



INDIA-US RELATIONS: TRADE, DEFENCE AND TECHNOLOGY

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Abstract:

The 21st century marks a pivotal era in India–United States relations, where shared democratic values, mutual economic interests, and convergent strategic visions have turned a once cautious relationship into a comprehensive global partnership. The evolution of India–US ties demonstrate a dynamic blend of pragmatism, interdependence, and technological innovation. This research paper analyses the multidimensional partnership between India and the United States across three critical pillars—trade, defence, and technology—while situating them within the context of changing global geopolitics between 2020 and 2025.

Trade between India and the U.S. has surpassed \$200 billion, making America India's largest trading partner. Defence relations have deepened through foundational agreements like LEMOA, COMCASA, and BECA, while joint military exercises such as Malabar and Yudh Abhyas underscore shared Indo-Pacific security goals. The technology partnership, energized by the 2023 Initiative on Critical and Emerging Technologies (iCET), has expanded cooperation in AI, quantum computing, semiconductors, cybersecurity, and space exploration. Despite these advances, the relationship faces challenges such as trade imbalances, visa restrictions, differing positions on Russia and China, and domestic political constraints. However, both nations continue to identify common ground in addressing climate change, digital governance, and global health. India's G20 presidency in 2023 and its assertive diplomacy in the Indo-Pacific reflect a confident, globally engaged India partnering with the U.S. to shape a balanced, rules-based international order.

This study concludes that the India–U.S. relationship has evolved into one of the most consequential global partnerships, built not only on mutual benefit but also on the shared commitment to preserve stability, democracy, and innovation in an increasingly multipolar world.

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Introduction:

India–U.S. relations represent a unique trajectory of transformation in global diplomacy. Once constrained by Cold War rivalries and ideological differences, the two nations have steadily evolved into natural partners in the 21st century. Both are vibrant democracies, large economies, and leading technological innovators. The partnership has matured from episodic cooperation to institutionalized dialogue across a wide range of sectors, including trade, defence, technology, climate, and education.



In the early decades after independence, India's policy of non-alignment and its economic self-reliance placed limits on cooperation with the U.S., which was aligned with Pakistan through SEATO and CENTO. However, the dissolution of the Soviet Union, India's economic liberalization in 1991, and the emergence of new global threats like terrorism and climate change gradually pushed both countries towards engagement.

The 1998 Pokhran-II nuclear tests initially brought sanctions but opened the path for dialogue, culminating in the historic **India–U.S. Civil Nuclear Deal (2005)**. Since then, bilateral relations have become more comprehensive and resilient. Under Prime Minister Narendra Modi and Presidents Obama, Trump, and Biden, the partnership has deepened further, evolving into what the U.S. calls a “defining relationship of the 21st century.”

India's foreign policy today reflects the dual imperatives of strategic autonomy and global engagement. In this framework, cooperation with the U.S. enhances India's technological, defence, and economic capacities while enabling Washington to anchor its Indo-Pacific strategy in South Asia.

Trade and Economic Cooperation:

1. Evolution of Bilateral Trade

Economic ties have been the cornerstone of India–U.S. relations since the 1990s. Following India's liberalization, American corporations saw immense potential in India's growing market and skilled workforce. Bilateral trade in goods and services, which stood at less than \$20 billion in 2000, reached over **\$200 billion in 2023–24**, making the U.S. India's largest trading partner.

Major areas of trade include information technology services, pharmaceuticals, textiles, defence components, agricultural products, and energy. U.S. companies such as Google, Amazon, Microsoft, and Apple have expanded operations in India, while Indian firms like Infosys, TCS, Wipro, and Mahindra Tech have become major employers in the United States.

2. Indo-Pacific Economic Framework (IPEF)

In 2022, India joined the **Indo-Pacific Economic Framework for Prosperity (IPEF)**, a U.S.-led initiative designed to promote fair trade, resilient supply chains, clean energy, and anti-corruption standards. India's participation in IPEF signals its willingness to shape the economic architecture of the Indo-Pacific without compromising its strategic autonomy.

3. Investment and Technology Flows

Foreign Direct Investment (FDI) between the two countries has grown significantly. The U.S. is among the top five investors in India, with cumulative FDI crossing \$60 billion. American capital has flowed into India's manufacturing, digital infrastructure, and renewable energy sectors. Conversely, Indian investment in the U.S. exceeds \$12 billion, particularly in IT and pharmaceuticals.

The bilateral **Commercial Dialogue (2023)** revived discussions on market access, intellectual property, and digital trade. The U.S. also supports India's ambition to become a global semiconductor hub under the “Make in India” and “Atmanirbhar Bharat” initiatives.



4. Trade Challenges

Despite the progress, trade tensions persist. Issues such as U.S. withdrawal of India's GSP (Generalized System of Preferences) status in 2019, tariffs on steel and aluminum, and disputes over data localization have periodically strained ties. Visa restrictions for skilled Indian professionals and disagreements on digital taxation also remain contentious.

Nevertheless, both nations have demonstrated political will to address these issues through dialogue. The establishment of a **U.S.-India Trade Policy Forum** and new frameworks under IPEF indicate long-term economic convergence despite temporary frictions.

Defence and Strategic Partnership:

1. From Estrangement to Strategic Alignment

Defence cooperation, once limited by ideological differences, has become one of the strongest pillars of India–U.S. relations. The transformation began after the 1998 nuclear tests, with both nations recognizing the need for strategic dialogue. The **Next Steps in Strategic Partnership (NSSP)** in 2004 and the **Defence Framework Agreement (2005)** institutionalized military collaboration.

2. Foundational Defence Agreements

Three key foundational pacts have cemented defence cooperation:

- **LEMOA (2016)** – Logistics Exchange Memorandum of Agreement allows reciprocal access to military facilities for refueling and repairs.
- **COMCASA (2018)** – Communications Compatibility and Security Agreement enables secure communication between armed forces.
- **BECA (2020)** – Basic Exchange and Cooperation Agreement facilitates sharing of geospatial intelligence. Together, these agreements have elevated India–U.S. defence relations to interoperability and joint operational levels.

3. Joint Exercises and Indo-Pacific Security

The **Malabar Naval Exercise**, which includes Japan and Australia (forming the QUAD), underscores maritime cooperation and freedom of navigation in the Indo-Pacific. The **Yudh Abhyas** army exercises enhance ground warfare coordination. These joint initiatives signal a shared strategic vision to maintain peace and stability in the Indo-Pacific, particularly in response to China's growing assertiveness.

4. Defence Trade and Co-Production

India's purchase of advanced American defence platforms such as the **C-17 Globemaster**, **Apache helicopters**, **P-8I Poseidon aircraft**, and **Predator drones** marks a shift from buyer-seller to co-developer status. The recent **General Electric–HAL deal (2023)** to manufacture jet engines in India exemplifies technology transfer and "Make in India" synergy.

5. Strategic Challenges

However, India continues to balance its historic defence ties with Russia, especially regarding the S-400 missile system. The U.S. CAATSA sanctions have been a diplomatic challenge, though Washington has



shown understanding of India's security compulsions. The long-term goal remains reducing dependency on Russian arms while strengthening indigenous capacity.

Technology Diplomacy: The Emerging Frontier

- The Initiative on Critical and Emerging Technologies (iCET):** Launched in January 2023 by Prime Minister Modi and President Biden, iCET symbolizes a paradigm shift in bilateral engagement. It focuses on six key areas—AI, quantum computing, semiconductors, space, defence innovation, and telecommunication. Under iCET, collaborations have expanded between research institutions, startups, and government agencies. The U.S. National Science Foundation and India's Department of Science & Technology have launched joint projects in AI ethics, cybersecurity, and green technology.
- Semiconductor and Digital Cooperation:** India's semiconductor mission aligns with U.S. efforts to diversify chip supply chains away from China. Companies like Micron and Applied Materials have invested in Indian manufacturing and design facilities. This cooperation enhances India's role in the global electronics ecosystem.
Digital cooperation extends to **Data Privacy Frameworks**, **5G/6G collaboration**, and **cybersecurity standards**, areas where both nations seek convergence amid concerns about surveillance and data misuse.
- Space and Defence Technology:** ISRO and NASA continue to collaborate through the **NISAR satellite mission**, advancing Earth observation and climate monitoring. India's signing of the **Artemis Accords** in 2023 further deepened cooperation in space exploration and lunar missions. The U.S. support for India's private space startups adds a new dimension to bilateral innovation.
- Education, Research, and Human Capital:** India's National Education Policy (NEP) 2020 promotes global partnerships in higher education. U.S. universities have begun collaborating with Indian institutions for dual-degree programs, online courses, and technology incubation. With over 270,000 Indian students in U.S. universities (2024 data), education continues to serve as a soft power bridge reinforcing technology diplomacy.

Contemporary Challenges: Despite the strategic convergence, several challenges persist:

- Trade and Tariff Issues:** Differences over market access and intellectual property protection remain.
- Visa and Mobility Concerns:** The H-1B visa regime affects skilled Indian professionals in U.S. tech sectors.
- Strategic Balancing:** India's ties with Russia and non-alignment approach sometimes conflict with U.S. expectations in global crises such as the Ukraine war.
- China Factor:** While both nations counterbalance China's assertiveness, they differ in tactical responses. India maintains a nuanced approach to avoid direct confrontation.
- Data Governance:** Divergent views on digital sovereignty and privacy laws can slow down cooperation in tech.

Opportunities and Future Prospects (2025–2030):

The coming decade offers unprecedented opportunities for India–U.S. collaboration:

- Energy and Climate Partnership:** Expansion of clean energy investment, hydrogen technologies, and



green finance mechanisms.

- **Defence Industrial Corridor Cooperation:** Joint production of advanced systems, drones, and AI-based defence tools.
- **Global Health and Pandemic Response:** Institutionalizing collaboration for vaccine research and healthcare resilience.
- **Education and Skill Development:** Establishing joint innovation hubs, particularly in AI, robotics, and sustainable technologies.
- **Global Governance and Diplomacy:** Coordinated efforts in the UN, QUAD, and G20 for peacekeeping, cyber governance, and maritime security.

India's emphasis on "Vasudhaiva Kutumbakam" (One Earth, One Family, One Future) complements America's vision of a free, open, and inclusive Indo-Pacific.

Conclusion: The India–U.S. relationship today represents one of the most successful transformations in modern diplomacy. It has evolved from mutual suspicion to mutual strategic trust. Trade, defence, and technology cooperation form the foundation of this partnership, while shared democratic values provide its enduring strength.

Both nations now view each other not merely as partners of convenience but as collaborators in shaping the global future. As India asserts its role as a leading voice of the Global South and the U.S. adapts to a multipolar world, their relationship will be crucial to maintaining global stability and innovation.

The synergy between economic growth, defence modernization, and technological innovation ensures that India–U.S. ties will remain one of the central pillars of 21st-century geopolitics.

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Cite This Article: *Dr. Auti M. E. (2025). India–US Relations: Trade, Defence and Technology. In Educreator Research Journal: Vol. XII (Issue VI), pp. 9–13. Doi: <https://doi.org/10.5281/zenodo.18430046>*