STUDY NOTES · BASIC CONCEPT

What is Pax Silica? What are India's advantages and challenges in joining Pax Silica?

International Relations

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Background

Pax Silica is a U.S.-led international initiative focused on building secure, resilient, and innovation-driven supply chains for technologies essential to the AI era, particularly those involving silicon, critical minerals, semiconductors, and advanced computing.

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The name draws from "Pax" (Latin for peace, stability, and prosperity) and "Silica" (referring to silicon dioxide, the foundational material for semiconductors).

It represents the U.S. Department of State's flagship effort to advance economic security consensus among allies, countering vulnerabilities in global tech supply chains, such as China's dominance in mining and refining critical minerals.

The initiative was formally launched in December 2025, with the founding Pax Silica Summit held in Washington, D.C. on December 11, 2025.

At the summit, the United States and Japan signed the Pax Silica Preamble, followed by the signing of the Pax Silica Declaration by initial participants.

The concept emphasizes that while the 20th century relied on oil and steel, the 21st century depends on compute power and the minerals that enable it, aiming to create a new economic order for AI-driven prosperity.

Objectives

1. Pax Silica aims to:Reduce coercive dependencies and vulnerabilities in AI supply chains.
2. Foster partnerships for joint investments, technology protection, and trusted digital infrastructure.
3. Unite nations with advanced tech capabilities to harness AI's economic potential.
4. Promote fair market practices, counter non-market behaviors like overcapacity and unfair dumping (implicitly addressing threats from entities like China).
5. Mobilize private industry to enhance national strength, innovation, and supply chain security.

The initiative seeks to ensure that economic value flows through reliable channels, from energy and minerals to hardware and new markets, while protecting sensitive technologies from undue influence.

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Key Components

The framework covers the full "strategic stack" of the global technology supply chain, including:

- Critical minerals refining and processing.
- Energy inputs.
- Advanced manufacturing.
- Semiconductors and compute.
- AI infrastructure, models, and software.
- Transportation logistics.
- Information networks (e.g., fiberoptic cables, data centers).
- Building trusted ecosystems for AI developers and vendors.
- It encourages reducing excessive dependencies on unreliable sources, forging connections with partners committed to fair competition, and coordinating policies to safeguard investments and infrastructure.

The Pax Silica Declaration serves as the core document affirming these commitments.

Participating Countries and Partners

Signatories to the Pax Silica Declaration include: Australia, Greece, Israel, Japan, Qatar, Republic of Korea (South Korea), Singapore, United Arab Emirates, and United Kingdom.

Non-signatory participants and observers encompass Canada, the European Union, Netherlands, Organization for Economic Cooperation and Development (OECD), and Taiwan.

The initiative is designed to expand, focusing on countries with complementary technological strengths to deepen economic ties.

Broader Impact and Support

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Pax Silica has garnered support from industry groups like the Semiconductor Industry Association (SIA), which views it as a commitment to securing resilient supply chains through international partnerships.

It positions itself as a counterweight to geopolitical risks, such as supply chain disruptions or monopolies in critical sectors, promoting a "trusted" network for AI and semiconductors.

As of January 2026, it remains in its early stages, with ongoing forums and summits to drive implementation.

Benefits to India, if India joins

India has not yet joined the U.S.-led Pax Silica initiative. While concerns about strategic autonomy and capability gaps persist, participation offers several potential benefits, particularly in economic, technological, and geopolitical domains. These advantages are drawn from analyses highlighting opportunities for India to integrate into secure global supply chains for AI, semiconductors, and critical minerals.

1. Enhanced Supply Chain Security and Reduced Dependencies : Joining Pax Silica allows India to mitigate risks from over-reliance on dominant players like China in critical minerals processing and semiconductor supply. This fosters resilience against coercive dependencies and supply disruptions, ensuring stable access to essential technologies for AI and advanced computing. It positions India as part of a "trusted" network, promoting fair market practices and countering non-market behaviors like overcapacity.

2. Economic Growth and Investment Opportunities : Membership is expected to unlock significant foreign investments in India's semiconductor and advanced manufacturing sectors, de-risking projects and creating high-tech jobs. For instance, it could attract global capital to build domestic fabs and AI infrastructure, boosting economic output. Indian companies in semiconductors, critical minerals, and tech could benefit directly, with potential stock market gains and expanded operations as India becomes an alternative production hub.

3. Technological Advancement and Innovation : India gains access to advanced technologies and collaborative frameworks, enabling it to scale up domestic manufacturing in semiconductors, AI models, and related infrastructure. This includes joint investments in critical areas like energy inputs and information networks. With its large tech workforce and growing digital ecosystem, India can leverage the initiative to enhance its AI capabilities and contribute to global standards, moving from a consumer to a producer role.

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4. Strengthened Geopolitical and Strategic Ties : The move deepens U.S.-India partnerships, signaling trust and alignment in high-tech domains, which could lead to broader cooperation in defense and economic security. It's described as a "historic milestone" for bilateral relations. Globally, it elevates India's standing in the emerging "silicon order," allowing it to influence tech governance while reducing vulnerabilities to geopolitical tensions.

What are india's concerns in joining this?

India has expressed several concerns regarding participation in the U.S.-led Pax Silica initiative. These hesitations stem from strategic, economic, and geopolitical considerations. Below is a breakdown of the key concerns based on available analyses and discussions.

1. Dilution of Strategic Autonomy : A primary worry is that joining Pax Silica could compromise India's independent foreign policy. The initiative requires alignment on export controls, investment screening,

technology protection, and supply chain standards, which might limit India's flexibility in dealing with non-aligned partners like Russia or China. This is seen as more than a trade forum—it's a geopolitical alignment that could force India into a U.S.-centric bloc amid global supply chain bifurcation. India has historically prioritized "strategic autonomy," avoiding full entanglement in Western alliances to maintain balanced relations, especially for energy and defense needs.

2. Capability Gaps and Perceived Inequality : India lacks advanced capabilities in critical areas like mineral processing, edge technologies (e.g., cutting-edge semiconductors), and control over key inputs compared to other members such as Japan, South Korea, Taiwan, or Israel. Critics argue India brings primarily a large market and consumer demand to the table, rather than production or innovation strengths, positioning it as a "latecomer" or "afterthought" rather than an equal partner. This mirrors past experiences, such as India's delayed entry into the U.S.-led Minerals Security Partnership (MSP) in 2023 due to similar deficiencies in processing capacity.

3. Limited Influence on Rules and Standards : Entering late means India may have reduced say in shaping the initiative's rules, investment priorities, or standards for "trusted" supply chains. This could result in fewer high-value partnerships in AI and semiconductors, potentially sidelining India in the global tech order and sending a negative signal to investors about its ecosystem readiness.

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4. Geopolitical and Economic Risks : Amid U.S.-China tensions, Pax Silica is viewed as a tool to counter Chinese dominance in critical minerals and AI infrastructure. Joining could expose India to risks like retaliatory measures from China (a major trade partner) or broader supply chain disruptions. There's also concern over domestic policy inaction, such as delays in building resilient power, predictable regulations, or advanced manufacturing, which contributed to the initial exclusion.