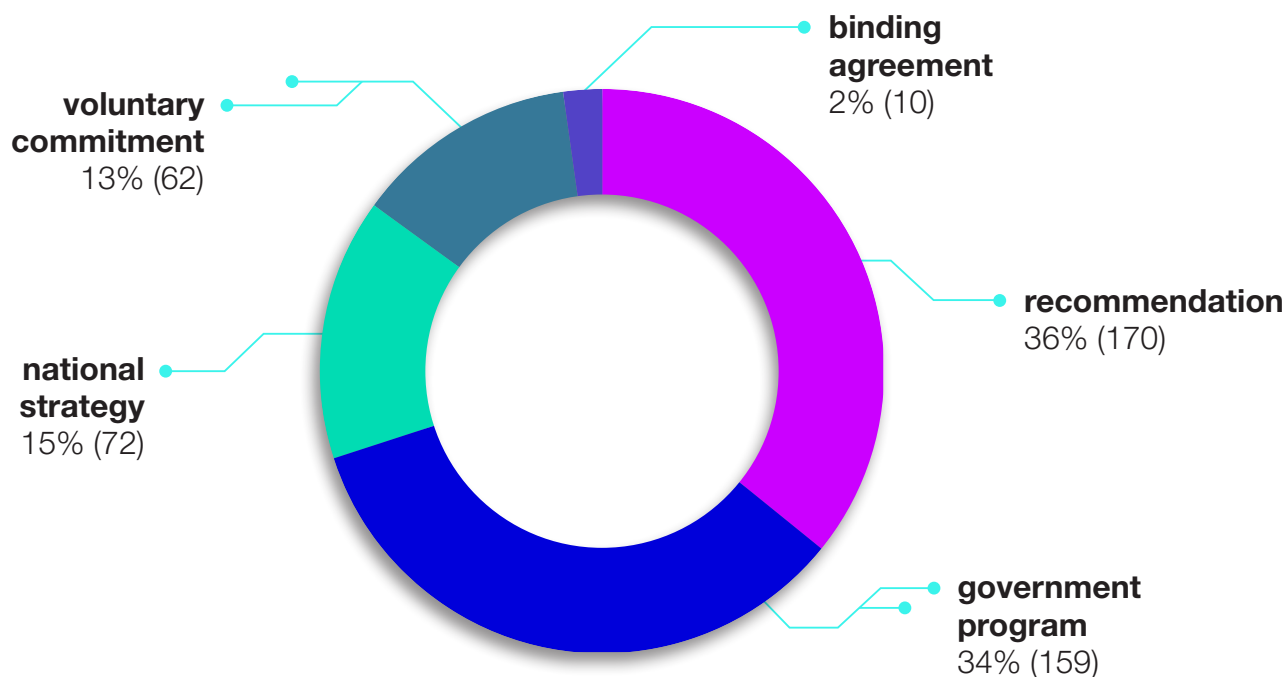
Source: Igarapé Institute AI regulation database (2024)

Table 4. AI regulations by key principles represented*

Key principles represented	Number	%
Accountability	133	8,09%
Building human capacity and preparing for labor market transition	118	7,18%
Fostering a digital ecosystem for AI	221	13,45%
Human control of technology	37	2,25%
Human-centered values and fairness	315	19,17%
International Human Rights	187	11,38%
Investing in AI R&D	103	6,27%
Privacy	104	6,33%
Robustness	69	4,20%
Safety and Security	177	10,77%
Transparency and Explainability	178	10,83%
Total	1643	100%

*Note that one intervention can have several key principles represented

Source: Igarapé Institute AI regulation database (2024)

Figure 2. AI regulations by type

Source: Igarapé Institute AI regulation database (2024)

Implications and Recommendations

It is necessary for developing countries to take action with respect to AI, for fear of being left out of an enormous source of capital and of becoming subject to poorly fitting and inadequate AI standards.³⁸ Government, industry, and civil society in developing countries – together with multilateral organizations – must also consider AI policy holistically, with an eye towards context.³⁹ When evaluating the path forward for AI regulation in the developing world, decision-makers may consider the below factors and policy options.

Key Considerations

- **Consider general Responsible AI principles.** A cluster of principles forms the basis of most ethics-focused AI regulation and provides a useful framework for mitigating some key AI risks. High-level principles such as those crafted by the OECD (including transparency, fairness, and accountability), are useful across cultural and geographic contexts.
- **Be mindful of specific cultural, economic, and geographic dynamics affecting AI standard setting.**⁴⁰ The specific context of a given country (or association of countries), such as the size of its AI market, its digital infrastructure, the ease of passing regulatory measures, and current civil rights or privacy debates can dramatically impact both the capacity of proposed AI policy and the provisions that should be included within said policy.

- **Anticipate the benefits and drawbacks of binding regulations, voluntary commitments, and recommendations.** The majority of countries or entities engaging in AI policy debates have limited themselves to issuing recommendations or voluntary commitments, rather than passing enforceable regulations. There are many reasons for this imbalance, not least the fact that AI technology is developing at such a rapid pace. As a result, public authorities are reluctant to regulate a technology today that may look entirely different tomorrow, or to potentially stem the tide of innovation and homegrown development by regulating too strictly.⁴¹ On the other hand, advocates for binding regulations argue that ethical guidelines provide insufficient protections for society from AI risks.⁴²

Policy Options

- **Invest in AI research and development.** Many countries in the developing world lack robust and capitalized AI sectors – they may have growing numbers of AI startups, or increased presence from large corporations, as outlined previously, but none of the 15 AI companies with the largest market shares are based in developing countries.⁴³ Many AI scholars in the developing world argue for the need to continue building out local digital infrastructure, investing in educating skilled engineers, incentivizing the establishment of local headquarters by major technology companies, and disincentivizing the so-called “brain drain,” or the emigration of talented individuals to countries that can offer higher pay.⁴⁴
- **Develop the necessary political infrastructure.** In order to pass effective AI policies, countries need to put in place solid legislative mechanisms and incentives to regulate. Without institutions that are interested in protecting citizens’ rights in the face of AI threats, no regulation can be passed.⁴⁵ Therefore, efforts to promote good governance and an active civil society go hand-in-hand with AI regulation.
- **Engage with global AI policy efforts to promote the interests of the developing world.** As outlined above, many international policy agreements regarding AI have been produced in fora dominated by high-income countries, like the OECD or the Global Partnership on AI (GPAI), and have little to no input from the developing world.⁴⁶ Although it is vital that the developing world produce its own AI recommendations, stakeholders from the Global South may also benefit by participating in global meetings and using them as opportunities to advocate for the inclusion of policy themes benefiting developing countries.⁴⁷
- **Form regional initiatives for AI policy design and development.** It may be highly beneficial for developing countries to form their own AI policy initiatives (as high-income countries have done) and to work with each other on a regional basis to identify common challenges and risks and corresponding policy frameworks for adoption throughout the area. This practice can help streamline the development of AI policy across countries and spark national conversations about further steps to take on a country-by-country basis.⁴⁸
- **Pass proprietary AI regulations.** Of course, the foremost action a country or state can take to regulate AI is to design and issue its own AI policies – these could be targeted at AI ethics or at building the necessary infrastructure. This action must be taken by weighing key factors, as outlined above, and by considering country-specific risks and goals.

Concluding Reflections

Globally, the pursuit of responsible AI is necessary to balance the potential benefits and risks of AI. Many countries are already engaging with responsible AI principles and releasing guidelines for AI usage, and private sector actors are making voluntary commitments to ethical AI practices. However, it is not advisable to advance a one-size-fits-all approach to responsible AI, given the diverse structural considerations faced by governments, private sector actors, and individuals in developed and developing economies. An approach to AI that is developed purely by and for high-income countries cannot be exported to lower-income countries without adjustment and careful consideration.

Policymakers, stakeholders, and advocates concerned with AI regulation in the Global South ought to evaluate responsible AI principles and any insights taken from existing regulations *within the context of the developing world*. They may ask questions like: who is building the AI we are utilizing, and to what standards do they adhere? What are the incentives to regulate AI within my own country? What risks are specific to my context? And what challenges or obstacles to AI regulation may stand in my way? Asking these questions and further interrogating the role of AI in the developing world is necessary for the creation of a just, inclusive, and functional global regulatory regime for AI.

Endnotes

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