



US-Indo Cooperation on ICET and its Implications for China's Tech Industry

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ABSTRACT

This article examines the ever-evolving dynamics of strategic partnerships and a landmark shift at the intersection of technological innovation and geopolitics. This study analyzes the partnerships initiated to deepen collaboration with the primary objective of fostering cooperation, innovation, and control of global supply chains in areas such as semiconductors, AI, quantum computing, and telecommunications, which share liberal democratic values. This article also highlights the dual nature of the partnership with the underlying strategic purpose of containing China and counterbalancing the power dynamic. Through the theoretical lens and scenario analysis of strategic realism, this article represents a more nuanced and comprehensive analysis of the initiative, functioning as a strategic détente enabling alliance formation, threat balancing, and technological containment while serving as a platform with liberal values of cooperation, democratic standards, and international norms. This further examines China's counter strategies, future scenarios, and the evolving normative competition between democracies and communists. It also addresses the challenges and risks that could create friction in sustainable partnerships, including protectionist policies and diverging national interests. Ultimately, this research represents the initiative as a hybrid mechanism shaping the global order, demonstrating strategic and normative logic in shaping state behavior in this cutthroat competition for technological dominance.

Keywords: Innovation Ecosystem, Normative Rivalry, Strategic Alignment, Geopolitical Shift, Technological Decoupling, Counterbalance, Détente.

Introduction

The US and India have started an "initiative on critical and emerging technologies" (ICET) since May 2022 to strengthen their strategic partnership. The ICET was launched by Indian Prime Minister and US former president Joe Biden to elevate and strengthen the technological and industrial cooperation between two democratic states. Their leaders believe that, as a democratic nation, they should cooperate and pave the road or shape the ways for engaging in designed technology and security. This initiative targets cooperation in critical technological fields, such as artificial intelligence, quantum computing, and telecommunications, fostering innovation and creating resilient supply chains to ensure competitiveness in the global tech landscape, placing China in a challenging position as it adapts to new geopolitical realities.

Shifting Power Dynamics:

The US-India partnership focuses on advancing technological capabilities and security cooperation, positioning them as leaders in critical technology sectors and balancing power dynamics in Asia. For the United States, the ICET helps secure its technological prowess and counter China's influence by fostering collaborative R&D projects and reducing reliance on adversarial states while sharing intelligence and innovations. India's engagement with the US under the ICET opens avenues for accessing advanced technologies and investments, sparking domestic industrial growth, skill development, and international diplomatic leverage, particularly in the Indo-Pacific. The US-India collaboration poses significant challenges to China's tech dominance, prompting China to innovate faster and strengthen ties with other nations to maintain its global position. The US-India ICET partnership reshapes the technological landscape and challenges China's influence, creating new geopolitical dynamics. (Sinha, A. 2024) (AAU, 2023) This partnership has the potential

to disrupt the volatile security of the South Asian region. Most significantly, China is economically, militarily, geopolitically, and technologically involved. India might emerge as a regional competitor in various sectors, potentially isolating China regionally. The US is already a rival to China, and combined, both the US and India threaten China's dominance and influence regionally and globally. INDIA-US relations have always influenced the security of the region. Whether it is a technological partnership, defense agreement, nuclear deal, or space. Both have contributed to the strategic dynamics of the South Asian region. Therefore, China expects a tremendous setback, leading to a threat that would imbalance the power dynamics, economically and geopolitically. The strategic significance of ICET lies in the joint venture in enhancing capabilities through technologies, lets explore those areas where two partners aim to build. (Siddiqui, 2023)

Geopolitical Dynamics: The US India partnership can disrupt China's geopolitical dynamics, making it more vulnerable in the region. Nations might be encouraged to deepen ties with both the US and India, fostering stronger security and economic relations and urging them to follow the US-India framework. QUAD complements the ICET goals, challenging China's influence entirely in the region, reducing China's influence, and threatening China's strategic interests in the most disputed South China region. With their high-end defense technology and modified naval weapons or machinery, both partners secure their ground in the region. The US-India strategic partnership may lead other nations in the region to align with the US and India, thereby reducing China's influence over its neighbors and changing the region's geopolitical dynamics. (Lou, 2024) (Smith, 2020)

Economical Competition: If ICET succeeds, it could stimulate economic growth not only in the United States and India, but throughout Asia. India, with U. S. assistance enhancing its technological capacity and economic growth, could compete with China in several areas, particularly in manufacturing and technology. The ICET may further cause economic setbacks for China through disrupted trade ties and reduced foreign investment, which would lead to increased production costs and reduced global competitiveness. The focus of ICET is heavily on semiconductors and electronics particularly in chips and critical minerals, India and the US are working together to create alternative supply chains that reduce dependence on China, which poses a threat to China's dominance in global electronics manufacturing and the refining of critical minerals. There is a Possible loss of foreign investment, especially from Western companies looking for a "China plus one" strategy.

Military Dynamics: Increased U.S.-India military cooperation could shift the balance of power in the Indo-Pacific region and challenge China's military presence and assertiveness in the South China Sea and surrounding areas. ICET 's defense innovation cooperation, such as the joint development of jet engines and drones theand, Super Train Navy with highly modified defense machines, could strengthen India militarily with U.S. technology and directly counter China's regional influence. Dynamical change in the region would have implications for China, which might be the strategic pressure on China to increase military R&D spending and reassess its Indo-Pacific footprint. The ICET is part of a broader technology decoupling and re balancing effort that could economically contain or slow China's rise in critical industries. (Siddiqui, 2023)

Technological Leadership: The ICET is challenging China's dominance in cutting-edge fields such as AI, quantum computing, and semiconductors. China has established itself as a formidable

player in artificial intelligence (AI), telecommunications, and e-commerce. According to a McKinsey report, China's digital economy is expected to reach \$ 8 trillion by 2025, accounting for 24.3% of the country's GDP. The Chinese government's "Made in China 2025" initiative further illustrates the country's ambition to dominate the high-tech industry. It focuses on advancements in semiconductors, robotics, and space. (Chen et al, 2015)

Reshaping the Strategic Landscape:

However, despite these achievements, the sector faces numerous challenges that could impede its growth. Beijing's heavy reliance on foreign technology, such as semiconductor manufacturing, could become one of its vulnerabilities as these countries work together to challenge China's technological dominance. In addition, this might disrupt China's control over critical global supply chains, such as rare earth minerals and technology could become disconnected as Chinese technology companies, including Huawei and ZTE, face increased scrutiny and bans in various markets. To mitigate the risks associated with geopolitical tensions and supply chain disruptions, tech giants such as Apple have shifted some production from China to India. These shifts indicate a broader strategic realignment as countries seek to build more resilient supply chains that are less vulnerable to external shocks and political influence. Reshaping the narrative of global technology dominance, ICET exerts a significant competitive threat to China's technological dominance as the US and India intensify their cooperation, and their combined strengths in R&D and innovation potentially surpass the extensive investment China has made in its own technology sector. The evolving geopolitical landscape, highlighted by the progress of the US-India ITC, means that as China's technology sector thrives, it faces a complex set of challenges that threaten its position on the global stage. Therefore, the ramifications of the ICET go beyond merely competing to potentially reshape global technology leadership. Stressing co-development and co-production to build an innovation bridge. To maximize the interests and benefits, the two have signed an agreement between the US National Science Foundation and Indian science agencies to enhance collaboration in artificial intelligence and quantum computing. Both have established a joint mechanism to foster research and cooperation involving academia, industry, and government. The US and India have planned to work on high-performance computing (HPC), semiconductors, space, and defense. Both countries wish to see them rid themselves of their reliance on China and Russia.

ICET focuses on HPC, processing massive amounts of data at a speed of one petaflops. Supercomputers enable cutting-edge innovation and research in AI and Quantum computing. This can facilitate the discovery of new materials. They can be used in defense, space technology, genome sequencing, and renewable energy to combat global challenges. Once the USA refused to sell supercomputers to India, and now they are collaborating to produce one. India aims to reduce its dependency on imports by focusing on hardware and software manufacturing. (Antony, K.S, 2024) (Mohanty A., & Singh, A. 2024)

An American-Indian computer scientist and engineer, Krishna V. Palem holds the Kenneth and Audrey Kennedy Professorship in Computing at Rice University. He discussed the role of emerging technologies in the India-US strategic partnership, with a focus on sustainable nanoelectronics and embedded computing. (Mirage News, 2024)

Focusing on semiconductors supply chain, both countries intend to promote the development and manufacturing of semiconductors to decrease their reliance on others. The US Semiconductor Industry Association (SIA) and the India Electronics Semiconductor Industry Association (IESA) are collaborating on the development of a task force to work on that will support global semiconductor supply chains and the development of joint technology partnerships. (Ravi, 2023)

Space, both have decided to promote cooperation on human space flight, incentivizing commercial players to cooperate and get

trained at NASA space center and engage in activities related to Commercial Lunar Payload Services (CLPS) project and broaden the US-India space partnership, such as space/ planetary defense. (The White House, 2025) Rudra Chaudhuri, Director of Carnegie India, co-authored the report The U.S.-India Initiative on Critical and Emerging Technology (ICET) from 2022 to 2025: Assessment, Learnings, and the Way Forward with Konark Bhandari. His analysis evaluates ICET's progress, highlighting achievements in areas such as space and defense while proposing avenues for future collaboration.

ICET promotes research and development in renewable energy **sources** such as solar, wind and hydrogen, with an emphasis on clean energy technologies. The goal is to reduce carbon dioxide emissions and promote sustainable development, which is a response to the global challenge of climate change. ICET intends to advance global digital infrastructure by focusing on next-generation technologies such as 5G and 6G. This includes optimizing telecommunications systems to ensure robust connectivity, which is essential for economic growth and digital inclusion in the region. An Indian computer scientist and IEEE Fellow, Ashutosh Dutta serves as a Senior Scientist and 5G Chief Strategist at the Johns Hopkins University Applied Physics Lab. His active involvement in 5G, 6G, and future network initiatives has significantly enriched the technological dialogue surrounding ICET. His view of ICET cooperation on the development of 5G and 6G that could enable the deployment and adoption of Open RAN in India. (Dutta, 2022)

ICET has set up a great environment for India's ambitious goals, which could help create thousands of jobs, advance economic growth, and help counter energy, defence, and cyber security challenges. Vivek Mishra, Deputy Director of the Strategic Studies Programme at the Observer Research Foundation. He discussed the potential transformation of bilateral relationship into tech-centric alliance, emphasizing areas such as AI and quantum computing in his ICET: Upscaling India-US Partnership for a Tech-centric Future article. (NatStrat, 2021) (Smit, 2020)

Bhaskar Chakravorti, Dean of global business at Fletcher School, Tufts University, has been fostering dialogues between Indian and US academic institutions to strengthen partnership in emerging technologies. He emphasized the inclusive innovation ecosystem. He works under the ICET to promote joint research and development, particularly in areas such as digital infrastructure and sustainable technology solutions. (Digital Transformation Governance | NACD, 2023)

The ICET cooperation road map includes cybersecurity, which is a new front in the battle for national security. This alliance enhances their cyber posture by improving cyber resilience through collaborative efforts and technology sharing. Until now, China has attempted multiple cyber-attacks on India and the USA's cyber security. To counter this cybersecurity threat, the US and India have initiated their own collaboration to foster innovation in cybersecurity technologies and create frameworks that can protect critical infrastructure from cyber-attacks. Another priority area for US-India cooperation is Artificial Intelligence. This includes developing ethical frameworks for AI applications, cross-border research initiatives, and sharing best practices for harnessing AI's benefits of AI. An American-Indian academic and technology entrepreneur Vivek Wadhwa, workwork at Carnegie Mellon's School of Engineering and at Harvard Law School's Labor and Work Life Program, has written on the US-INDIA tech partnership, highlighting the significance of ICET in fostering innovation and addressing challenges in the global tech landscape. Fostering Innovation and Research, with India's vast scientific talent and cost-effective resources, coupled with US technological capabilities and investment. Sandip Tiwari, an esteemed Indian electrical engineer and applied physicist, holds the Charles N. Mellowes Professorship in Engineering at Cornell University, USA. His groundbreaking research on nanoscale devices and energy-efficient designs has profound implications for the

technological partnerships envisioned under the ICET. (Ahuja A. 2024)

Barbara Synder, president of the Association of American Universities, is one of the leading figure in AAU's efforts to establish collaborative framework under ICET. It focuses on developing and strengthening academic partnerships between US and Indian universities. AAU has been working with Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc) to set up US-Indo Global Challenge Institutes. She advocates for research partnerships and people-to-people exchanges in areas such as clean energy, semiconductors, and public health. (AAU to Lead Task Force on Expanding U.S.-India University Partnerships, 2023), (India Strategic Staff/ Agency, 2023)

Furthermore, they plan to collaborate on joint maritime security and intelligence surveillance reconnaissance (ISR) and develop advanced military systems that enhance readiness and operational capabilities. This partnership aims to enhance maritime domain awareness, ensure safe passage, and respond to threats in the region through joint naval exercises. The QUAD also contributes to security cooperation. It can provide a great advantage to the US in countering China in the region.

Moreover, growing security threats or concerns posed by rivals such as China underscored the strategic partnership between the US and India.

Defence innovation and technology would push greater technological cooperation for joint development and production, initially focusing on jet engines and munition technologies. In addition, Artificial Intelligence and quantum computing have advanced defence technology, which is essential for military operations. The development of sophisticated technologies and defence systems ensures that both nations stay ahead of their technological adversaries. Vivek Mishra, Deputy Director of the Strategic Studies Programme at the Observer Research Foundation, ICET not only reinforces defense capabilities but also contributes to the broader goal of maintaining regional stability and deterring potential threats to it. discussed the potential transformation of bilateral relationship into tech-centric alliance, emphasizing areas such as AI and quantum computing in his ICET: Up-scaling India-US Partnership for a tech-centric Future article. In addition, Atul Keshap, president of the US-India Business Council, has been facilitating dialogues between industry leaders to promote collaboration in critical and emerging technologies. He considers the ICET a significant platform to accelerate strategic convergence and policy alignment between the two nations. The USBIC has launched events such as the India-US Defence Acceleration Ecosystem (INUS-X) conference to foster innovation and collaboration in defence technology. Both sides are actively working and collaborating. (Dutta, 2023), *Explainer - India-US Initiative on Critical and Emerging Technologies (ICET)*, 2024) (Lou, 2024), (Siddiqui, 2023) (AAU, 2023) This article offers a review of existing literature followed by the identification of a research gap and formulation of a research gap, which then develops a theoretical framework grounded in strategic realism using qualitative methodology, proceeds to discussion before concluding the insights on the implications of these findings for global technological dominance and strategic alignment. (Ahuja A. 2024)

Literature Review

The Indo-US initiative on ICET conceptualizes its strategic partnership and collaboration on critical and emerging technology, which is seen as a strategic move to bolster technological capabilities and counterbalance the influence of technological global powers in the region. Scholars have examined the ICET through multiple theoretical lenses.

Conceptual Framework:

From the liberal perspective, the ICET initiative is seen as a partnership that fosters liberal principles, such as cooperation through shared norms and institutions and mutual interests, with interdependence in achieving economic and strategic goals. The

Observer Research Foundation examines how these partnerships foster cooperation, economic integration, and shared liberal values and norms. This also highlights the ICET as a normative and institutional partnership fostering liberal democratic values and a shared commitment to rule-based mechanisms. ICET is not just about countering threats but also a partnership that proves a positive-sum framework for cooperation, peace, and values. Some constructivists view this cooperation as a framework with shared identities, values, and norms and how mutual perception and understanding shape or influence partnerships' trajectories. Postcolonial critique ICET analyzes the power dynamics and historical context shaping this partnership. In the context of US-India relations, scholars have questioned whether such initiatives perpetuate Western dominance and critically examined the cultural, political, and economic legacies of colonialism, with India, as a former British colony, experiencing challenges in asserting its sovereignty in the global arena. It is argued that global technological partnerships are structured to serve the interests of the countries involved and redefine relations on equal terms. However, it also highlights the potential for neo-colonial dynamics, where the United States may exert its influence over India's technological development and economic policies, which perpetuates dependence on Western technologies and expertise, creating a power imbalance despite mutual benefits. This also prompts consideration of how the ICET might influence the cultural imposition of Western paradigms on India and intellectual exchanges between the two nations. In conclusion, applying postcolonial theory emphasizes a nuanced framework for understanding the intricate interplay of historical legacies, cultural factors, and critical power dynamics that shape this partnership. (Grünberg, 2022)

Methodologically, the partnership is qualitatively approached by scholars, emphasizing policy analysis and case study methods to evaluate the understanding of objectives and implications for the partnership from expert, policymaker, and researcher insights. However, the literature on this topic is limited, and empirical studies and comparative analyses with other technology alliances are lacking. While the existing literature lacks a robust theoretical interrogation and the partnership has not yet been examined as a behavioral phenomenon and their strategic motivations, how states behave and position themselves in the evolving technological order. This article aims to fill that gap by considering partnerships as strategic behavior embedded in ever-evolving power dynamics.

Research Question

In what ways does the Indo-US partnership reflect the strategic behavior of states in balancing power in the international arena, and how does strategic realism analyze its geopolitical implications and strategic autonomy and power?

Theoretical Framework

The US and India's initiative ICET has garnered interest in academia and IR, with scholars encompassing a range of IR theories, each offering distinct insights into ICET, interpreting its potential impacts on global geopolitics, technological innovation, and the economy through differing theoretical frameworks that reflect the evolving nature of global power and technological competition. This review focuses on contemporary lens of strategic realism. IR scholars view ICET through the lens of liberalism, post-colonial theory, and constructivism. Scholars argue that this partnership might have the potential to lead to a reconfiguration of the global telecommunications and semiconductor supply chains, jeopardizing China's dominance. At the core of ICET's commitment to liberal democratic norms, such as transparency, privacy, and open innovation, is the aim to institutionalize a rules-based technological ecosystem by anchoring these principles, unlike the state-centric, surveillance-heavy model promoted by China, where the government controls data and digital expression. This cooperation highlights a deliberate effort to foster international cooperation by democratic

states with shared values and economic interdependence, which shows rational states capable of cooperation when interests align.

Analyzing Diverse Theoretical Drivers:

To critically assess the strategic implications of the US–India initiative, this study adopts strategic realism as the primary theoretical framework, which offers a more pragmatic lens that interprets how states respond to threats, form alliances, and engage in long-term positioning to ensure their survival and power maximization within an anarchic international system. This strategic alliance is designed to counterbalance China's technological hegemony, secure supply chains, and contain its supremacy in the region. This perspective sheds light on the strategy, why the ICET emerged at a time of heightened US-China tensions, and why the US chose India as its partner from the South Asian region. This raises serious concerns for realists, who try to interpret the hidden goals and benefits of this cooperation. Therefore, this perspective provides a comprehensive and multidimensional framework for analyzing how the US and India are leveraging technological cooperation to build capacity, challenge China's rise, and create strategic dependencies. This theory complements the ICET's strategy by addressing its dual nature as a balancing act strategy, the containment of China, and shifting global power dynamics. This analysis assesses the calculated maneuvers, opportunity-driven alliances, and threat perceptions that define the realpolitik underlying the ICET and the broader strategic architecture, which is being framed as a cooperative venture that reveals deeper strategic motives. This also illustrates the state behavioral aspect of strategic realist states forming alliances and acting in a certain way based on their perceived threats and opportunities. This theory reinforces the idea that this partnership can be understood as a calculated and long-term move within a broader strategic move against China's growing technological advancement. Unlike the liberal and postcolonial views, strategic realism provides a more critical and comprehensive yet contrasting perspective, dual in nature: competitive and cooperative, strategic and institutional. This reflects the evolving nature of international relations and ever-changing global dynamics. (Mason, 2020) (Smith, 2020) The distancing from Chinese technologies reflects a deliberate strategic move by two democracies to reshape the balance of power through strategic signaling and technological alignment by collaborating on critical technologies such as AI, semiconductors, quantum computing, and defence as strategic deterrence against Chinese hegemony in these fields, rather than being driven solely by ideological or economic concerns. Setting an offensive strategic posture to define technological norms and the innovation ecosystem. The US and India are effectively signaling their intent to counter and create alternative technological ecosystems that reinforce their strategic autonomy with the logic of strategic bargaining in a broader geopolitical contest by tightening the flow of knowledge and resources to reduce China's leverage over critical technologies. These strategic plans reflect a comprehensive understanding of power, national interests, and strategy, where innovation is merely a tool or weapon. However, this partnership is dynamic, with evolving relations and the nature of global politics focusing on state interactions, shifting alliances, and responding to global events. In conclusion, this cooperation implicitly yet effectively undermines China's influence in tech defence and raises concerns for the US and India.

(FACT SHEET: The United States and India Committed to Strengthening Strategic Technology Partnership | the American Presidency Project, 2025) (Pant, 2023)

Methodology:

This study adopts a qualitative analysis of the initiative through the perspective of strategic realism by analyzing the ICET. It employs interpretive analysis of how technological cooperation reflects strategic behavior aimed at counterbalancing threats and containing emerging powers, drawn from secondary information such as policy documents, academic literature,

scholarly research, and expert analysis. The methodological framework helps us understand how states act in anticipation of perceived geopolitical threats and reflects power balancing behavior in perceived opportunities. The theoretical perspective of strategic realism provides a comprehensive understanding of the geopolitical implications and strategic alignments in the region. This illustrates how this collaboration is not merely a technological advancement but a strategy to counter the tech hegemon.

Discussion

Redefining Global Tech Order:

The US stands to gain significantly from the ICET in terms of economic growth and technological leadership, which are crucial for national security in modern geopolitics. By fostering partnerships, US companies can access India's vast market and skilled workforce, eventually leading to greater productivity and creating robust alternatives to China's exports. Through ICET, the US can counter China's economic dominance in the Indo-Pacific region strategically and militarily, fostering alliances that advance cutting-edge technologies and strengthen international security and strategically counter China's technological assertiveness. The ICET will facilitate the joint development of advanced defense technologies. Joint projects, along with the NASA-ISRO Synthetic Aperture Radar satellite, enhance surveillance and domain awareness, which are critical for monitoring China's activities. It also deepens the US–India strategic partnership, enabling both nations to address pressing global challenges, such as cybersecurity threats and climate change. As India emerges as a key ally in maintaining stability in the Indo-Pacific region, increased defense cooperation enhances U.S. national security. This is how the ICET initiative benefits US interests both regionally and globally. (Singhai, S., Singh, R., & Sardana, H. K., 2019) (Antony, K.S, 2024)

For India, the ICET elevates India as a critical player in global supply chains and offers notable benefits, particularly in economic growth and technological advancement. India can accelerate its technological capabilities and develop a more resilient innovation ecosystem by collaborating with the United States. Access to cutting-edge technology and best practices from American companies will improve India's manufacturing capabilities, which will likely lead to job creation and economic growth. This partnership positions India as an emerging technological powerhouse and enhances its global competitiveness. Furthermore, defense cooperation through ICET strengthens India's military capabilities, allowing it to address security concerns more efficiently. India's strategic posture in the region will be enhanced by gaining access to advanced weapons and defense technologies through cooperation with the United States. Cooperative efforts in the defense realm not only enhance India's national security but also facilitate a more stable and secure environment in the Indo-Pacific region, thereby countering regional threats and fostering peace. Increased military and technological cooperation under ICETs bolsters India's position on freedom of navigation and indirectly challenges China's territorial assertions. Intelligence sharing and innovation in defense enhance India's ability to manage border disputes with China. In addition to addressing national security priorities, alliances in semiconductor manufacturing and artificial intelligence research are driving economic growth and innovation, such as those between Indian and American technology companies, to develop next-generation technologies. (Desk, 2023)(Smit, 2020) (Holla, N, 2020) (Behera, 2022)

While the USA and India are benefiting from this partnership, it has implications for China's technological landscape. China's technological sector has become a centerpiece of its economic strategy and has established itself as a formidable player in the AI and e-commerce fields. Given this, it has made its digital economy a strategic part of its national economy plan to build a roadmap and incentives to shore up the sector. According to Yicai Global,

China expects its digital economy to reach \$8 trillion and make up to 10 pc of GDP by the end of 2025. However, despite these achievements in technology (robotics, aerospace, and semiconductors), the technological sector faces multiple challenges that could impede its growth trajectory. While China is not explicitly mentioned in ICET's objectives and aims, it contributes its share of challenges for China's technological hegemony. By aligning with the US, India offers an alternative to countries to wary China's tech influence, disrupting China's economic strategy. The ICET facilitates the de-risking of supply chains away from China, reducing its leverage over critical nodes. Some Chinese firms have already been targeted by export controls, blacklists, high tariffs, and regulatory scrutiny. The ICET potentially serves as a technological containment mechanism, the initiative CHIPS and Science Act; redirecting global supply chains for semiconductors, AI, and 5G, especially in the Indo-Pacific region, reducing regional dependence and standards on China in these sectors. Setting international technical standards and norms sidelining China from a global leadership position. While China continues to invest heavily in self-reliance and domestic innovation, the process of slowing the international expansion of Chinese tech has already started countering through ICET. (Qasim, 2025), (Ghanem, 2023), (Lou, 2024) (Ramamurthy, V. S., & Srivastava, D. K., 2023) (Singhai, & Sardana, 2019)

A Catalyst for Geopolitical Realignment:

As the military tech and dual-use tech dimensions race intensifies, India is deepening areas like space and hypersonic systems, which have dual-use challenges that compete directly with Chinese advance programs. Fortifying geopolitical alliances, ICET is a part of a broader US strategy focused on alliances in the Indo-Pacific and techno-democratic bloc, including QUAD members and other democratic global partners, creating an ideological split in the global tech order and building a parallel ecosystem to China's Digital Silk Road and BRI. This tech collaboration promotes decoupling from China, weakening China's role as a global manufacturing hub, especially if India effectively becomes a regional alternative, leading to a strategic realignment. Additionally, China's tech companies, including Huawei and ZTE, are under severe scrutiny in the market, leading to a potential decoupling of global tech supply chains, as China's heavy reliance on foreign technology for materials like semiconductors could expose its vulnerabilities. (Rajagopalan, 2023) The competitive threat posed by ICET is reshaping the narrative of global tech supremacy, potentially outpacing China's extensive investments in technology, and facing challenges in transparency, intellectual property rights, and governmental oversight. The potential shift in global supply chains might force multinational companies to prioritize localizing production, thereby reducing their reliance on Chinese manufacturing capabilities. This shift is evidenced by the fact that MNCs, such as Apple, have shifted some production from China to India because of its extensive market and labor, mitigating risks with geopolitical tensions. This recalibration emphasizes that a new world order is emerging that will realign economic relationships based on shared values and strategic interests. According to a report by the Boston Consulting Group, this initiative has the potential to attract substantial investment of over \$100 billion in semiconductor technology, which is expected in the coming years, placing China as a tech rival, potentially curbing or slowing trade. Consequently, this reflects the economic imperative and a strategic thrust towards enhancing security and technological sovereignty for both partners, ultimately changing the dynamics. This shift could have a cascading effect on China's economy, leading to a loss of share in the tech ecosystem and dependence on foreign nations for key components. There are implicit economic considerations for China, and foreign investors might be attracted to the ICET. ICET encompasses a framework that presents opportunities for investors, fostering an environment ripe for venture capital and private equity investment and for the global economic ecosystem.

This potential of new international norms will not only redefine international relations but also threaten China's dominance, with Indian tech funding reaching \$39 billion in 2021 reflecting the growing confidence of investors which anticipates that the Indian IT industry will grow to \$350 billion by the end of 2025. This intensification of technology collaboration threatens to undermine China's position in the global tech market, according to a report from the International Data Corporation (IDC) China's share of the global semiconductor market could potentially diminish approximately 20pc if ICET initiative continue to strengthen. The Chinese tech industry might experience disruptions affecting exports and economic growth if the market reliance shifts to ICET initiative, highlighting vulnerabilities in China's previous growth model that hinged on aggressive global supply integration. It reflects a competitive coexistence model with strategic inclusion and influence building to curtail China's technological rise. (Mansoor, 2023) (Ramamurthy, V. S. & Srivastava, D. K. 2023) (Singhai, & Sardana, 2019)

Implications for China's Global Tech Order:

Having potential ramifications for China's international standing in the global technological landscape leading to the significantly curb of Chinese technology, it is expected that china may find itself isolated in the future relative to the creation of a "tech bloc", proposed by the American think tank, Centre for strategic and International Studies (CSIS). Amid growing security concerns, US allied democratic nations might disengaged themselves from Chinese technology, this trend could potentially diminish China's soft power as global alliance shifts eventually resulting in the reduction in China's global influence. As per Bremmer's understanding, a renowned geopolitical analyst "the world is moving toward a tech cold war" reflecting a greater struggle for influence and global tech hegemony which could compromise the international relations (Ramamurthy, V. S. & Srivastava, D. K.2023)

Role of multinational corporations in shaping ICET and Chinese technological dominance is critical, working as primary force multipliers in innovation ecosystem and technology developers, distributors and these leveraging their vast resources and expertise to foster bilateral or multilateral technology partnerships ranging from semiconductors to AI and quantum computing. Considering Google's investments in India aligns with the strategic goal of countering China's technological hegemony but it also accelerates technological advancement. Their, MNCs, strategic interests align with ICET's framework's therefore they are not just passive observers but active participants in their shared goals of interoperable innovation ecosystem, influencing architecture of international tech corporation and supply chain in the face of rising techno-nationalism. MNCs actively engage in public private partnerships through government, ensuring technological development through cross-border investments in standard setting bodies. The global nature of these corporations allows them to navigate complex geopolitical landscapes, driving investment flows that can shape global technology supply chains and epitomizes the synergy between private sector innovation and governmental objectives like R&D collaborations help institutionalize norms around data governance, IP protection and AI areas central to ICET's vision. Furthermore, MNCs act as transnational bridges, facilitating knowledge transfer, enhancing technological capabilities between the US and Indian innovation sectors and reshaping the strategic landscape in way that aligns with broader strategic objectives of challenging China's global dominance in technology. (Lou, 2024), (Ullah et al., 2024) (Singhai, & Sardana, 2019) (NACD,2023)

Strategic Competition and Counter-Strategy:

China's counter strategy in essence to ICET initiative is crafting an assertive tech sovereignty through programs like Made in China 2025, a five year plan with massive investments and building alternative alliances, strengthening ties with BRICS and SCO and regional trade pacts like RCEP and BRI, Digital Silk

Road building technological dependencies among emerging economies. China is massively investing in talent development, accelerating domestic innovation, diversifying supply chains and promoting alternative standards. Deepening economic and technological cooperation, reducing dependence on western technologies, intensifying efforts to develop indigenous technologies, and promoting for Chinese-led technological standards with its economic partners in Asia, Africa and Latin America. Adopting policies such as economic retaliation and diplomatic engagement and narrative shaping, challenging the notion of containment and leveraging diplomatic channels and economic measures against countries participating in containment efforts; but not only resisting containment also building a parallel global tech ecosystem—the one with capitalist values.; countering soft power through digital diplomacy.(Pant, 2023) (Ullah et al., 2024)

Navigating Future Scenarios:

Multiple plausible future scenarios emerge exploring the possible trajectories of ICET, which would likely to be a Technological Bifurcation, collaborative breakthroughs, Convergence and Strategic Compromise Developing World Leverage, a Democratic Tech Bloc takes Root and the Talent Migration shifts. Navigating the scenarios which is more likely the outcomes such as intensification of techno-geopolitical rivalry, ICET succeeds in creating a parallel technological ecosystem where two distinct technological spheres emerge with the world dividing into two incompatible digital ecosystem the one with US-led with its allies and other one led by China and its partners. This could affect global supply chains eventually leading to high cost, economic inefficiencies and restricted cross-border collaboration, again creating a dilemma for south. ICET implements policies to attract top tech talent potentially altering innovation centers, provides a vision of open secure infrastructure which shifts the talent to ICET. ICET functions as a trusted bloc attracting participations from other democratic nations, where trusted partners develop standards for AI, semiconductors, quantum computing and etc. It matures into a formalized multilateral alliance and becomes a central pillar of a liberal tech order with transparency, norms and shared values and innovation. This partnership transitions itself into a strategic détente as a proactive stabilization mechanism between democratic nations reflects a cooperative alignment designed to prevent technological supremacy and escalation with shared goals and values. It is driven by mutual threat perceptions of China's growing influence over global technology and its geopolitical influence, not based on market partners but as a counterbalancing power and preventive alliance formation against China and its economic partners. (Chauduri, R. & Bhandari, K. 2024) (Singhai, & Sardana, 2019) (NACD,2023)

With this partnership comes risks and challenges for both India and US, while they both have economic and strategic opportunities and are credible yet competitive, it also carries risks and concerns for both that might affect domestic stability, foreign policy and long term independence. It posits concerns for US, even though they are partners but owing to the fact that US policymakers priority is to maximize its interests at the expense of others while US considering India's non alignment policy which compels US to foresee India's position in geopolitical conflicts. Also India's data protection policies may not align with the US' tech firms could face operational challenges. Previously US has raised a concern about India's weak intellectual property issue which might jeopardize the initiative. Similarly, India has concerns towards US, with its protectionist policies and growing concern over US restrictive export controls which may limit meaningful technology transfer and lack of trust. US visa restriction and immigration reforms may limit mobility of talent. India seeks assurance that ICET is not merely transnational but mutually beneficial. (Shrivastava, 2023), (Asian News International, 2023), (Lou, 2024) (Ahuja A.,2024).

Beyond technology:

Beyond technological competition this partnership emphasizes a profound normative competition and the battle of ideas; which is not merely about semiconductors, AI protocols or quantum computing breakthroughs but a cutthroat competition of global hegemony about what kind of political framework and whose values will define the the digital age. Therefore, it's a strategic alignment with a soft power as tool for exporting democratic norms through this cooperation. Through this partnership US and India expects greater coordination by setting regulatory standards, codes of conduct and ethical framework aiming to shape global liberal norms which presents a normative dilemma for global south, forcing them in a vulnerable position to pick between the democratic innovation frameworks or with the model that promise growth and central control. In this regard, it represents both a hard strategic alignment and soft ideological contention, where norms and values determine who leads the next digital century symbolizing a more extensive reinterpretation of post-globalization order. (NatStrat, 2021) (Rossow, 2024) (Grünberg, 2022) (Singhai, & Sardana, 2019)

Conclusion:

To conclude, Initiative for Critical and Emerging Technologies (ICET) reflects a multifaceted framework embodying a blend of cooperative ideals and pragmatic strategic imperatives, ICET emerges as a strategic blueprint shaping the international order with its deep liberal norms and values with the combination of calculated strategic imperative.

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