

ANALYSIS | ATHENALAB

Beyond the Chatbot: Implications of Artificial Intelligence for Chile

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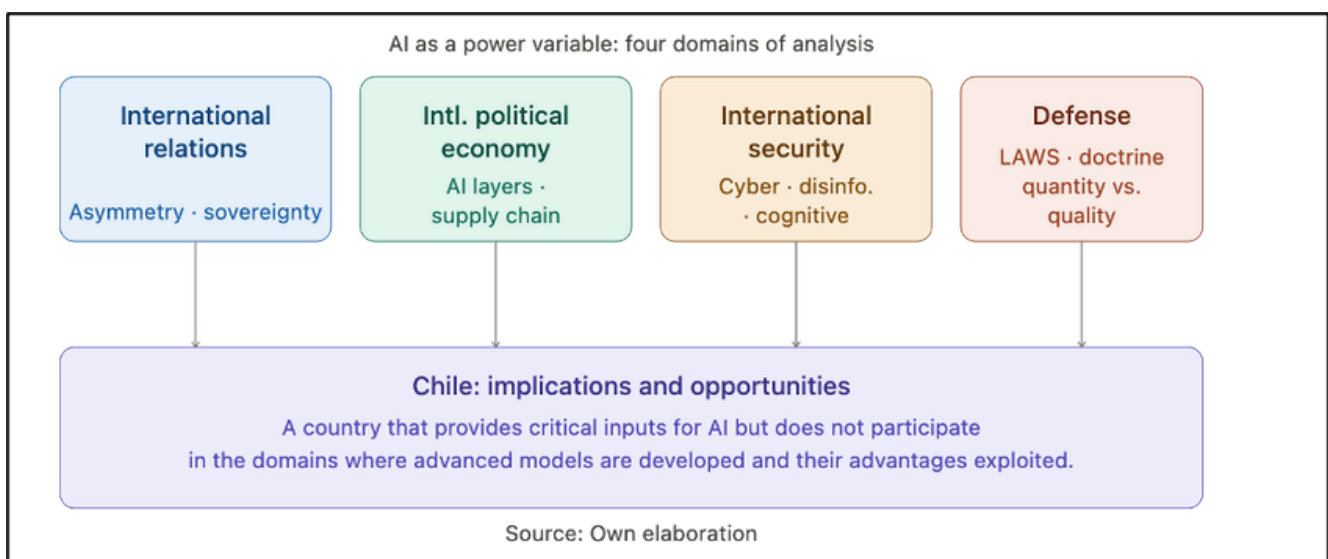
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CONTEXT

Artificial intelligence (AI) is becoming a structural variable in the conditions under which power is exercised in the international system. Unlike previous technologies that amplified existing capabilities, AI will redefine who can know, who decides, and who acts faster. A state that does not control the systems that produce its strategic knowledge does not fully control its decision-making cycle. Therefore, strategic autonomy would no longer depend exclusively on material resources, but also on the possession of AI systems that produce better knowledge for decisions in today's international complexity. This reconfiguration operates simultaneously across all domains of power and compels us to understand the impacts of AI and why its evolution changes the nature of risks. This article examines implications in international relations, international political economy, security, and defense—with particular attention to Chile—a country that provides critical inputs for AI but does not participate in the domains where advanced models are developed and their advantages exploited.

Figure 1.

AI as a Power Variable: Four Domains of Analysis



I. INTERNATIONAL RELATIONS

The leading AI¹ developers have emerged as a new type of actor in the international order. Their capabilities exceed those of most medium-sized states, and they lack the accountability obligations typical of a government. A state that manages its security and foreign policy with AI tools it does² not control will be ceding part of its autonomy to a foreign jurisdiction. In this context, sovereignty over such models emerges as a critical dimension that most national security frameworks have yet to formalize.

Prioritized access to AI models and computing centers thus becomes a new diplomatic objective. States without sovereign access to this infrastructure depend on decisions made by foreign corporations or state actors that control it. The Pax Silica Alliance, signed in December 2025 by the United States, Japan, South Korea, Singapore, the Netherlands, Israel, the UAE, the United Kingdom, and Australia, illustrates this new dynamic.³ The implicit objective -“market for all, frontier for allies”- reserves access to cutting-edge semiconductors and advanced computing capacity for those who align themselves with the United States.

The current absence of a binding multilateral framework for the use of AI creates a permissive normative environment. UN General Assembly Resolution 79/62, adopted in December 2024, recognizes the urgent need to address the challenges posed by LAWS from humanitarian, legal, and ethical perspectives, but did not advance toward a legally binding instrument that the major powers are unwilling to negotiate⁴. This creates for middle-income countries a dilemma between supporting strict regulatory frameworks that offer normative credibility, but that will generate restrictions on their own initiatives. This regulatory vacuum is not merely a governance problem, but a variable that will condition the strategic options of every state.

II. INTERNATIONAL POLITICAL ECONOMY

AI depends on a contested supply chain that determines which state actors can develop their own capabilities, and which will be constrained in this domain. To understand this, it is useful to think of AI as a set of interconnected layers: critical minerals, energy, semiconductors, data center infrastructure, language models, and applications.

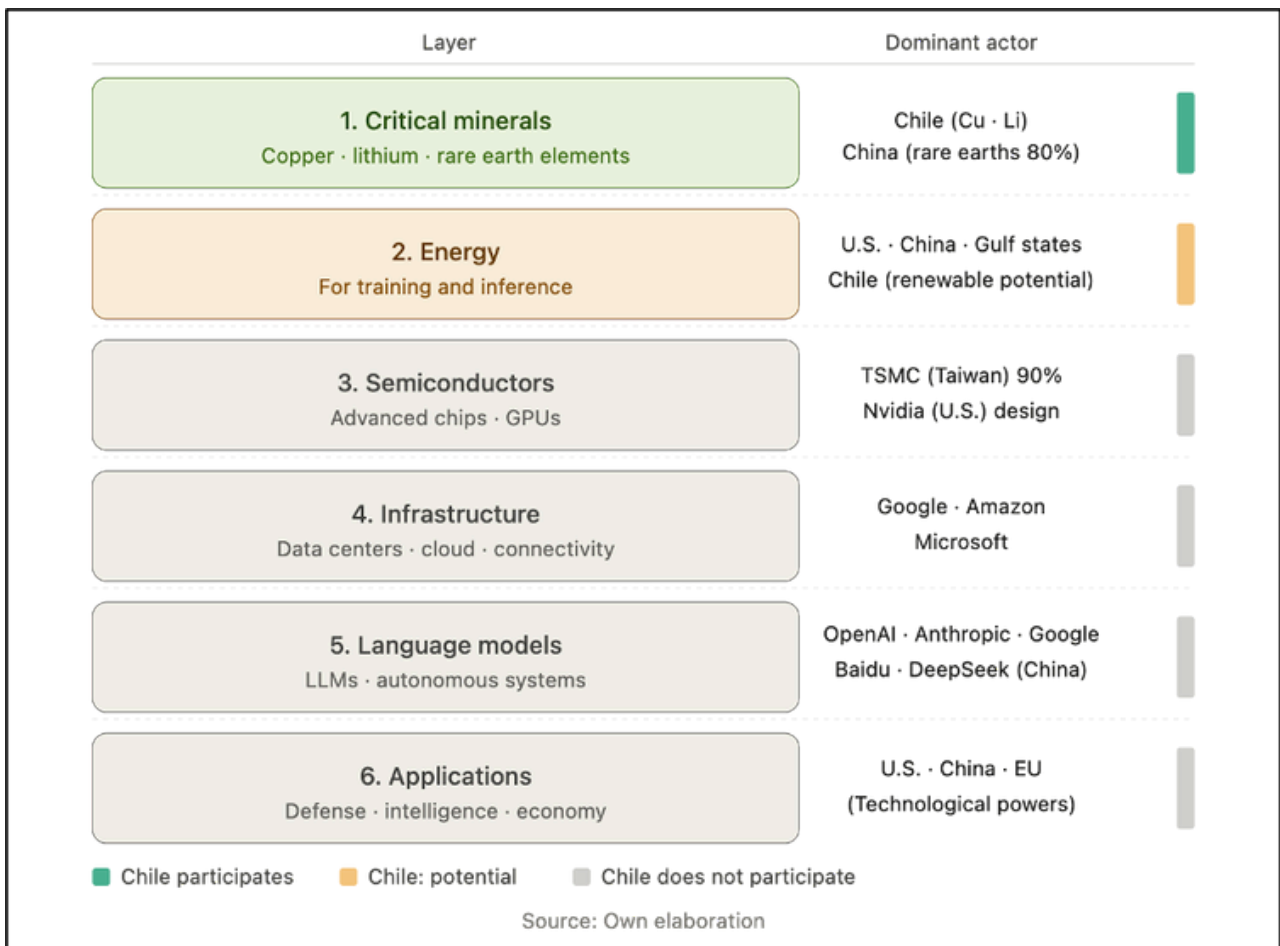
Critical minerals constitute the physical substrate, and their geographic concentration makes them factors of strategic coercion. Chile is the world's leading producer of copper—critical for data center electrical infrastructure—and holds one of the largest lithium reserves, a key element for the energy storage that underpins that infrastructure. For any state, being a key node in the supply chain confers advantages, but also places it at the center of competing external interests. The growing presence of Chinese, American, and European capital in the lithium triangle is a confirmation to this competition.

AI's high energy consumption constrains capability development in this domain. For instance, by 2028, AI could consume the equivalent of 22% of all U.S. household electricity annually.⁵ States without access to abundant and reliable energy will be structurally limited in developing their own AI models. Furthermore, energy demand is projected to grow exponentially, making electricity supply a strategically relevant variable.

The manufacture of advanced semiconductors is the most critical choke point in the entire AI supply chain. TSMC, headquartered in Taiwan, concentrates more than 90% of global production of the chips that sustain the most capable models. This concentration gave rise to the concept of the “silicon shield”: dependence on TSMC acts as a deterrent against Chinese aggression, since such aggression would trigger a global technological crisis with severe consequences.⁶ Given this situation, the United States has applied export restrictions on chips to China and with the CHIPS Act, which seeks to relocate part of TSMC's production to Arizona,⁷ effectively elevating semiconductor manufacturing to a matter of economic security.⁸

Data centers—the physical infrastructure where AI resides and operates—raise a dimension of information sovereignty. While Google, Amazon, and Microsoft control much of the global cloud,⁹ most medium-sized states lack sufficient infrastructure of their own, meaning their strategic data is processed on servers under foreign jurisdiction. Information sovereignty is, in this sense, the link connecting international political economy to the security risks analyzed below.

Figure 2.
The AI Stack: From Critical Minerals to Applications



III. INTERNATIONAL SECURITY

AI is transforming the security environment in terms of the speed and offensive volume in cyberspace, the distinction between real and false information, and the erosion of the cognitive processes that underpin decision-making.

Actors with access to AI models can now automate offensive operations in cyberspace at speeds unimaginable just a few years ago. According to Anthropic, Mythos would enable adaptive attacks, automated generation of malicious code, and massive vulnerability reconnaissance.¹⁰ Strategic advantage would no longer be solely a function of available human talent, but of the capacity to train and deploy proprietary models. AI will reduce the marginal cost of persistent cyberspace incursions, which will also be increasingly difficult to attribute and will operate below the threshold of armed conflict.

AI-assisted disinformation represents an exponential leap over traditional propaganda by operating on individual profiles rather than mass audiences. AI models can identify specific cognitive biases at scale and exploit them through personalized content.¹¹ The possibility of political leaders acting on perceptions shaped by foreign algorithms illustrates how this phenomenon could penetrate the core decision-making structures of the state.

Moreover, AI-driven systems designed to decide faster than the adversary reduce the margin for political deliberation. In high-risk scenarios, that speed can trigger automatic responses before any human decision-maker intervenes, transforming a false alarm into a real crisis. This demands that thresholds and control mechanisms be defined in advance to preserve political accountability in AI-accelerated crisis environments.

IV. DEFENSE

AI introduces dilemmas without consolidated doctrinal answers regarding the role of commanders' judgment in warfare. As AI systems assume more central roles in the military decision-making cycle, human discretion could become increasingly marginal—a tendency expressed in the progression from human-in-the-loop (the human approves each decision) toward human-on-the-loop (the human supervises but the system acts).¹² Accordingly, various LAWS are deployed today without international consensus on meaningful autonomy or adequate human control.¹³ Algorithmic opacity compounds the problem, as a system that recommends a target but cannot verify its own reasoning¹⁴ raises an unanswered question about who bears responsibility for that decision. The principles of international humanitarian law (IHL) face tensions when the decision-making agent cannot be held accountable to any identifiable authority.

Furthermore, AI is altering the traditional logic of military advantage, which has historically privileged quality over quantity. A RAND report posits that the combination of “precise mass” and “affordable mass” (AI-enabled unmanned systems, more cost-effective and increasingly capable) could deliver a cost-effectiveness advantage over expensive platforms in certain applications.¹⁵ This inversion of conventional logic has consequences for armies of medium size and budget, as AI reduces the cost of scaling autonomous capabilities, allowing actors with fewer resources to compensate for gaps through such systems. In parallel, AI-supporting infrastructure (data centers, fiber optic cables, and computing centers) has been the target of Iranian drone attacks,¹⁶ becoming a new avenue for degrading an adversary's operational capabilities without conventional confrontation.

Armed forces that fail to develop AI capabilities will face operational disadvantage, while those that adopt them without adequate doctrine will assume serious institutional risks. The responsible integration of AI into defense is not exclusively a technical problem; it also requires legal frameworks, operational doctrine, and audit mechanisms that preserve civilian control and coherence with IHL. The Anthropic-Pentagon case illustrates that this debate is unresolved even in the United States; when the company refused to eliminate its red lines on mass domestic surveillance and LAWS, it was labeled a “supply chain risk.”¹⁷ The real challenge is not whether to integrate AI into defense, but to first build the institutional architecture that makes such integration coherent with the values and obligations that define a professional armed force.

V. IMPLICATIONS AND OPPORTUNITIES FOR CHILE

Chile could face a progressive erosion of its strategic autonomy insofar as its decision-making processes depend on systems it does not control and which operate under foreign jurisdiction. Likewise, in the absence of binding frameworks regarding AI, the rules governing these technologies will be defined by those with the capacity to develop them, introducing a new dimension of informational asymmetry. Building proprietary analytical capacity and establishing sovereignty standards for these models before dependence becomes irreversible is an opportunity Chile must address as a priority. To that end, one concrete measure would be establishing a national algorithmic sovereignty policy that regulates which systems may process the state’s strategic information and under what auditing and jurisdictional conditions.

Our country occupies an ambivalent position in the AI supply chain, as a provider of critical inputs at the lower levels, yet without participation in the levels where value and strategic power concentrate. In other words, we supply the material that make the AI revolution possible without capturing the capabilities that revolution generates. Likewise, the country lacks the transmission infrastructure to convert its renewable resources into the foundation of a competitive industry. Chile, with its copper and lithium, could pursue a framework that attracts foreign digital infrastructure and technology transfer agreements. Preferential access to strategic mineral resources should be conditioned on commitments to invest in local digital infrastructure and transfer technological capabilities.

Chile faces the security risk areas analyzed—offensive cyber operations, disinformation, and cognitive manipulation—without consolidated defensive capabilities. Its institutional infrastructure is not prepared to absorb a sustained digital attack campaign that falls below the threshold that would trigger a formal political response. Moreover, our leaders operate in an environment where personalized cognitive manipulation is technically feasible and difficult to detect. Therefore, Chile must develop AI capabilities in cyberspace and in the domain of cognitive security. Cognitive resilience and AI-assisted manipulation detection should be incorporated as explicit dimensions of the National Cybersecurity Policy, alongside institutional frameworks that define response thresholds against sustained cyber campaigns.

Chile's Armed Forces could soon operate in environments with decision cycles that press toward the elimination of human control, supported by opaque algorithms and where adversaries deploy LAWS without clear legal frameworks. The absence of doctrine on the use of AI leaves institutions without parameters to evaluate, acquire, and integrate these capabilities in a manner consistent with IHL and civilian control. Achieving capabilities that integrate AI responsibly is a condition of operational relevance for effective national deterrence. The responsible use of AI should be incorporated into the update of the National Defense Policy, establishing doctrinal criteria to guide the acquisition, training, and civilian control of autonomous systems.

Figure 3.

Chile Facing AI: Implications, Opportunities, and Actions by Domain

Chile facing AI: implications, opportunities, and actions by domain			
Domain	Implication	Opportunity	Action
IR	Progressive erosion of strategic autonomy by depending on systems it does not control and which operate under foreign jurisdiction.	Build proprietary analytical capacity and establish algorithmic sovereignty standards before dependence becomes irreversible.	National policy regulating which systems may process the state's strategic information and under what auditing and jurisdictional conditions.
IPE	Ambivalent position: provider of critical inputs at lower levels without participation in the levels where value and power concentrate.	Pursue a framework that attracts foreign digital infrastructure and technology transfer agreements.	Condition preferential access to strategic mineral resources on commitments to invest in local digital infrastructure.
Security	Chile faces offensive cyber operations, disinformation, and cognitive manipulation without consolidated defensive capabilities.	Develop AI capabilities in cyberspace and in the domain of cognitive security.	Incorporate cognitive resilience and AI-assisted manipulation detection into the National Cybersecurity Policy.
Defense	Armed forces could operate in environments with LAWS lacking legal frameworks, opaque algorithms, and decision cycles that eliminate human control.	Achieve capabilities that integrate AI responsibly as a condition for effective national deterrence.	Incorporate the responsible use of AI into the update of the National Defense Policy.

Source: Own elaboration

VI. CONCLUSION

AI does not merely add complexity to the current international scenario—it could reconfigure some of its foundations. States that control the systems that produce knowledge, and better decisions will further limit the autonomy of other state actors, regardless of their material resources or conventional capabilities. For middle-income countries, technological dependence will progressively deepen existing strategic dependence.

Chile needs a posture toward AI across the four domains analyzed. This requires, as a prerequisite, a national critical data infrastructure that ensures decisions on security, foreign policy, and defense are not made on servers outside state control. The urgency of this issue will grow in parallel with widening technological asymmetries, and the window of opportunity will remain open only until structural dependence makes the gap irreversible. Failure to act would generate not only a technological disadvantage, but an irreversible erosion of our autonomy with consequent impacts on national security.

NOTES

- ¹ In the United States, the leading developers are OpenAI, Anthropic, Google/DeepMind, and Meta; in China, the main developers are Baidu, Alibaba, Huawei, and DeepSeek.
- ² Shaleen Khanal, Hongzhou Zhang, and Araz Taeihagh, “Why and How Is the Power of Big Tech Increasing in the Policy Process? The Case of Generative AI,” *Policy and Society* 44, no. 1 (2025): 52–69.
- ³ Australian Government, “The Pax Silica Declaration by Countries Attending the Pax Silica Summit, 12 December 2025,” Department of Industry, Science and Resources, December 13, 2025, <https://www.industry.gov.au/publications/pax-silica-declaration-countries-attending-pax-silica-summit-12-december-2025>.
- ⁴ United Nations, General Assembly. *Lethal Autonomous Weapons Systems*. A/RES/79/62. New York: United Nations, December 2, 2024. <https://undocs.org/A/RES/79/62>.
- ⁵ James O’Donnell and Casey Crownhart, “We Did the Math on AI’s Energy Footprint. Here’s the Story,” *MIT Technology Review*, May 20, 2025, <https://www.technologyreview.com/2025/05/20/1116327/ai-energy-usage-climate-footprint-big-tech/>.
- ⁶ AthenaLab. 2024. *Special Report: Taiwan*. Santiago: AthenaLab. https://www.athenalab.org/wp-content/uploads/2024/11/athenalab_doc_especial_taiwan.pdf.
- ⁷ U.S. Congress, “H.R. 4346—CHIPS and Science Act of 2022,” Congress.gov, accessed May 3, 2026, <https://www.congress.gov/bill/117th-congress/house-bill/4346>.
- ⁸ Chris Miller, *Chip War: The Fight for the World’s Most Critical Technology* (New York: Scribner, 2022).
- ⁹ Felix Richter, “The Big Three Hold Dominant Lead in Accelerating Cloud Market,” Statista, February 9, 2026, <https://www.statista.com/chart/18819/worldwide-market-share-of-leading-cloud-infrastructure-service-providers/>.
- ¹⁰ Chiara Barbeschi and Tarik Fayad, “Anthropic’s Mythos Moment: How Frontier AI Is Redefining Cybersecurity,” World Economic Forum, April 20, 2026, <https://www.weforum.org/stories/2026/04/anthropic-mythos-ai-cybersecurity/>.
- ¹¹ Bentzen, Naja. 2025. *Information Manipulation in the Age of Generative Artificial Intelligence*. Brussels: European Parliamentary Research Service (EPRS).
- ¹² NATO Command and Control Centre of Excellence, “Human Oversight in AI-Driven Defence: At What Positions Do We Need the Human in the Loop,” August 4, 2025, <https://c2coe.org/download/human-oversight-in-ai-driven-defence-at-what-positions-do-we-need-the-human-in-the-loop/>.
- ¹³ Samuel Bendett and David Kirichenko, “Battlefield Drones and the Accelerating Autonomous Arms Race in Ukraine,” Modern War Institute at West Point, January 10, 2025, <https://mwi.westpoint.edu/battlefield-drones-and-the-accelerating-autonomous-arms-race-in-ukraine/>.
- ¹⁴ “Inside the AI Black Box, for Real This Time,” *The New York Times Magazine*, April 15, 2026, <https://www.nytimes.com/2026/04/15/magazine/ai-black-box-interpretability-research.html>.

NOTES

- ¹⁵ Burdette, Zachary, Dwight Phillips, Jacob L. Heim, Edward Geist, David R. Frelinger, Chad Heitzenrater, and Karl P. Mueller. *How Artificial Intelligence Could Reshape Four Essential Competitions in Future Warfare*. Santa Monica, CA: RAND Corporation, 2026. https://www.rand.org/pubs/research_reports/RRA4316-1.html.
- ¹⁶ Phoebe Liu, "AI Data Centers Are Now a Big Geopolitical Risk. Securing Them Against Attackers, Drones and More Is Becoming a Lucrative Business," *Forbes*, April 21, 2026, <https://www.forbes.com/sites/phoebeliu/2026/04/21/ai-data-centers-are-now-big-geopolitical-risk-securing-them-against-iran-attackers-drones-business/>.
- ¹⁷ "Pete Hegseth Wages War on Anthropic," *The Economist*, February 24, 2026, <https://www.economist.com/business/2026/02/24/pete-hegseth-wages-war-on-anthropic>.