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# Introduction

This paper examines the governance, adoption, and equitable distribution of artificial intelligence (AI) across Latin America, with the goal of informing international policy recommendations to better reflect the priorities of the Global South. It is one component of a broader research initiative conducted by Deep Tech at Duke, which examines AI innovation, access, and governance across the Global South, including a parallel analysis of AI development across the African continent. The Global North and Global South are terms used to distinguish nations characterized by high levels of economic and industrial development from those with comparatively lower levels of development from those with comparatively lower levels of development, respectively.[1] Drawing on country-level policy analysis, infrastructure assessments, practitioner survey findings, and geopolitical evaluation, this paper identifies structural barriers to equitable AI adoption and proposes actionable recommendations for policymakers and international stakeholders.

AI is rapidly reshaping economies worldwide, yet its benefits remain unevenly distributed. Latin America, despite contributing substantially to global AI development, often through data-labeling work and expanding digital infrastructure,[2] is estimated to capture only 3 percent of projected AI economic gains if current trends continue.[3] This paradox of participation without proportional benefit defines the region's current position in the global AI landscape and motivates the analysis that follows.

Several Latin American nations have undertaken comprehensive efforts to establish national AI frameworks and accordingly have been selected for further examination. Brazil launched the Brazilian Artificial Intelligence Strategy in 2021 and allocated $4 billion USD through its 2024 National Plan.[4] Chile established the Centro Nacional de Inteligencia Artificial[5] and enacted EU GDPR-aligned data protection legislation.[6] Uruguay attracted major international investment, including an $850 million Google data center commitment.[7] Mexico

[1] https://www.facebook.com/cirisorg. "Global South/North Divide - CIRIS." *Center for International Relations and International Security*, 2015, www.ciris.info/learningcenter/global-south-north-divide/.

[2] Okolo, Chinasa. "AI in the Global South: Opportunities and Challenges towards More Inclusive Governance." Brookings, November 1, 2023. https://www.brookings.edu/articles/ai-in-the-global-south-opportunities-and-challenges-towards-more-inclusive-governance/.

[3] Unger, Noam, and Madeleine McLean. "An Open Door: AI Innovation in the Global South amid Geostrategic Competition." Csis.org, 2025. http://www.csis.org/analysis/open-door-ai-innovation-global-south-amid-geostrategic-competition.

[4] International Trade Administration | Trade.gov. "Brazil - Artificial Intelligence," August 21, 2025. https://www.trade.gov/country-commercial-guides/brazil-artificial-intelligence.

[5] CENIA. "CENIA," November 18, 2024. https://cenia.cl/en/home/.

[6] https://www.facebook.com/FutureofPrivacy. "AI Regulation in Latin America: Overview and Emerging Trends in Key Proposals." Future of Privacy Forum, 2026. https://fpf.org/blog/ai-regulation-in-latin-america-overview-and-emerging-trends-in-key-proposals/.

[7] López, Eduardo. "A New Data Center in Latin America." Google, August 29, 2024. https://blog.google/company-news/inside-google/around-the-globe/google-latin-america/a-new-data-center-in-latin-america/.

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introduced constitutional amendments granting Congress authority to legislate on AI.[8] These initiatives recognize AI as central to economic competitiveness and social development but simultaneously raise concerns about ethical deployment, data governance, and technological sovereignty.

Despite this regional progress, persistent infrastructural challenges constrain the region's ability to translate strategic ambition into equitable outcomes. For example, approximately one-third of the Latin American population faces unreliable technology access,[9] and the region is projected to be the slowest-growing major economy globally in 2025, with GDP growth of just 2.3% in 2025 and 2.5% in 2026.[10] Moreover, AI adoption is concentrated in formal service sectors and among larger firms, meaning that increased access may widen rather than narrow existing disparities. Critical shortages of specialized human capital, low R&D investment intensively relative to OECD benchmarks, and mounting pressure on energy and water systems further limit scalable AI deployment.

Furthermore, the geopolitical implications of this imbalance are significant. Without substantive collaboration from the Global North, Latin American nations may deepen technological relationships with alternative powers, particularly through China's Digital Silk Road initiative.[11] Countries such as Brazil wield meaningful regional influence and will play determining roles in the contours of the global AI ecosystem. Concurrently, the rapid expansion of foreign-owned data center infrastructure raises urgent questions about environmental sustainability and diminished national sovereignty over critical digital resources.[12] In Chile, for example, multinational data center investment is projected to exceed 500 megawatts of capacity by 2030,[13] straining water resources in a country contending with a fifteen-year drought.[14]

The combined findings of this paper indicate that expanded AI access alone will not produce equitable outcomes for the region. Without concurrent investments in digital and energy infrastructure, local capacity building, enforceable worker protections, and inclusive governance frameworks, Latin America risks ***remaining*** a contributor rather than a beneficiary of the global AI revolution. Accordingly, this paper's recommendations focus on subsidizing domestic AI

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[8] Breier, Kimberly. "New Artificial Intelligence Legislation in Mexico." Global Policy Watch, March 14, 2025. https://www.globalpolicywatch.com/2025/03/new-artificial-intelligence-legislation-in-mexico/.

[9] www.iadb.org. "At Least 77 Million Rural Inhabitants Have No Access to High-Quality Internet Services | IADB," October 29, 2020. https://www.iadb.org/en/news/least-77-million-rural-inhabitants-have-no-access-high-quality-internet-services.

[10] Worldbank.org. "Latin America and the Caribbean | World Bank Group," 2025. https://www.worldbank.org/ext/en/region/lac.

[11] Council on Foreign Relations. "Assessing China's Digital Silk Road Initiative." Council on Foreign Relations, 2020. https://www.cfr.org/china-digital-silk-road/.

[12] Whitecase.com. "Data Center Boom in Latin America Calls for Accelerating Infrastructure Investment | White & Case LLP," November 18, 2024. https://www.whitecase.com/insight-our-thinking/latin-america-focus-2024-data-center-infrastructure-investment.

[13] Mordor Intelligence. "Chile Data Center Market Size & Share Analysis - Industry Research Report - Growth Trends." Mordorintelligence.com, 2017. https://www.mordorintelligence.com/industry-reports/chile-data-center-market.

[14] Ibid.

models and regional datasets to reduce linguistic and cultural bias, expanding compute and digital infrastructure to close the region's investment gap, establishing enforceable environmental accountability standards for foreign-owned data center operations, and enacting comprehensive labor protections and social safety nets for workers displaced or exploited across the AI supply chain.

# Methodology

This paper employs a mixed-methods approach combining documentary policy analysis, infrastructure and geopolitical assessment, and primary survey data to examine AI governance, adoption, and equity across Latin America.

The primary analytical layer consists of comparative country-level policy analysis. Four nations, Brazil, Chile, Uruguay, and Mexico, were selected for in-depth examination on the basis of their comparatively advanced national AI strategies and their consistent prominence across industry, academic, and policy literature. For each country, the authors reviewed official government strategy documents, national action plans, legislative texts, and institutional reports to assess the scope, ambition, and implementation status of existing AI frameworks. Country selection was not intended to be exhaustive, but rather to capture the most well-documented cases of AI governance in the region, providing a strong foundation for comparative analysis.

The second methodological component draws on infrastructure and geopolitical assessment, synthesizing data from international economic organizations, including the World Bank, OECD, ECLAC, and the International Energy Agency, alongside academic literature and investigative reporting to evaluate structural constraints on AI adoption. This includes analysis of energy infrastructure, rare earth mineral supply chains, digital access disparities, and foreign investment patterns.

Third, the paper incorporates primary survey data collected as part of a broader research initiative conducted by Deep Tech at Duke examining AI innovation, access, and governance across the Global South. The survey was circulated among AI practitioners across Latin America and asked respondents, among other questions, to identify the countries they considered most influential in shaping regional AI development. Survey findings are treated as supplementary rather than primary evidence, informing the inclusion of Argentina and Colombia as additional cases warranting discussion, though not full case study treatment.

One methodological consideration that warrants acknowledgment is the uneven depth of coverage across the country profiles presented in this paper. The profile of Brazil is substantially more detailed than those of Chile, Uruguay, Mexico, Argentina, and Colombia, reflecting the relative availability and accessibility of English-language policy documentation, academic literature, and institutional reporting on Brazil's AI ecosystem. Brazil's prominence in regional AI discourse, its scale as the largest economy in Latin America, and the breadth of its published strategy documents naturally generate a richer body of source material. This disparity in documentation depth does not imply that the other nations examined have less developed or less significant AI strategies. Rather, it reflects a broader pattern in which smaller economies or those

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with less internationally circulated policy output are systematically underrepresented in the literature, a gap that itself underscores one of this paper's central arguments about equitable participation in global AI governance.[15] Future research would benefit from more granular, locally sourced analysis of AI governance developments in Chile, Uruguay, Mexico, Argentina, and Colombia, including Spanish-language policy documents, regional academic scholarship, and direct practitioner engagement, to produce a more balanced comparative assessment across the region.

Together, these three methods, documentary policy analysis, structural and geopolitical assessment, and practitioner survey, allow the paper to triangulate findings across institutional, infrastructural, and practitioner dimensions of the regional AI landscape. Future research would benefit from expanded Spanish-language source analysis, direct stakeholder interviews, and more granular country-level data, particularly for smaller economies underrepresented in the existing literature.

# Current Policy Landscape by Country

The four nations examined in this paper were selected on the basis of their comparatively comprehensive national AI strategies and their consistent prominence across the industry, academic, and policy literature. Brazil, Chile, Uruguay, and Mexico have each undertaken substantive institutional efforts to define and operationalize national strategies, ranging from dedicated research centers and data protection legislation, to constitutional amendments and multi-billion-dollar investment commitments. Their repeated identification across a wide body of literature as regional leaders in AI governance reflects both the ambition of their policy frameworks and the visibility of their implementation efforts. While other Latin American nations are actively engaging with AI, these four represent currently the most developed and well-documented cases in the region and thus provide the strongest foundation for comparative policy analysis.

## Country 1: Brazil

Brazil leads the region in research output, patents, and AI-related development, supported by a strong academic and innovation ecosystem.[16] In 2021, the government launched the Brazilian Artificial Intelligence Strategy (EBIA), followed in 2024 by the National Plan for Artificial Intelligence which allocated  $4 billion USD for AI infrastructure and development. Building on these initiatives, Brazil enacted a National Data Center Policy, known as “ReData,”

[15] Okolo, Chinasa. “AI in the Global South: Opportunities and Challenges towards More Inclusive Governance.” Brookings, November 1, 2023. https://www.brookings.edu/articles/ai-in-the-global-south-opportunities-and-challenges-towards-more-inclusive-governance/.

[16] Carvalho, Eduardo. 2025. “The Digital Pulse of Latin America: Brazil’s Rise as a Global Tech Innovator.” Interconnections - the Equinix Blog. Equinix. May 7, 2025. https://blog.equinix.com/blog/2025/05/07/the-digital-pulse-of-latin-america-brazils-rise-as-a-global-tech-innovator/.

officially established by Provisional Measure No. 1.318/2025,[17] to attract additional investment and expand the country's digital infrastructure. The policy is expected to introduce tax incentives, legal security, and specific regulatory guidelines for the sector, underscoring Brazil's continued commitment to advancing its digital and AI ecosystem.[18] [19]

Despite these advances, Brazil faces several persistent challenges. A significant shortage of specialized human capital remains a primary concern, with many companies reporting a lack of digital skills and awareness (46% of firms in one study) and regulatory uncertainty (only 28 % reported awareness of AI regulatory debates).[20] Moreover, R&D investment intensity remains lower than in advanced economies, and Brazil continues to grapple with uneven digital infrastructure, particularly outside major metropolitan centres.[21] Additionally, while high-level ethical and strategic principles are in place, translating them into concrete regulatory and industrial frameworks with clear rules, liability regimes, and scalable sectoral applications remains a significant challenge.[22]

**Current Policies**

Brazil's Artificial Intelligence for the Common Good Plan (2024–2028) signals a clear move toward creating an AI environment that is fair, widely accessible, and self-determined. Shaped by broad discussions across government bodies, businesses, and community groups, it shows how AI can support social development and environmental protection while reducing reliance on foreign technology. Within this framework, certain priorities emerge: rules governing AI use, funding drawn from both public and private sectors, and the removal of existing barriers to responsible integration.

At the heart of Brazil's AI plan lies the guiding principle of "AI for the Common Good," described as people-focused, open, and respectful of national sovereignty. Current guidelines emphasize respect for individuals, broad accessibility, and safeguards against algorithmic bias. Officials position artificial intelligence as a tool for advancing sustainability targets, connecting technological progress with environmental stewardship.

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[17] BNamericas. 2025. "Brazil Launches Anticipated Policy to Cut Taxes and Attract Investment in Data Centers." BNamericas.com. BNamericas. September 18, 2025. https://www.bnamericas.com/en/features/brazil-launches-policy-to-cut-taxes-and-attract-investment-in-data-centers.

[18] Carvalho, Eduardo. 2025. "The Digital Pulse of Latin America: Brazil's Rise as a Global Tech Innovator." Interconnections - the Equinix Blog. Equinix. May 7, 2025. https://blog.equinix.com/blog/2025/05/07/the-digital-pulse-of-latin-america-brazils-rise-as-a-global-tech-innovator/.

[19] Reuters Staff. 2025. "Brazil Launches Proposals to Attract Data Centers, Regulate Digital Competition." Reuters, September 18, 2025. https://www.reuters.com/world/americas/brazil-launches-proposals-attract-data-centers-regulate-digital-competition-2025-09-18/.

[20] "Artificial Intelligence in Brazil: 9 Million Companies Will Have Adopted AI (2025)," Ília Digital, September 10, 2025, https://ilia.digital/en/artificial-intelligence-in-brazil-9-million-companies-will-have-adopted-ai-2025/

[21] Nakayama, Luis Filipe, William Warr Binotti, Naira Link Woite, Chrystinne Oliveira Fernandes, Pia Gabrielle Alfonso, Leo Anthony Celi, and Caio Vinicius Regatieri. 2023. "The Digital Divide in Brazil and Barriers to Telehealth and Equal Digital Health Care: Analysis of Internet Access Using Publicly Available Data." Journal of Medical Internet Research 25 (1): e42483. https://doi.org/10.2196/42483.

[22] "Regulation of Artificial Intelligence in Brazil and Worldwide," LicksLegal, September 17, 2025, https://www.lickslegal.com/post/regulation-of-artificial-intelligence-in-brazil-and-worldwide

As the only Latin American nation whose official language is Portuguese, Brazil's domestically developed language models and AI tools may have limited transferability across the broader Spanish-speaking majority of the continent, potentially constraining regional knowledge exchange and the scalability of AI solutions developed within one national context to others. Accordingly, to strengthen self-reliance, the strategy prioritizes the development of large-scale AI models in Portuguese, independent data networks, and domestic chip and technology production. On ethics and regulation, the plan emphasizes clear oversight through accountability frameworks, personal data protection, algorithmic transparency, and robust cybersecurity measures throughout AI systems. Brazil also aims to expand its influence in worldwide AI policy through partnerships grounded in equity and openness.

In practice, these priorities are operationalized through five structured pillars: infrastructure development, AI skills education, modernization of public services, promotion of industry innovation, and establishment of regulatory systems. By aligning such efforts, authorities seek to expand digital access, strengthen domestic capabilities, and improve institutional efficiency, while embedding AI oversight within Brazil's governance structures.

**Public and Private Investments**

A central element of Brazil's AI strategy is its wide-ranging funding approach. From 2024 to 2027, it has allocated R$23.03 billion (around $4.43 billion USD) to strengthen AI across science, technology, education, and business transformation. Funding flows through multiple state mechanisms, including the National Fund for Scientific and Technological Development (FNDCT), direct federal expenditure, and financing via national development banks, in combination with cooperative agreements with private sector partners.

Investments span multiple domains, including advanced supercomputing infrastructure, environmentally sustainable data systems, national AI frameworks and key datasets, skill development through grants and training initiatives, and digital modernization in health, education, or environmental monitoring. The majority of funding is directed toward private enterprises with the aim of sharpening industrial competitiveness, improving technology supply chains, and supporting new ventures and smaller firms in integrating modern tools. A portion of funds is also allocated to regulatory development and oversight, ensuring that legal and ethical considerations guide the long-term application of AI. This funding approach reflects the government's intent to expand domestic research capacity while fostering private sector engagement through financing instruments, innovation incentives, and university-industry partnerships.

**Current Challenges**

Despite its ambitions, Brazil faces significant challenges in translating its AI strategy into practice. A primary obstacle is the development of resilient domestic systems capable of handling large data volumes, advanced computing tasks, and sustainable AI expansion. While current funding commitments are expected to address existing shortfalls, achieving full

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technological independence demands more sustained financial investment, skilled workforce, and robust domestic production networks over time.

Moreover, human capital development represents an equally pressing challenge. Brazil must build technical capacity across different stages, encompassing not only foundational digital literacy, but also advanced AI expertise, while simultaneously supporting workers displaced by automation. Equitable access to education matters greatly, particularly given the country's widespread social and economic inequalities.

A third challenge concerns the development and enforcement of effective regulation. As artificial intelligence penetrates sectors such as healthcare or manufacturing, Brazil must contend with complex questions regarding algorithmic fairness, data privacy, cybersecurity, and broader societal impacts. Crafting policies that protect users without impeding innovation requires sustained cooperation across agencies, continuous oversight, and regulatory frameworks flexible enough to evolve alongside rapidly changing technology.

Ultimately, Brazil's central challenge is advancing technological development while ensuring equitable access and institutional accountability. Its current strategy emphasizes public participation as a safeguard against biased or exclusionary AI outcomes, yet sustaining this balance will depend on Brazil's ability to prioritize resilient systems, cross-sectoral collaboration, and ongoing civic engagement.

## Country 2: Chile

Chile has taken significant steps to develop a comprehensive national strategy and institutional architecture for artificial intelligence. Its National AI Policy and action plan (2021-2030) has three key pillars: enablers (data, talent, and infrastructure), development and adoption, and ethics and regulation. The plan positions AI as a cross-cutting agenda for productivity and social inclusion.[23] To implement this strategy, the government created the Centro Nacional de Inteligencia Artificial (CENIA), which operates within Chile's National Agency for Research and Development (ANID) and supports research programs in deep learning, human-centered AI, and technology transfer to public services.[24] Chile has further aligned its governance framework with international standards by adopting the OECD AI Principles and enacting a new Personal Data Protection Law, Law 21.719, in 2024, which established a national data protection agency and required compliance with EU GDPR-style regulation in 2026.[25]

[23] UNESCO. "Chile Launches a National AI Policy and Introduces an AI Bill Following UNESCO's Recommendations." UNESCO, October 10, 2024. https://www.unesco.org/en/articles/chile-launches-national-ai-policy-and-introduces-ai-bill-following-unescos-recommendations-0

[24] CENIA. "CENIA to Lead the First Regional Artificial Intelligence Index." Centro Nacional de Inteligencia Artificial, January 23, 2023. https://cenia.cl/en/2023/01/23/cenia-to-lead-the-first-regional-artificial-intelligence-index/

[25] Humeres, Mónica. "Cooling Down AI Regulation Controversies: Three Closure Strategies in Chile." Big Data & Society (2025). https://doi.org/10.1177/20539517241311067;

Investment and adoption trends reflect strong public–private synergy. Through the Corporación de Fomento de la Producción (CORFO) and InvestChile, the government has funded AI-intensive projects, including national supercomputing infrastructure and AI-driven mining exploration models.[26] The private sector has similarly demonstrated rapid AI penetration, most notably through NotCo, whose "Giuseppe" platform leverages AI to design plant-based food products in collaboration with major international brands.[27] At the regional level, Chile ranks among the leaders of AI development according to the Latin American Artificial Intelligence Index ILIA 2025.[28] Nonetheless, remaining key challenges are a shortage of specialized human capital, low R&D investment intensity compared to OECD peers, and difficulty translating broad ethical principles into concrete regulatory and industrial frameworks.[29] While scholars note that Chile has succeeded in "cooling down" policy controversies of AI, the issues of accountability, labor elimination, and unequal access to technology have yet to be clearly addressed.[30]

## Country 3: Uruguay

Uruguay's AI adoption has been bolstered by its strong STEM education system and active urban innovation communities.[31] The country has attracted significant international investment in recent years: Google committed $850 million in 2024 for its second data center in Uruguay, while Microsoft launched its Co-Innovation Lab there in 2022, the first AI and Internet of Things (IoT) lab in the region and only the third established outside the United States.[32] [33] [34]

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Future of Privacy Forum (FPF). "Chile's New Data Protection Law: Context, Overview, and Key Takeaways." FPF Blog, January 2025. https://fpf.org/blog/chiles-new-data-protection-law-context-overview-and-key-takeaways

[26] "Chile: Leader in Artificial Intelligence in Latin America." InvestChile Blog, January 20, 2025. https://blog.investchile.gob.cl/chile-leader-artificial-intelligence-latin-america

[27] The Lauder Institute. The Lauder Global Business Insight Report 2022. Philadelphia: The Lauder Institute, 2022. https://lauder.wharton.upenn.edu/wp-content/uploads/2022/02/2022-Lauder-Report.pdf

[28] Economic Commission for Latin America and the Caribbean (ECLAC). "ILIA 2025: Consolidated as a Policy-Design Instrument for Artificial Intelligence in the Region." ECLAC Notes, October 20, 2025. https://www.cepal.org/en/notes/ilia-2025-consolidated-policy-design-instrument-artificial-intelligence-region

[29] Organisation for Economic Co-operation and Development (OECD), Making Digital Transformation Work for All in Chile, OECD Economics Department Working Paper No. 1668 (Paris: OECD Publishing, 2021), https://one.oecd.org/document/ECO/WKP(2021)35/en/pdf ; International Science Council, Chile: Finding Possibilities to Apply Artificial Intelligence in an Existing Research Financing Ecosystem (Paris: International Science Council, 2024), https://council.science/wp-content/uploads/2025/02/AI-Paper-Case-Study-Chile_V1.pdf

[30] Humeres, Mónica. "Cooling Down AI Regulation Controversies: Three Closure Strategies in Chile." Big Data & Society (2025). https://doi.org/10.1177/20539517241311067

[31] Bratton, Elizabeth. 2025. "Uruguay Launches New Innovation Program - Latin America Reports." Latin America Reports. May 28, 2025. https://latinamericareports.com/uruguay-launches-new-innovation-program/11495/.

[32] Reuters Staff. 2024. "Google to Open Second Data Center in Latin America, to Invest over $850 Mln." Reuters, August 30, 2024. https://www.reuters.com/technology/google-open-second-data-center-latin-america-invest-over-850-mln-2024-08-3

[33] López, Eduardo. 2024. "A New Data Center in Latin America." Google. Google. August 29, 2024. https://blog.google/around-the-globe/google-latin-america/a-new-data-center-in-latin-america/.

[34] areaw3.com, AreaW3 www. 2022. "Microsoft Chooses Uruguay as the Location for Its New Artificial Intelligence and Internet of Things Lab. - News." XXI. 2022.

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Whether these commitments will truly benefit Uruguay's AI development remains uncertain, particularly given growing public concern over water scarcity and the environmental impact of data center expansion.[35] A lack of transparency, often justified on grounds of corporate secrecy, has intensified public demand for clearer answers regarding the scope and consequences of data centers.[36] Striking an appropriate balance between AI development and environmental accountability remains a central challenge for Uruguay as it pursues its broader digital ambitions.

Recognizing AI's rapid growth, the country launched its initial National Artificial Intelligence Strategy in 2021 to "promote the safe and responsible use of artificial intelligence to benefit people and all sectors of society."[37] The strategy, which was revised and re-approved in November of 2024, establishes guidelines for ethical and responsible AI development and use, while advancing AI applications in public services and government management.[38] It also lays the groundwork for fostering public and private investment, enabling Uruguay to build the necessary infrastructure and capacities for AI deployment across both sectors.[39]

## Country 4: Mexico

Mexico's engagement with artificial intelligence governance began in 2018, when the Federal Executive of Mexico released the report "Towards an AI Strategy in Mexico," outlining the country's AI adoption plan across five focus areas: governance, research and development, capacity building and education, data infrastructure, and ethics and regulation.[40]

Building on this foundation, the Senate and civil society jointly established the National Alliance for Artificial Intelligence (ANIA) in 2023. ANIA was created to inform Mexico's development of a national AI strategy through the establishment of standards and good practices. This governance effort gained further momentum in February of 2025, when Congressman Ricardo Monreal Ávila, the head of the majority Morena parliamentary group, introduced a bill to amend the Mexican Constitution. The bill would allow Congress to legislate on AI and adopt a

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https://www.uruguayxxi.gub.uy/en/news/article/microsoft-eligio-a-uruguay-como-sede-de-su-nuevo-laboratorio-de-inteligencia-artificial-e-internet-de-las-cosas/.

[35] Narayan Ammachchi. "Water-Guzzling Data Centers Spark Outrage across Latin America - Nearshore Americas." Nearshore Americas, January 30, 2025. https://nearshoreamericas.com/water-guzzling-data-centers-spark-outrage-across-latin-america/.

[36] Montgomery, Blake. "Data Centers Meet Resistance over Environmental Concerns as AI Boom Spreads in Latin America." the Guardian. The Guardian, November 10, 2025. https://www.theguardian.com/technology/2025/nov/10/data-centers-latin-america.

[37] Oecd.ai. "OECD AI Policy Observatory Portal," 2025. https://oecd.ai/en/dashboards/policy-initiatives/national-artificial-intelligence-strategy-20242030-8923.

[38] International Trade Administration. "Uruguay - Digital Economy." International Trade Administration | Trade.gov, 19 Sept. 2024, www.trade.gov/country-commercial-guides/uruguay-digital-economy.

[39] "OECD AI Policy Observatory Portal." Oecd.ai, 2025, oecd.ai/en/dashboards/policy-initiatives/national-artificial-intelligence-strategy-20242030-8923.

[40] "Mexico AI Strategy." Datagovhub.elliott.gwu.edu, datagovhub.elliott.gwu.edu/mexico-ai-strategy/.

General Law on the Use of AI,[41] representing a significant step toward formal constitutional recognition of AI governance.

Alongside these policy developments, significant private sector investments have accelerated the expansion of Mexico's AI infrastructure. In 2024, Microsoft announced a $1.3 billion investment over three years to enhance AI infrastructure and expand connectivity, with a particular focus on increasing AI adoption among small and medium-sized enterprises to accelerate the country's broader digital transformation.[42] In 2025, Salesforce followed suit by committing a $1 billion investment over the next 5 years to expand its operations and drive further AI adoption across the country.[43]

## Survey Findings

Argentina and Colombia emerged from survey responses as notable cases warranting further consideration. While the scope of this paper does not permit full case study treatment of either nation, their inclusion in the survey findings reflects their growing relevance to regional AI governance discussions and is acknowledged accordingly. Below are some brief descriptions of their AI strategies:

### Argentina

Argentina has emerged as a notable actor in Latin America's AI landscape, distinguished by a mature digital culture and a growing technology sector. The country has produced 11 unicorn companies to date, joined the Hiroshima AI Process Friends Group led by the G7, and maintains an internet penetration rate nearing 90 percent,[44] providing a stronger baseline for AI adoption than many of its regional peers.

Under President Javier Milei, Argentina has pursued a deregulatory agenda with explicit ambitions to position the country as a regional AI hub. The administration has redirected Argentine foreign policy toward the United States and actively sought to create opportunities for the U.S. technology sector,[45] moving to reorient away from its previous technological entanglements with China and toward U.S.-aligned governance frameworks. Argentina's domestic development of small modular reactors (SMRs) is designed in part to meet the energy

[41] Breier, Kimberly. "New Artificial Intelligence Legislation in Mexico." Global Policy Watch, 14 Mar. 2025, www.globalpolicywatch.com/2025/03/new-artificial-intelligence-legislation-in-mexico/.
[42] News Center Latinoamérica. "Microsoft Announces $1.3 Billion USD Investment in Cloud and AI Infrastructure Supporting Inclusive Growth through Technology and Skilling Programs in Mexico - News Center Latinoamérica," September 24, 2024. https://news.microsoft.com/es-xl/microsoft-announces-1-3-billion-usd-investment-in-cloud-and-ai-infrastructure-supporting-inclusive-growth-through-technology-and-skilling-programs-in-mexico/.
[43] "Salesforce Investing $1B in Mexico to Boost Economic Growth and Transform Businesses into Agentic Enterprises." Salesforce, 8 Oct. 2025, www.salesforce.com/news/press-releases/2025/10/08/mexico-investment/.
[44] Korn, Dan, and Juan Cruz. "The United States, Argentina, and Seizing the Moment for American AI." Csis.org, 2025. https://www.csis.org/analysis/united-states-argentina-and-seizing-moment-american-ai.
[45] Ibid.

demands of next-generation AI infrastructure,[46] positioning the country as a potential node in the region's broader AI deployment architecture. Nonetheless, significant challenges remain, including economic volatility, historical dependency on foreign capital, and the need for large-scale workforce reskilling, all of which will determine whether Argentina can translate its strategic ambitions into durable institutional capacity.

## Colombia

Colombia was among the first countries in the region to release a dedicated Ethical Framework for AI in 2020,[47] and has consistently aligned its digital agenda with international standards, particularly those of the OECD and UNESCO. Building on this foundation, the government adopted CONPES 4144, the National Policy for Artificial Intelligence, in February 2025, establishing a multi-year strategic roadmap through 2030 that integrates AI into broader national development goals, with an emphasis on inclusive economic growth, closing digital divides, and protecting fundamental rights.[48]

CONPES 4144 is organized around a risk-based classification system that mirrors the European Union's AI Act, categorizing AI applications into four tiers: unacceptable risk, high risk, limited risk, and low risk.[49] The policy mandates over 100 concrete actions and is led jointly by the Department of National Planning, the Ministry of Information and Communications Technologies, and the Ministry of Science, Technology and Innovation.[50] Governance is further supported by the Superintendencia de Industria y Comercio, which serves as the national data protection authority with investigative and enforcement powers over AI systems that process personal data, including the authority to impose fines of up to 2,000 monthly minimum wages for violations.[51]

Colombia's regulatory approach is notably co-evolutionary, combining horizontal strategic policy with emerging sector-specific legislation, regulatory sandboxes for fintech AI applications, and a planned National AI Observatory to track algorithmic impacts across society.[52] The country is also advancing pending legislation, including Statutory Bill 154 of 2024, which if passed would represent the first comprehensive, binding AI law in Colombia, granting citizens the right to request explanations of automated decisions and mandating human oversight in sensitive administrative contexts.[53] Significant challenges remain, however, including the need to operationalize the CONPES action plan at scale, address persistent regional

[46] Ibid.
[47] Regulations.ai. "Colombia AI Regulation Overview," January 6, 2026. https://regulations.ai/regulations/colombia-summary.
[48] Ibid.
[49] Ibid.
[50] Ibid.
[51] Ibid.
[52] Ibid.
[53] Ibid.

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inequalities in digital access, and translate a growing body of proposed legislation into enforceable statutory law.

## Overall Takeaways

Across the four primary country profiles, and two supplementary profiles based on our survey responses, several consistent strengths and persistent gaps emerge in Latin America's current approach to AI governance. Regarding strengths, the region has demonstrated a meaningful institutional commitment to establishing national frameworks. Brazil, Chile, Uruguay, Mexico, and Colombia have each adopted formal national strategies that articulate priorities across infrastructure, ethics, regulation, and human capital development. Moreover, a common thread across these frameworks is the alignment with international standards, particularly OECD AI principles and similar EU GDPR data protection requirements. Such alignment reflects the region's deliberate effort to integrate itself into global governance norms as opposed to developing unique governance structures that might be isolated from the broader international discussion. For example, Chile enacted the Personal Data Protection Law 21.719 in 2024, mandating compliance with similar EU GDPR regulation by 2026.[54] Colombia explicitly references OECD and UNESCO frameworks in its CONPES 4144 policy.[55] Additionally, public-private investment has also emerged as a consistent feature across the region, with significant foreign capital commitments from technology firms complementing domestic public funding mechanisms.[56]

Despite these advances, several structural gaps persist across the region. First, the translation of high-level strategic principles into enforceable, concrete regulatory frameworks remains incomplete in nearly every case examined. Moreover, while ethical guidelines and national strategies are broadly in place, binding legislation with clear liability regimes, enforceable mechanisms, and accountability structures is still nascent or pending in most countries. For example, Colombia's Statutory Bill 154 of 2024, which would represent the country's comprehensive binding AI law, remains under review.[57] Similarly, scholars note that despite Chile's success in moderating policy controversies regarding AI, substantive questions about AI's broader impacts have yet to be adequately resolved.[58] Second, human capital shortages represent a nearly universal constraint, with Brazil citing not only a lack of digital

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[54] UNESCO. "Chile Launches a National AI Policy and Introduces an AI Bill Following UNESCO's Recommendations." UNESCO, October 10, 2024. https://www.unesco.org/en/articles/chile-launches-national-ai-policy-and-introduces-ai-bill-following-unescos-recommendations-0.
[55] Ibid.
[56] Reuters Staff. 2024. "Google to Open Second Data Center in Latin America, to Invest over $850 Mln." Reuters, August 30, 2024.
[57] https://regulations.ai/regulations/colombia-summary
[58] Humeres, Mónica. "Cooling Down AI Regulation Controversies: Three Closure Strategies in Chile." Big Data & Society (2025). https://doi.org/10.1177/20539517241311067

literacy but also a lack of AI regulatory awareness[59] impacting the region's ability to develop and deploy AI domestically rather than blindly adopting foreign AI systems. Third, infrastructure inequality remains a fundamental barrier to the development of AI with much of the region facing unreliable access to technology and the concentration of AI's benefits remaining in urban sectors.[60] Finally, the region's dependence on foreign technology firms both for innovation and infrastructure raises ongoing concerns about technological sovereignty, data governance, and the equitable distribution of economic returns from AI deployment, particularly as Latin America is projected to capture only 3% of global AI economic gains if current trends continue.[61] The structural conditions underlying these trends warrant deeper examination, as each carries significant implications for the equitable governance of AI across the Global South. The sections that follow analyze the key challenges shaping AI development across Latin America, encompassing capacity constraints, uneven adoption patterns, dependency and marginalization risks, and the social and environmental costs that disproportionately burden the region.

# Challenges in Latin America

## Capacity Constraints

### Economic and Investment Constraints

The economic constraints facing Latin America fundamentally shape the region's capacity to participate meaningfully in the artificial intelligence revolution and capture proportional benefits from AI-driven economic transformation. The World Bank highlights that Latin America is the slowest-growing global region, with GDP growth projected at around 2.1% in 2025 and little improvement in per-capita income over the past decade.[62] Furthermore, other sources such as the OECD and ECLAC consistently identify weak investment climates and significant financing gaps as barriers to inclusive growth for the region.[63]/[64] As warned by Unger

[59] Artificial Intelligence in Brazil: 9 Million Companies Will Have Adopted AI (2025)," Ília Digital, September 10, 2025, https://ilia.digital/en/artificial-intelligence-in-brazil-9-million-companies-will-have-adopted-ai-2025/
[60] https://www.iadb.org/en/news/least-77-million-rural-inhabitants-have-no-access-high-quality-internet-services
[61] Unger, Noam, and Madeleine McLean. "An Open Door: AI Innovation in the Global South amid Geostrategic Competition." Csis.org, 2025.
http://www.csis.org/analysis/open-door-ai-innovation-global-south-amid-geostrategic-competition.
[62] World Bank. "Latin America and the Caribbean." Washington, DC: World Bank, 2025.
https://www.worldbank.org/en/region/lac/overview.
[63] United Nations Economic Commission for Latin America and the Caribbean (ECLAC). Preliminary Overview of the Economies of Latin America and the Caribbean 2024. Santiago: ECLAC, 2024.
https://www.cepal.org/en/publications/81105-preliminary-overview-economies-latin-america-and-caribbean-2024.
[64] OECD. Latin American Economic Outlook 2024. Paris: OECD Publishing, 2024.
https://www.oecd.org/en/publications/2024/12/latin-american-economic-outlook-2024_60523697/full-report/overview_b80bea0f.html.

and McLean (2025), "if current development trends continue, it is expected[65] that only 3 percent of the projected AI economic benefits will go to Latin America, 6 percent to developed countries in Asia (excluding China), and a mere 8 percent to the combined populations of "Africa, Oceania, and other Asian markets" (again, excluding China)."[66] Ultimately, the weak investment climate reflects a constellation of factors, including regulatory uncertainty, institutional limitations, and macroeconomic volatility that collectively discourage both domestic and foreign investment in long-term productive capacity. For artificial intelligence development, these investment constraints prove particularly acute given the substantial upfront capital requirements for building data centers, training research personnel, and developing domestic AI capabilities. The financing gaps that characterize the region mean that even where governments or private actors recognize the strategic importance of AI investment, mobilizing the necessary resources remains profoundly challenging.

## Infrastructure and Energy Constraints

The notion of the Global South as "tech takers"[67] stems from the economic and infrastructural deficits that limit the region's AI development. With approximately one third of the population in Latin America facing unpredictable technological accessibility, concerns for building stronger digital and energy infrastructure underscore the fact that technology access alone is insufficient without the foundational systems to support equitable deployment.[68] Beyond technological accessibility, the region must confront significant limitations in energy infrastructure, which is critical to sustaining the substantial computational demands of AI systems. These infrastructure deficits exist not as isolated technical shortcomings, but as interconnected systemic constraints that shape the region's relationship to emerging technologies. The absence of reliable digital and energy infrastructure means that even where AI technologies become notionally available, their practical deployment and sustained operation remain uncertain.

## Rare Earth Minerals

Latin America sits atop some of the world's most consequential mineral deposits. Chile holds the largest copper reserves on earth and the fourth largest lithium deposits. Brazil ranks

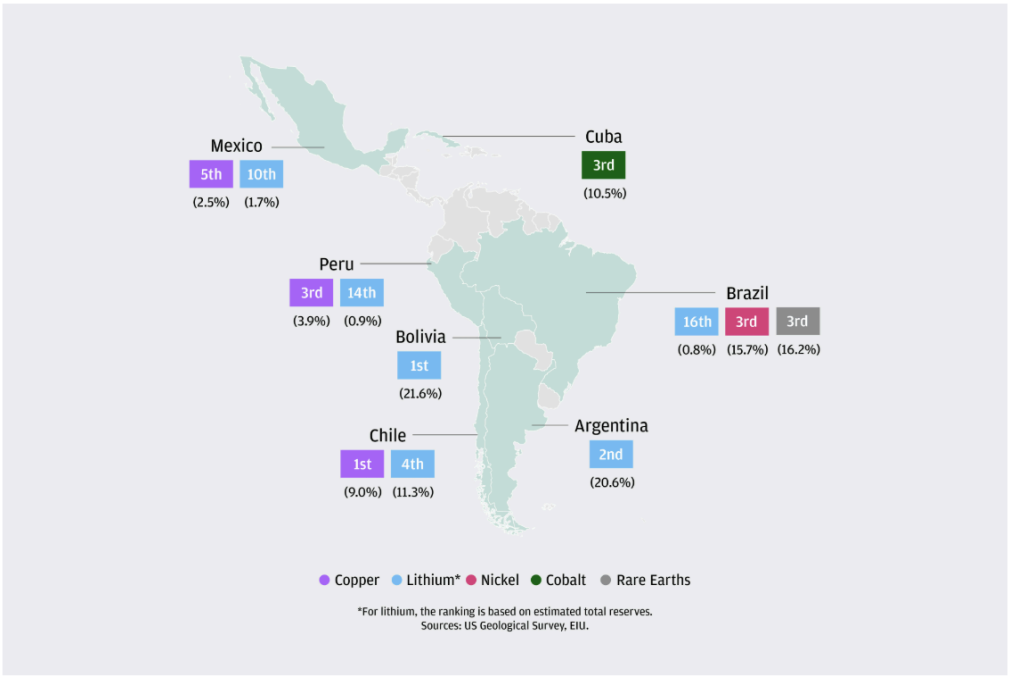
[65] Adams, Rachel. "AI Is Bad News for the Global South." Foreign Policy, December 17, 2024. https://foreignpolicy.com/2024/12/17/ai-global-south-inequality/?tpcc=fp_this_week&utm_source=Sailthru&utm_medium=email&utm_campaign=FP%20This%20Week%20-%20011325&utm_term=fp_this_week.

[66] Unger, Noam, and Madeleine McLean. "An Open Door: AI Innovation in the Global South amid Geostrategic Competition." Csis.org, 2025. http://www.csis.org/analysis/open-door-ai-innovation-global-south-amid-geostrategic-competition.

[67] Feakin, Tobias. "AI Geopolitics beyond the US-China Rivalry." *Aspen Digital*, 18 Mar. 2025, www.aspendigital.org/blog/ai-geopolitics-beyond-the-us-china-rivalry/.

[68] United Nations Economic Commission for Latin America and the Caribbean (ECLAC). Preliminary Overview of the Economies of Latin America and the Caribbean 2024. Santiago: ECLAC, 2024. https://www.cepal.org/en/publications/81105-preliminary-overview-economies-latin-america-and-caribbean-2024.

third globally in both nickel and rare earth elements.[69] Argentina, though it currently produces no copper at all, has six projects expected to come online before 2030.[70] The region's resource wealth presents a potential opportunity for strategic positioning in light of the explosive growth of artificial intelligence.




EIU, US Geological Survey 2022

Rare earth minerals are a crucial foundation of the AI technology, they are essential inputs to the chips, motors, and sensors that underlie modern digital systems. Copper is currently the most immediately critical of these.[71] Every data center requires copper for power transmission, wiring, and cooling.[72] Lithium is another mineral mined in the LAC region integral

[69] "Global Race for Critical Minerals… a Unique Opportunity for Latin America? | J.P. Morgan Private Bank Latin America." Privatebank.jpmorgan.com, privatebank.jpmorgan.com/latam/en/insights/markets-and-investing/global-race-for-critical-minerals-a-unique-opportunity-for-latin-america.

[70] Stewart, Sara. "Artificial Intelligence and the Critical Minerals Crunch." *Foreignpolicy.com*, FP Analytics, 18 July 2025, fpanalytics.foreignpolicy.com/2025/07/18/artificial-intelligence-critical-minerals-supply-chains/.

[71] Scheyder, Ernest. "AI to Boost Copper Demand 50% by 2040, but More Mines Needed to Ensure Supply, S&P Says." Reuters, 8 Jan. 2026, www.reuters.com/business/energy/ai-boost-copper-demand-50-by-2040-more-mines-needed-ensure-supply-sp-says-2026-01-08/.

[72] "Copper in the Age of AI | S&P Global." *S&P Global*, 2026, www.spglobal.com/en/research-insights/special-reports/copper-in-the-age-of-ai.

to the back-up battery system that upholds the critical uninterrupted power supply demands to keep facilities running during outages.[73]

As companies rush to construct data centers, the demand for critical resources is accelerating faster than supply can follow. According to the International Energy Agency, data center buildout alone could increase global copper demand by roughly 2 percent by 2030. An additional 512 kilotonnes of copper will be needed for data centers by 2030, even as global copper supply is projected to face a structural shortfall by 2035.[74] Forecasts suggest that at the current rate, production will only be able to cover only about two-thirds of global requirements. The consequences of this have already begun to manifest in the form of delayed data center construction, and stalled chip production as critical mineral supplies tighten, and the prices for key components skyrocketing.[75] In 2025 copper was added to the Draft List of Critical Minerals, reflecting growing recognition of these pressures.[76]

Against this backdrop, investment is flowing into Latin America's mining industry at a scale that could fundamentally reshape the region's role in global supply chains.[77] Nearly $50 billion is being directed toward copper projects across the region, with production expected to begin before 2030. Argentina alone, though currently absent from copper production entirely, has the potential to generate as much as 793,000 tons per year from its six planned projects, an amount which would place the nation among the top ten copper producers globally.[78]

And yet, resource wealth has not automatically translated into economic development[79] or development of AI infrastructure. Latin America has historically been extracted and exported for raw minerals while the higher-value work of processing, refining, manufacturing, and the sale of finished products has been offshored.[80] The region loses not only the revenue from those goods, but the skilled technical jobs, the industrial expertise, and the broader economic development that comes with moving up the value chain. Rare earth minerals illustrate this dynamic clearly:

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[73] Scheyder, Ernest. "AI to Boost Copper Demand 50% by 2040, but More Mines Needed to Ensure Supply, S&P Says." Reuters, 8 Jan. 2026, www.reuters.com/business/energy/ai-boost-copper-demand-50-by-2040-more-mines-needed-ensure-supply-sp-says-2026-01-08/.

[74] World Energy Outlook Special Report Energy and AI.

[75] Stewart, Sara. "Artificial Intelligence and the Critical Minerals Crunch." Foreignpolicy.com, FP Analytics, 18 July 2025, fpanalytics.foreignpolicy.com/2025/07/18/artificial-intelligence-critical-minerals-supply-chains/.

[76] "2025 Draft List of Critical Minerals." *Federal Register*, 26 Aug. 2025, www.federalregister.gov/documents/2025/08/26/2025-16311/2025-draft-list-of-critical-minerals.

[77] "IDB Group Launches IDB LAC Minerals." IDB, 2026, www.iadb.org/en/news/idb-group-launches-idb-lac-minerals. Accessed 18 Mar. 2026.

[78] Scheyder, Ernest. "AI to Boost Copper Demand 50% by 2040, but More Mines Needed to Ensure Supply, S&P Says." Reuters, 8 Jan. 2026, www.reuters.com/business/energy/ai-boost-copper-demand-50-by-2040-more-mines-needed-ensure-supply-sp-says-2026-01-08/.

[79] Falconí, Fander, et al. "Extraction and Dematerialization in Latin America, 1970–2023." Ecological Economics, vol. 244, 7 Feb. 2026, p. 108947, www.sciencedirect.com/science/article/pii/S0921800926000327, https://doi.org/10.1016/j.ecolecon.2026.108947.

[80] "Fostering Industrialization and Value Chains Is Crucial for Taking Advantage of the Region's Natural Resources." Economic Commission for Latin America and the Caribbean, 2016, www.cepal.org/en/news/fostering-industrialization-and-value-chains-crucial-taking-advantage-regions-natural-resources. Accessed 18 Mar. 2026.

mined in the region, but transformed into value elsewhere (and then having to be bought back at a more expensive rate).

By contrast, China has leveraged a relatively modest mineral reserves by building a vertically integrated supply chain for rare earth minerals.[81] Beijing controls most of the global refining and downstream production, capturing the economic rents, skilled jobs, and industrial expertise that Latin America loses when ores are shipped abroad.[82] Control over critical mineral supply chains has also become a instrument of geopolitical power which China has not hesitated to leverage.

With United States and ally countries look for alternative sources to reduce dependence on Chinese supply chains, there is an opportunity for Latin American countries to adopt a similar model, investing in midstream and downstream capabilities to retain more value locally, develop technical expertise, and climb the industrial ladder rather than remaining exporters of raw materials.[83]As a step in this direction, Chile and Mexico have enacted export bans on rare minerals to foster domestic processing abilities.

Even so, Latin American countries should proceed thoughtfully in order to avoid repeating past mistakes. Where extraction proceeds without strong community protections and environmental safeguards, the people living closest to these resources often bear the heaviest costs such as displacement, environmental harm, and limited recourse.[84] Mechanisms to protect affected communities have often been weak or absent, leaving local populations exposed while the benefits accrue elsewhere. This is a tension which the Latin American region will confront as its natural resources increase in demand. The region holds an unmatched opportunity to drive growth, attract investment, and build the kind of industrial capacity that can sustain development for generations. But realizing that potential means moving beyond extraction and developing domestic processing and manufacturing capacity, building the institutions that can protect communities and environments, and ensuring that the value created by these resources stays in the region. The minerals are there. Work is needed to ensure the conditions for a genuine, inclusive transformation can be built around them.

# Uneven AI Adoption

## Service Adoption Over Frontier Innovation

Within this constrained environment, AI adoption in Latin America tends to concentrate on service-sector applications rather than frontier innovation. AI is mostly being used to improve services rather than to develop cutting-edge, breakthrough AI technologies. Interviews conducted

[81] Feng, Emily. "How China Came to Rule the World of Rare Earth Elements." NPR, July 23, 2025. https://www.npr.org/2025/07/23/nx-s1-5475137/china-rare-earth-elements.
[82] https://www.uscc.gov/sites/default/files/2025-11/Chapter_8--China_Shock_2.0.pdf
[83] Zhou, Weihuan. "China's Strategy on Critical Minerals Surpasses Geopolitics." World Economic Forum, November 19, 2024. https://www.weforum.org/stories/2024/11/china-critical-mineral-strategy-beyond-geopolitics/.
[84] Americas, Alianza. "Mining: The Cost of 'Development' in Latin America | Alianza Americas." Alianzaamericas.org, 2025. https://www.alianzaamericas.org/post/mining-the-cost-of-development-in-latin-america.

in Chile reveal that most AI adoption occurs in service, administrative, and governance settings, with users emphasizing trust and transparency rather than celebrating technological breakthroughs.[85] Post-pandemic digitalization has expanded online platforms for health, education, and work, yet the International Monetary Fund (IMF) notes that AI's productivity benefits remain concentrated in formal sectors and among larger firms capable of automating processes.[86] This uneven adoption pattern means that increased AI access may widen rather than narrow existing disparities in goods and services availability.

## Two-Speed Adoption Across the Region

Current trends show two speeds of AI adoption in Latin America. While "pioneer" nations like Chile, Brazil, and Uruguay have established national strategies, over one-third of the region remains an "explorer" with limited institutional capacity over AI.[87] The risk of marginalization arises when these countries adopt foreign consensus frameworks that prioritize data privacy or high-end innovation at the expense of addressing local needs, such as algorithmic transparency in social welfare. With low public trust in institutions (averaging 19–27% in some LAC nations), mismatched policies that lack transparency or alignment with the local culture can lead to the total rejection of AI-enabled public services.[88]

## Unequal Distribution of Benefits

As explored in the preceding sections, Latin America is at a precarious crossroads in the global AI race. While 26–38% of jobs in Latin America could be affected by generative AI, only 7–14% of workers are likely to benefit from productivity gains, largely due to infrastructure gaps and labor market structure.[89] These structural barriers translate directly into the value gap already outlined above. Just 23% of Latin American organizations are generating any economic value from AI use, and a mere 6% across the region report significant value creation from AI" contrasts sharply with higher AI productivity gains reported in North America and Europe. Underpinning all of this is the issue of underinvestment. Latin America accounts for 6.6% of

[85] Correa, Teresa et al. "Reimagining AI in Latin America: Situated Narratives of Users, Developers, and Decision-Makers on Understanding and Governing AI." Communication and Change 1 (2025): Art. 12. https://doi.org/10.1007/s44382-025-00012-1.

[86] International Monetary Fund. "What Can Artificial Intelligence Do for Stagnant Productivity in Latin America and the Caribbean?" IMF Working Paper, October 2024. https://www.imf.org/en/Publications/WP/Issues/2024/10/11/What-Can-Artificial-Intelligence-Do-for-Stagnant-Productivity-in-Latin-America-and-the-556243.

[87] Economic Commission for Latin America and the Caribbean. "ILIA 2025: Consolidated as a Policy-Design Instrument for Artificial Intelligence in the Region," 2025. https://www.cepal.org/en/notes/ilia-2025-consolidated-policy-design-instrument-artificial-intelligence-region.

[88] https://publications.iadb.org/publications/english/document/An-Enabling-Regulatory-Framework-for-Artificial-Intelligence-in-Latin-America-and-the-Caribbean.pdf.

[89] International Labour Organization. "Buffer or Bottleneck? Employment Exposure to Generative AI and the Digital Divide in Latin America," July 19, 2024. https://www.ilo.org/publications/buffer-or-bottleneck-employment-exposure-generative-ai-and-digital-divide.

global GDP but receives only about 1.12% of global AI investment. This investment imbalance significantly limits the region's ability to develop domestic AI industries and capture economic value.[90]

Without the proper infrastructure and upskilling, Latin America stands at a disadvantage. To partake equally of the benefits of AI (and on some level, to facilitate greater AI adoption in the region), it is necessary to ensure/establish systems that benefit the region directly/equally; otherwise, Latin American participation is limited to the extractive practices of the global north for data to train models or moderate content. These statistics, however, only hint at a more structural problem. Infrastructure gaps and a lack of upskilling don't just slow Latin America's AI adoption; they determine what kind of participation is even possible. Without reliable connectivity, accessible compute, and a workforce equipped to build and deploy AI tools, the region cannot meaningfully compete in the spaces where AI generates its greatest value such as product development, automation of high-skill work, and the ownership of platforms and intellectual property.

With the risk of economic value capture, Latin America becomes integrated into the global AI economy on deeply unequal terms; not as a creator or beneficiary, but as a resource. This takes familiar forms: the sourcing of cheap training data, low-wage content moderation labor, and the harvesting of user behavior from large and underserved populations (reference LAC's prominent social media usage). These are not new dynamics. They echo longstanding patterns of economic extraction, now replicated in digital form, where the raw materials are data and human attention, and the profits accumulate elsewhere. As a result, AI-driven economic gains accrue primarily to foreign firms, local markets function largely as consumers rather than producers of AI technologies, and Latin American actors remain largely excluded from the high-value segments of the AI supply chain.

Addressing this requires more than connectivity targets. It requires deliberate investment in local AI research capacity, region-specific models trained on Spanish- and Portuguese-language data, and policy frameworks that ensure the economic returns of AI deployment don't flow solely outward. As the world continues to grapple with the full scope and reality of AI abilities and its use and role in society, many implications, benefits, and detriments are yet unseen. Dependency and Marginalization Risks.

## Geopolitical Dependencies and Pressures

Due to the infrastructure deficits and economic and institutional constraints, much of the region faces geopolitical vulnerability in the greater AI race. The technological alliances that the

[90] Economic Commission for Latin America and the Caribbean. "Latin America and the Caribbean Accelerate the Adoption of Artificial Intelligence, Though Challenges Remain in Investment, Talent, and Governance," 2025. https://www.cepal.org/en/pressreleases/latin-america-and-caribbean-accelerate-adoption-artificial-intelligence-though.

Global South nations create will determine future international geopolitical dynamics.[91] Without Western collaboration, countries may, or continue to, align with alternative powers such as China as part of their Digital Silk Road initiative. Such alliances would fundamentally shape the global AI ecosystems in ways that may not align with the values of the Global North. Countries such as Brazil, Indonesia, and Kenya wield meaningful regional influence and will play significant roles in determining the contours of the global AI ecosystem and the extent of U.S power within it.[92] In the absence of tangible counteroffers, these countries may disregard concerns about deepening technological relationships with China, focusing instead on concrete economic solutions to local problems. Low- and middle-income countries face a crossroads between Western systems that are sometimes torturous to deploy and Chinese alternatives that may be cost-effective but carry long-term implications for technological diffusion, data sovereignty, and geopolitical alignment. U.S. export controls risk inadvertently pushing developing country partners toward China to access technologies, with spillover effects threatening their abilities to build their own systems.[93]

# Social and Environmental Costs

## Labor Exploitation in the AI Supply Chain

Ultimately, the Global South faces a qualitatively different set of challenges that extend beyond more Western-centric concerns and reflect the region's economic vulnerabilities, limited institutional capacity, and immediate risks of exploitation. Largely concerning to the Global South is confronting the exploitation of the region for aforementioned data-labeling labor. Documented instances of people in the region being exposed to graphic content and/or precarious working conditions influence this concern, as the Global South has routinely become a destination for outsourced labor.[94] The lack of robust data protection and AI policies in the Global South could potentially lead to greater levels of misuse as AI grows in consumer reach, potentially worsening conditions for the Global South rather than improving them.

## Bias, Exclusion, and Representation Gaps

Additionally, concerns about AI bias take on particular significance in the Global South. As previously mentioned, AI systems "predominately reflect[ed] the views, languages, and

[91] Feakin, Tobias. "AI Geopolitics beyond the US-China Rivalry." *Aspen Digital*, 18 Mar. 2025, www.aspendigital.org/blog/ai-geopolitics-beyond-the-us-china-rivalry/.
[92] Lu, Marianne, and Sam Winter-Levy. "The Other AI Race: An Export Promotion Strategy for the Global South." *Carnegie Endowment for International Peace*, 2025, carnegieendowment.org/research/2025/07/the-other-ai-race-an-export-promotion-strategy-for-the-global-south?lang=en.
[93] Unger, Noam, and Madeleine McLean. "An Open Door: AI Innovation in the Global South amid Geostrategic Competition." *Csis.org*, 2025, www.csis.org/analysis/open-door-ai-innovation-global-south-amid-geostrategic-competition.
[94] Shapiro, Ari. 2018. "'The Cleaners' Looks at Who Cleans up the Internet's Toxic Content." NPR. November 12, 2018. https://www.npr.org/2018/11/12/667118322/the-cleaners-looks-at-who-cleans-up-the-internets-toxic-content.

ideologies of select advanced economies."[95] Moreover, current AI principles neglect to consider the views of the Global South as a partner in AI's development. Instead, these nations are perpetually treated as "tech takers"[96] and as such, reinforce existing inequalities in access to the technology's benefits.

## Environmental and Resource Strain

Although algorithmic fairness and governance are often emphasized in discussions about AI ethics and regulation, there is a larger ethical risk that is embedded in the infrastructure when the Global South is viewed as a site of deployment instead of full participants in the design of AI systems. In Chile, for example, the rapid growth of data-centre capacity and cloud infrastructure is raising issues of sustainability and equity while outside investment is racing ahead of local regulatory and environmental oversight (New York Times, 2025). Amazon Web Services recently announced a USD 4 billion investment to build its first large-scale data centres in Chile, to power regional cloud and AI services. AWS claims that centres would use only 4% of national water resources for cooling, but cities in Chile are contending with a 15-year-long drought, and AWS is drawing down on already-strained local aquifers (Reuters, 2025). Predicted data center capacity in Chile has nearly tripled since 2015 and could be more than 500 megawatts by 2030, largely fueled by multinational technology investment (Buenos Aires Times, 2025).

These developments demonstrate two primary ethical concerns regarding the absence of Global South voices in AI governance. First, AI ecosystems characterized by heavy infrastructure will likely impose greater environmental and social burdens on communities that have minimal decision-making power regarding investment. Second, Latin American countries that are hosts, rather than co-developers, of AI systems will increasingly rely on foreign technology firms for both innovation and regulation. This may result in water shortages, environmental stress, and diminished national autonomy over significant digital resources. In fact, Global North countries may end up reaping most of the benefits of those resources at the cost of those living in Latin America. That means that sustainability is not simply about minimizing energy or water consumption; it involves embedding local involvement and environmental accountability into the global AI infrastructure of the future. Without authentic collaboration, the Global South will not only continue to suffer the consequences of an AI revolution designed elsewhere; they will operate at an ecological disadvantage.

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[95] Unger, Noam, and Madeleine McLean. "An Open Door: AI Innovation in the Global South amid Geostrategic Competition." *Csis.org*, 2025, www.csis.org/analysis/open-door-ai-innovation-global-south-amid-geostrategic-competition.

[96] Feakin, Tobias. "AI Geopolitics beyond the US-China Rivalry." *Aspen Digital*, 18 Mar. 2025, www.aspendigital.org/blog/ai-geopolitics-beyond-the-us-china-rivalry/.

# What this Means for AI Adoption in Latin America

## AI adoption is inevitable

Artificial intelligence is no longer a future prospect for Latin America; it is an active economic reality. But at the moment, the area will not receive benefits of AI proportional to its contributions. According to Unger and McLean (2025), despite providing the essential labor and physical infrastructure that powers AI, Latin America is predicted to receive only 3% of the global economic dividend if current development trends continue.[97] In the absence of intervention, the region's primary function will continue to be extractive: it will house water-intensive data centers, source essential rare earths and minerals and supply low-paid "ghost work" for international platforms. The key factor in determining whether this adoption promotes inclusive development or only strengthens a new kind of digital dependency is regulation.

## Why regulation is so important

AI regulation is important for making sure that the financial benefits of AI spread throughout the region's economies as opposed to going solely to foreign platform owners. Regulation also determines how risk is distributed, determining whether the state and local communities bear the costs of labor displacement, resource depletion, or algorithmic errors, or whether multinational corporations bear these costs.[98] A strong regulatory framework can create the confidence to promote domestic R&D by offering liability clarity and data interoperability.[99] In the end, regulation can dictate what is constructed and encourage the creation of AI use cases that serve the public interest rather than just commercial, extractive deployments.

## What's at stake if the regulatory foundation is weak or mismatched

*Collapse of Trust*

Unclear AI policy decisions can deteriorate institutional trust, averaging only 19–27% in some countries.[100] Even the most beneficial public technologies may not be adopted if citizens

[97] Unger, Noam, and Madeleine McLean. "An Open Door: AI Innovation in the Global South amid Geostrategic Competition." Csis.org, 2025, www.csis.org/analysis/open-door-ai-innovation-global-south-amid-geostrategic-competition.
[98] Yeyati, Eduardo Levy. "Smart AI Regulation Strategies for Latin American Policymakers." Brookings, May 22, 2025. https://www.brookings.edu/articles/smart-ai-regulation-strategies-for-latin-american-policymakers/.
[99] United Nations University. "New Policy Report on Interoperability in AI Safety Governance: Ethics, Regulations, and Standards," 2025. https://unu.edu/macau/news/new-policy-report-interoperability-ai-safety-governance-ethics-regulations-and-standards.
[100] "OECD AI Policy Observatory Portal." Oecd.ai, 2025, oecd.ai/en/dashboards/policy-initiatives/national-artificial-intelligence-strategy-20242030-8923.

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are unable to comprehend an automated hiring decision or appeal a denied welfare claim. This distrust can lead to legal disputes and political unrest. As such, opaque decisions by governments about AI can stall the adoption of the technology if the public does not trust it.

*Increased Dependency*

Governments in Latin America run the risk of being forced into proprietary foreign systems due to a lack of regulation on public procurement and data governance. The region loses negotiating leverage and experiences "vendor lock-in" when AI is viewed as an "imported utility" rather than a domestic capability. This hinders the development of local startups that might provide more culturally appropriate alternatives.

*Biased and Exclusionary Systems*

The linguistic subtleties and socioeconomic realities of Latin America are frequently misinterpreted by models trained on Global North datasets. Not only do these biased systems "make mistakes" when used for credit scoring or policing without local oversight, but they also automate prevailing social prejudices on a scale that can become politically destabilizing. Recent evaluations of major Large Language Models (LLMs) reveal a "Digital Linguistic Bias," where models consistently underperform in identifying regional Spanish lexical variations, particularly those from Chile and the Andean regions, compared to Peninsular Spanish.[101] Furthermore, when these "imported" models are applied to sensitive biometric tasks like predictive policing in high-density urban centers, they risk codifying historical racial and class-based inequities into automated "threat scores" that lack local context or accountability.[102]

*Environmental and Resource Strain*

Local resources are severely strained by the growth of "hyperscale" data centers. For example, by 2030, data centers in Chile are expected to use 31.8 billion liters of water.[103] In recent public demonstrations in Chile and Uruguay, local communities see the diversion of limited aquifers toward foreign-owned AI infrastructure as a direct threat to their domestic security and agriculture.[104] As a result, Latin American governments risk underfunding the

[101] Kawasaki, Yoshifumi. "Digital Linguistic Bias in Spanish: Evidence from Lexical Variation in LLMs," February 10, 2026. https://doi.org/10.48550/arXiv.2602.09346.
[102] "CHCI POLICY BRIEF," n.d. https://chci.org/wp-content/uploads/2025/03/Rodriguez_Fara_Predictive-Policing-How-AI-is-Setting-the-Stage-for-a-Digital-Jim-Crow-Era-.pdf. , Clavell, Gemma. "Gender Bias in AI Risks and Opportunities for Latin America and the Caribbean Regional Human Development Report 2025 Background Paper Www.undp.org/Latin-America," n.d. https://www.undp.org/sites/g/files/zskgke326/files/2025-10/undp-rblac-wp_45_rhdr_gender_bias_in_ai.pdf.
[103] Mordor Intelligence. "Chile Data Center Water Consumption Market Size, Share & 2030 Growth Trends Report." Mordor Intelligence, December 3, 2025. https://www.mordorintelligence.com/industry-reports/chile-data-center-water-consumption-market.
[104] McGovern, Gerry, and Sue Branford. "The Cloud vs. Drought: Water Hog Data Centers Threaten Latin America, Critics Say." Mongabay Environmental News, November 2, 2023. https://news.mongabay.com/2023/11/the-cloud-vs-drought-water-hog-data-centers-threaten-latin-america-critics-say/

computational power of the Global North at the expense of their own ecological stability unless they incorporate environmental accountability into their AI strategies.

# Policy Recommendations

To transition from being "tech takers" to "tech shapers," Latin American nations must move toward a strategy of technological sovereignty. The following recommendations provide a potential framework for ensuring that AI development serves the region's economic, social, and environmental interests.

## Subsidize Domestic AI Models and Regional Datasets

Current AI development is hampered by linguistic and cultural bias, where models consistently underperform in regional Spanish and Portuguese variations. Because Latin America is projected to capture only 3% of global AI economic gains despite contributing significantly to the supply chain, governments should provide targeted subsidies for AI more tailored to their needs and cultures.[105] Financial incentives for these nations should support the development of LLMs trained on local data to improve accuracy in regional dialects. Furthermore, establishing national and regional data commons will allow local startups to access high-quality, culturally relevant datasets without being forced into "vendor lock-in" with foreign providers.

## Expansion of Compute and Digital Infrastructure

Latin America accounts for 6.6% of global GDP but receives only 1.12% of global AI investment.[106] To close this gap, the region should implement a two-pronged policy focusing on expanding compute power and digital access. Governments should invest in national supercomputing centers (similar to Chile's CENIA model) to provide academic and local industrial sectors with the processing power needed for frontier innovation. Additionally, with one-third of the population currently facing unreliable technology access, digital infrastructure must be treated as a basic utility. Subsidies for fiber-optic expansion and 5G deployment in rural areas are important to prevent AI from widening the existing urban-rural divide.

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[105] Unger, Noam, and Madeleine McLean. "An Open Door: AI Innovation in the Global South amid Geostrategic Competition." Csis.org, 2025, www.csis.org/analysis/open-door-ai-innovation-global-south-amid-geostrategic-competition.

[106] Economic Commission for Latin America and the Caribbean. "Latin America and the Caribbean Accelerate the Adoption of Artificial Intelligence, Though Challenges Remain in Investment, Talent, and Governance," 2025. https://www.cepal.org/en/pressreleases/latin-america-and-caribbean-accelerate-adoption-artificial-intelligence-though.

## Enforceable Environmental Accountability Standards

The environmental cost of AI is often localized while the benefits are exported. In Chile alone, data center capacity is expected to reach 500 megawatts by 2030, potentially consuming 31.8 billion liters of water.[107] Regulatory frameworks must require that all new hyperscale data centers utilize non-drinking water (e.g., treated wastewater or seawater) for cooling systems to protect local aquifers during droughts. Moreover, data center operators should be required to report energy efficiency metrics and prioritize the use of the region's renewable energy resources, ensuring that technological growth does not compromise national climate goals.

## Comprehensive Labor Protections and "AI-Ready" Social Safety Nets

Estimates suggest that 26% to 38% of jobs in Latin America could be disrupted by generative AI, yet only 7% to 14% of workers are currently positioned to benefit from productivity gains.[108] Countries should legislate protections for the workers involved in data labeling and content moderation. These provisions should include mandating fair wages, mental health support for those exposed to graphic content, and the right to collective bargaining. Countries should also develop national transition funds financed by AI productivity taxes to provide long-term reskilling programs for sectors most vulnerable to automation, such as formal administrative and service roles.

## Leveraging Regional Strengths for Domestic Capacity Building

For negotiating leverage in the global AI race, Latin America must lean on its distinct comparative advantages, particularly its reserves of vital minerals like lithium and its high potential for renewable energy. Policymakers should enact "technology transfer" mandates instead of permitting the continuation of past extractive practices. Multinational corporations looking to access the region's energy grids or natural resources would have to sign offset agreements that give domestic capacity priority under such frameworks. These agreements include funding computer science advanced degree programs in the host nation, establishing local R&D centers, and collaborating with local institutions to develop intellectual property. The region can make sure that the AI revolution drives long-term industrial growth rather than transient commodity booms by connecting resource access to knowledge production.

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[107] Mordor Intelligence. "Chile Data Center Water Consumption Market Size, Share & 2030 Growth Trends Report." Mordor Intelligence, December 3, 2025. https://www.mordorintelligence.com/industry-reports/chile-data-center-water-consumption-market.
[108] International Labour Organization. "Buffer or Bottleneck? Employment Exposure to Generative AI and the Digital Divide in Latin America," July 19, 2024. https://www.ilo.org/publications/buffer-or-bottleneck-employment-exposure-generative-ai-and-digital-divide.

## Infrastructure and Environmental Protection

To guarantee that Latin America's environment is not sacrificed for foreign innovation, the growth of AI through hyperscale data centers must be guided by the principle of reciprocity. In order to protect local drinking supplies during the region's frequent droughts, regulations should require that all new data center projects include stringent environmental protections and a reciprocity quota to guarantee that these facilities offer a real domestic benefit. As a result, data center operators would have to set aside a specific portion of their local processing power for use by local small-to-medium businesses, public sector researchers, and national universities.

# Latin America's Choice

Together, these consequences leave Latin American policymakers with a choice. If regulations are weak, nonexistent, or mismatched, the adoption of AI can worsen an extractionary relationship with the Global North: unstable labor and data supply chains continue, environmental and social costs are localized, vendor lock-in increases, and mistrust generates backlash that prevents public-sector deployment. Instead of increasing capability, the region's market participation and investment share may continue to be structurally below its economic weight.

If regulations are flexible and enforceable, the adoption of AI can become a development strategy. This includes expanding public-interest services with accountability and oversight, creating domestic ecosystems through interoperability and procurement, safeguarding workers throughout the AI lifecycle, and controlling infrastructure growth with environmental accountability. This route increases output without compromising sovereignty.

The asymmetry between the concerns of the Global North and the Global South suggests that increased access to AI will not immediately improve the availability of goods and services in developing regions. However, outcomes will depend on success factors such as the deployment of AI being accompanied by investments in infrastructure, development of local innovation capacity building, protection of workers' rights, and governance frameworks that better align with the Global South's priorities, rather than including the region post de facto. Moreover, given that AI legislation is still in its nascent stage globally, there is an opportunity for countries in the Global South to circumvent the potential negative impacts of AI if such governments make concerted efforts to draft and enact AI strategies to protect their populations and enable more responsible innovation.[109] However, these strategies must be prominently represented at the table in multilateral global conversations on AI to counter potential harms.[110] Specifically, there are

[109] Okolo, Chinasa. "AI in the Global South: Opportunities and Challenges towards More Inclusive Governance." *Brookings*, 1 Nov. 2023, www.brookings.edu/articles/ai-in-the-global-south-opportunities-and-challenges-towards-more-inclusive-governance/.
[110] Ibid.

concerns that current AI principles neglect to view the Global South as a partner in AI's development, suggesting a need for more inclusive international standards that incorporate diverse perspectives.[111]

The challenge moving forward is ensuring that technology transfer occurs in ways that build local capacity rather than perpetuating dependency, that workers are protected from exploitation, and that the infrastructural and policy foundations are established to enable equitable distribution of AI's benefits. Without concurrent investments in digital infrastructure, regulatory frameworks, worker protections, and capacity building, the region risks remaining a contributor, though not a beneficiary of the global AI revolution, with increased access paradoxically widening rather than narrowing the gap in availability of essential goods and services between the Global North and Global South.

Latin America has a rare opportunity to influence outcomes because AI governance is still up for debate worldwide, but only if regulations are created as a tool for bargaining power and capacity-building rather than as a translation of foreign ethical standards.

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[111] Ibid.