

AI FOR AMERICANS FIRST

AI, Energy & Semiconductor Protectionism:
US/Europe Divergence Trajectories 2024-2030
Integrated Geostrategic and Economic Analysis

Chapter VI bis

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75% global AI compute = USA | \$675B US capex 2026 | 7-12× US/EU ratio

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CHAPTER VI BIS

Consequences for South America and Brazil

The analysis of the preceding chapters focused on the US-Europe transatlantic axis. However, the consequences of American AI protectionism extend well beyond the OECD. South America, and Brazil in particular, constitute a revealing case study: simultaneously a dynamic market for AI, a terrain of US-China geopolitical competition, and a region structurally dependent on foreign compute while possessing unique energy assets. This supplementary chapter analyzes the specific consequences of the protectionist regime on South America, with an in-depth focus on Brazil.

6bis.1 Structural Position: The Global South Facing the Compute Asymmetry

6bis.1.1 A Fast-Growing but Structurally Dependent Ecosystem

Latin America represents 6.6% of global GDP but attracts only 1.12% of global AI investment — a ratio of 5.9 that measures the region's investment deficit.¹ Yet adoption indicators are remarkably dynamic. The Latin American Artificial Intelligence Index (ILIA 2025), published by ECLAC and Chile's CENIA, classifies three countries as "pioneers" (Chile, Brazil, Uruguay), eight as "adopters" (including Colombia, Ecuador, Costa Rica), and one-third as "explorers" with nascent ecosystems.² The region accounts for 14% of global visits to AI solutions and ranks third worldwide for generative AI application downloads.

This adoption dynamic contrasts with a considerable infrastructure deficit. High-income countries host 77% of global colocation data center capacity (June 2025), compared to 18% for upper-middle-income countries and 5% for lower-middle-income countries.³ High-income countries also concentrate 87% of notable AI models, 86% of AI startups, and 91% of AI venture capital, while representing only 17% of the world's population. Latin America falls in the intermediate category: a dynamic consumer of AI, but almost entirely dependent on foreign infrastructure (American and, increasingly, Chinese) for compute.

6bis.1.2 Tier 2 Classification: Caps on US Compute Access

Under the AI Diffusion Rule of January 2025 (Biden administration), all of Latin America — including Brazil, Mexico, and Chile — is classified as Tier 2, meaning subject to quantitative caps on advanced GPU imports. Tier 1 (unlimited access) is reserved for 20 close allies (Australia, Canada, France, Germany, Japan, etc.). Tier 3 (access prohibited) targets China, Russia, and approximately twenty countries.⁴

For South America, this Tier 2 classification means that large-scale AI data center projects are capped in importable GPU volumes. The AI Diffusion Rule's initial caps were approximately 50,000 GPUs between 2025 and 2027 for all Tier 2 countries (individually), a volume clearly insufficient to fuel the announced megaprojects. Brookings observes that even for the most

favored Tier 2 countries (Brazil, India), American caps mean that their compute needs will likely not be consistently met.⁵ Although the Trump administration rescinded the AI Diffusion Rule in May 2025 without yet publishing a replacement rule, the regulatory uncertainty creates a supply risk that weighs on investment decisions. The BIS published in July 2025 America's AI Action Plan, which promotes the export of "full-stack AI export packages" to allies while tightening enforcement against adversaries.⁶

6bis.2 Brazil: An Emerging Hub Between Two Blocs

6bis.2.1 Brazil's Structural Assets for AI

Brazil possesses objective competitive advantages for AI infrastructure. Its electricity mix is 83% renewable (primarily hydroelectric, complemented by rapidly growing wind and solar), with a competitive electricity cost of approximately \$0.08/kWh. The national interconnected power grid (SIN) has surplus capacity, and the country has a submarine telecommunications cable base (notably the Fortaleza hub) offering one of the shortest routes to Europe and Africa.⁷

The Brazilian data center market is the largest in Latin America, representing over 41% of regional investments. Installed IT capacity reached approximately 1 GW by end-2025, with 202 active projects and 23 completions expected by end-2026. The AI data center market specifically is valued at \$0.55 billion in 2025, projected to reach \$1.24 billion by 2030 (annual growth of 17.5%).⁸ The Brazilian Data Center Association (ABDC) projects that data center energy demand could reach 13.7 GW by 2035.

The Lula government has taken concrete measures to accelerate development. In September 2025, the provisional measure Redata was adopted, creating a special tax regime that reduces the cost of capital by 50% for data centers through exemption of taxes on IT assets, with benefits valid until December 2026. The Brazilian Artificial Intelligence Plan (PBIA) aims to transform the country into a global data center hub, and BNDES (National Development Bank) has launched a dedicated AI and data center fund with initial capital of 500 million to 1 billion reais (\$93-187 million).⁹

6bis.2.2 Megaprojects and US-China Duality

Brazil has become the stage for direct competition between American and Chinese investments in AI infrastructure, a duality that reveals the dynamics created by US protectionism.

On the Chinese side, the most spectacular project is the TikTok-ByteDance data center in Pecém (Ceará), announced in December 2025: 200 billion reais (approximately \$38 billion), in partnership with developer Omnia (Patria Investments) and renewable energy producer Casa dos Ventos.¹⁰ The project, whose construction is scheduled to begin in April 2026, will be entirely powered by wind energy (initial 300 MW, expandable to 900 MW or even 1 GW). It constitutes the largest private data center investment ever announced in Brazil and ByteDance's first project in Latin America. The investment is set in a context where TikTok faces blocking threats in the

United States and where China seeks to diversify its compute infrastructure outside its direct geopolitical risk zone.

On the American side, Microsoft announced an investment of \$2.7 billion over three years in cloud and AI infrastructure in Brazil, as part of its global commitment of \$50 billion for the Global South by 2030.¹¹ AWS and Google already have cloud regions in Brazil (São Paulo). US hyperscalers control approximately 55% of the Brazilian cloud market (AWS, Azure, GCP), a lesser dominance than in Europe (70%) but sufficient to structure dependency.

Other megaprojects illustrate the scale of ambitions. Scala Data Centers announced the AI City of Eldorado do Sul (Rio Grande do Sul), with 1,800 MW capacity and a potential of 5,000 MW by 2033. Elea Data Centers is developing the Rio AI City, presented as Latin America's largest data center campus, with 1.8 GW capacity by 2027 and 3.2 GW by 2032, with Oracle and Nvidia as technology partners.¹²

Table 14. Major AI data center projects in Brazil (2025–2030). Source: author compilation from Bloomberg, IndustrialInfo, Introl.

Project	Origin	Investment	Capacity	Characteristic
TikTok Pecém	China	~\$38B	300 MW → 1 GW	100% wind; 1st LATAM ByteDance project
Scala AI City	Brazil/US	Multi-\$B	1.8 → 5 GW	Largest planned install. in S. America
Elea Rio AI City	Brazil/US	Multi-\$B	1.8 → 3.2 GW	Oracle + Nvidia tech. partners
Microsoft Azure	US	\$2.7B (3 yrs)	N/A	Cloud + AI + ConectaAI program
AWS São Paulo	US	N/A	Multiple AZ	Active cloud region since 2011

6bis.3 Impact of US Protectionism on South America

6bis.3.1 The Double Bind of Tier 2 Classification

Brazil's and South America's Tier 2 position creates a strategic double bind. On one side, GPU import caps limit countries' ability to build sovereign AI infrastructure and complete the announced megaprojects. On the other, American restrictions toward China (Tier 3) push ByteDance and other Chinese actors to invest massively in Latin America as an alternative infrastructure deployment zone. Brazil thus becomes a "substitute terrain" in the Sino-American rivalry.

Brookings warns that this situation could push Tier 2 countries to develop supply chains independent of the United States, including stronger technological ties with China.¹³ Brazil, for which China is the leading trade partner, perfectly illustrates this dynamic. The TikTok-Pecém investment, the largest Chinese technology investment in Latin America, is part of a deepening of China-Brazil ties that predated Trump's re-election but has accelerated in response to American trade policies.

6bis.3.2 Five Impact Channels

The impact of American AI protectionism on South America is transmitted through five distinct channels, some of which are specific to the region.

Channel 1 — Direct constraint on AI hardware. Tier 2 caps on cutting-edge GPUs limit construction capacity. Even if the AI Diffusion Rule is rescinded, regulatory uncertainty weighs: projects requiring 10,000 to 100,000 GPUs (like Scala AI City or Elea Rio AI City) depend entirely on American willingness to deliver Nvidia or AMD accelerators. The GAIN AI Act, currently under discussion in the US Congress, proposes giving priority access to advanced semiconductors to American consumers before fulfilling international orders — which would further degrade the region's supply.¹⁴

Channel 2 — Reinforced dependency on US cloud. In the absence of sufficient local infrastructure, Brazilian companies rely heavily on US cloud. The Brazilian financial sector (Itaú, Nubank, Bradesco) is the most digitized in Latin America, with 95% of transactions processed digitally at Itaú Unibanco. Brazilian Open Banking connects 800 institutions. This digitization largely relies on US hyperscalers, creating the same dependency pattern as for Europe (Chapter IV), but with less negotiating capacity.

Channel 3 — US-China technological bifurcation. Brazil faces a specific risk: the fragmentation of its AI infrastructure between American and Chinese ecosystems. The Pecém data centers (ByteDance), although powered by Brazilian renewable energy, will likely use Huawei hardware or non-US alternatives if American restrictions prevent the export of Nvidia GPUs to Chinese projects. This hardware duality creates problems of interoperability, data sovereignty (US CLOUD Act versus Chinese data security law), and standardization. Brazil risks becoming a space where two incompatible technological ecosystems coexist, fragmented and each dependent on an external power.

Channel 4 — Amplified brain drain. The ILIA 2025 signals a widening of the AI talent gap in Latin America since 2022, associated with an "acceleration of the brain drain of specialists."¹⁵ Brazil trains excellent engineers (USP, Unicamp, ITA), but the compensation differential with the United States is even more pronounced than for Europe. The compute asymmetry exacerbates this drain: AI researchers who remain in Brazil do not have access to the compute needed for frontier research, which reinforces the attractiveness of American labs.

Channel 5 — Widened productivity gap. The World Bank and ILO observe that Latin America suffers from a persistent productivity deficit, largely linked to barriers to innovation and technology adoption.¹⁶ If high-income countries capture AI productivity gains (IMF: significantly higher TFP gains in advanced economies), AI protectionism risks transforming what was an adoption lag (temporary buffer) into a structural barrier (bottleneck). Constrained access to cutting-edge compute prevents Latin American companies from realizing the theoretical productivity gains of AI, widening the gap with the United States.

6bis.4 Specific Scenarios for Brazil

Using the 2×2 matrix from Chapter V, the scenarios for Brazil differ from Europe because Brazil has an additional variable: the possibility of playing the Chinese card as an alternative to the US ecosystem.

Table 15. Specific scenarios for Brazil facing American AI protectionism 2026–2030.
Source: author construction.

Brazil Scenario	Probability	Positive Consequences	Risks
A': Neutral dual US-China hub	35-45%	Investment inflows from both blocs; renewable energy as asset; supplier diversification	Ecosystem fragmentation; US pressure to limit Chinese access; data vulnerability
B': Secondary sanctions	15-20%	Accelerated Chinese substitute investment	Loss of US ecosystem access (Nvidia, cloud); partial tech. isolation
C': Pro-US alignment	20-25%	Negotiated Tier 1 access; unlimited GPUs; increased Microsoft/AWS investment	Total US dependency; loss of Chinese investment (Pecém threatened)
D': Regional LATAM sovereignty	10-15%	Regional compute consortium; reduced dependency; energy pooling	Limited execution capacity; insufficient capital; 5-10 year delay

Scenario A' (Neutral dual hub) is the most likely in the short term. Brazil maintains close trade relations with both blocs and has no interest in aligning exclusively. However, this scenario is inherently unstable: the United States could impose conditions (restrictions on the use of Nvidia GPUs in data centers also hosting Chinese workloads), forcing Brazil to choose. Trump's designation of drug cartels as foreign terrorist organizations has already increased the exposure of companies operating in Brazil and Mexico to US export control rules.¹⁷

Scenario B' (Secondary sanctions) represents the maximum risk. If the United States decided to apply secondary sanctions against countries hosting significant Chinese AI infrastructure, Brazil would face an existential dilemma: losing access to the American technological ecosystem (Nvidia, AWS, Azure), or abandoning massive Chinese investments. This scenario, while unlikely in the short term, is not hypothetical: the United States has already applied secondary sanctions on Russian and Venezuelan oil, and the Affiliates Rule (suspended until November 2026) extends restrictions to subsidiaries of listed entities.¹⁸

6bis.5 South America Beyond Brazil

Other South American economies are subject to the same dynamics as Brazil, but with less negotiating weight and fewer structural assets.

Chile, classified as a "pioneer" by the ILIA 2025, benefits from favorable temperatures (reduced cooling energy consumption) and an advanced AI governance ecosystem. Microsoft launched Chile Central in June 2025, its first cloud region in the country, associated with the Transforma Chile program (180,000 people trained, 81,000 jobs created). But Chile remains

entirely dependent on American hardware and cloud, without the Chinese alternative available to Brazil.

Mexico, the United States' immediate neighbor, presents a different profile. Nearshoring (relocation of production from Asia) has transformed the economic landscape, and data centers benefit from proximity to the US market. However, Mexico is more vulnerable to American protectionism due to the USMCA (renewable in July 2026) and the designation of cartels as terrorist organizations. Its energy infrastructure for data centers is also less competitive than Brazil's.

Colombia, Argentina, and Peru, classified as "adopters," face even stronger constraints: fragile electrical infrastructure, limited AI human capital, and virtually zero negotiating capacity with GPU suppliers. For these countries, American AI protectionism translates primarily into delayed and more expensive access to AI tools, widening the productivity gap not only with the United States but also with Brazil and Chile within the region itself.

6bis.6 Synthesis: A Risk of Triple Fracture

The analysis in this chapter reveals that American AI protectionism produces in South America a risk of triple fracture, specific to the region and distinct from the European scenario.

North-South fracture. The compute gap between the United States and South America is far more pronounced than the US-Europe gap. If the CACI(US)/CACI(EU) ratio is 7-12:1 (Chapter III), an equivalent CACI(US)/CACI(Brazil) ratio would be on the order of 50-100:1, reflecting the combination of an installed computing capacity deficit, more limited AI human capital, and a higher cost of capital (Brazilian Selic at 14.25% at end-2025). This gap is such that catch-up is virtually impossible by 2030 without massive external assistance.

East-West fracture. The US-China rivalry for AI infrastructure in South America creates a risk of technological fragmentation without equivalent in Europe. Brazil could end up with two parallel incompatible ecosystems (US cloud versus Chinese infrastructure), each responding to its own geopolitical logic rather than to the needs of the local economy. Europe, as a Tier 1 ally, does not face this bifurcation.

Intra-regional fracture. Within South America, Brazil attracts the bulk of AI investments (41% of the LATAM market), followed by Chile and Mexico. "Explorer" countries (one-third of the region according to the ILIA 2025) risk being entirely excluded from the AI economy, reproducing a dependency pattern analogous to that of raw materials. The WEF suggests a regional multi-stakeholder consortium (GAVI model) to pool compute resources and democratize access to AI.¹⁹

For Brazil specifically, the main strategic challenge is to transform its energy assets (83% renewable mix) into compute sovereignty, while preventing the US-China competition from fragmenting its ecosystem. The comparison with France is illuminating: both countries possess a distinctive energy asset (nuclear for France, renewable for Brazil), an emerging national technology champion (Mistral for France, the fintech/Nubank ecosystem for Brazil), and a regional AI hub ambition. But Brazil faces

additional constraints (Tier 2 classification, cost of capital, amplified brain drain) that make its trajectory more uncertain and its vulnerability to protectionism more acute.

Notes

¹ ECLAC/CENIA (October 2025), Latin American Artificial Intelligence Index (ILIA 2025). Latin America represents 6.6% of global GDP and 1.12% of global AI investment.

² ECLAC/CENIA (2025), ibid. Three categories: pioneers (Chile, Brazil, Uruguay, >60 pts), adopters (Colombia, Ecuador, Costa Rica, Dominican Republic), explorers (nascent ecosystems).

³ World Bank (November 2025), Digital Progress and Trends Report 2025: Strengthening AI Foundations. High-income countries: 77% DC colocation capacity, 87% notable AI models, 86% AI startups, 91% AI venture capital.

⁴ BIS (January 2025), Framework for Artificial Intelligence Diffusion. Tier 1: 20 allied countries (unlimited access). Tier 2: ~140 countries including the entire American continent outside US/Canada (quantitative caps). Tier 3: ~20 countries (access prohibited). Rule rescinded in May 2025 by the Trump administration, replacement pending.

⁵ Brookings Institution (January 2025), "The New AI Diffusion Export Control Rule Will Undermine US AI Leadership." Caps mean that Tier 2 countries' compute needs "will likely not be consistently met."

⁶ Data Center Knowledge (December 2025), "AI Chip Export Controls: A New Challenge for Data Centers." America's AI Action Plan (July 2025) promotes the export of "full-stack AI export packages" to allies.

⁷ Introl Blog (December 2025), "Latin America AI Infrastructure: Brazil and Mexico Data Center Opportunities." Brazilian electricity mix 83% renewable, electricity cost ~\$0.08/kWh.

⁸ Mordor Intelligence (November 2025), Brazil Artificial Intelligence Data Center Market Report 2030. Brazilian AI DC market: \$0.55B (2025) → \$1.24B (2030), 17.51% CAGR. IndustrialInfo (February 2026): 202 active projects, 1 GW installed capacity.

⁹ DCD (December 2025), "BNDES Working to Create Fund for AI and Data Centers in 2026." Provisional measure Redata (September 2025): 50% capital cost reduction, IT asset tax exemption.

¹⁰ Bloomberg (December 2025), "Brazil Emerges as AI Hot Spot With TikTok's Data Center Push." 200B BRL (~\$38B), ByteDance/Omnia/Casa dos Ventos partnership, 300 MW initial wind.

¹¹ Serrari Group (February 2026), "Microsoft's \$50 Billion AI Push Into the Global South." Microsoft: \$2.7B in Brazil (3 years), ConectaAI program. Global commitment of \$50B for the Global South by 2030.

¹² Introl Blog (December 2025), ibid. Scala AI City: 1.8 GW (2027) → 5 GW (2033), Eldorado do Sul. Elea Rio AI City: 1.8 GW → 3.2 GW (2032), Oracle and Nvidia partners.

¹³ Brookings (January 2025), ibid. Tier 2 countries could develop non-US supply chains including stronger technological ties with China.

¹⁴ American Action Forum (November 2025), "The GAIN AI Act in Context: Export Controls and U.S. AI Competitiveness." The GAIN AI Act proposes giving priority to US domestic consumers for advanced semiconductors.

¹⁵ ECLAC/CENIA (2025), ILIA 2025 ibid. Widening AI talent gap since 2022, associated with acceleration of specialist brain drain.

¹⁶ World Bank / ILO (April 2025), "Quantifying the Jobs Potential of AI in Latin America and the Caribbean." Persistent productivity deficit, barriers to innovation and technology adoption.

¹⁷ Morgan Lewis (January 2026), "US International Trade and Investment: Key Shifts in 2025." Designation of cartels as foreign terrorist organizations: increased exposure for companies operating in Mexico and Latin America.

¹⁸ Morrison Foerster (February 2026), "Managing Export Control Risks in the AI Chip Ecosystem." Affiliates Rule suspended until November 10, 2026; extends restrictions to subsidiaries of listed entities.

¹⁹ WEF (January 2025), "Latin America Can Set the Standard in Fueling and Governing AI." Proposal for a regional multi-stakeholder consortium (GAVI model) to pool compute resources.

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