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INDIA-US SEMICONDUCTOR PARTNERSHIP WILL ENDURE CHANGE IN US GOVERNMENT

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Semiconductor chips are foundational to the digital economy. To achieve this growth access to critical technologies, managing the changing geopolitical landscape, and ensuring chips supply is crucial.

The Indo-US trade partnership is expected to gather momentum even with a new American president-elect at the helm. It is an open secret that the impending increase in trade barriers is expected to affect China more than India. It is speculated that there may be a rebranding of the US' domestic semiconductor program, the CHIPS and Science Act, given the huge capital expenditures involved and, with respect to India, the iCET (Initiative on Critical & Emerging Technologies) as remnants of the Biden era. Intrinsically they have both been spectacular policy measures providing impetus to national resource architecture, creating sustainable jobs, and hedging trade ties against China.

The CHIPS and Science Act has an allocation of $50 billion to revitalize the American IC (integrated chips) industry—with successful commitment by American as well as Taiwanese manufacturers that are building massive production facilities to be a leader in semiconductor industry again. These investment commitments are unlikely to be reversed with the transfer of power in the US, as the resolve to reduce the role of China in this sector is certainly here to stay.

From India's perspective, the iCET is crucial and has been seen as successful by policy wonks over the last two years. It has been launched by the National Security Councils of both India and the US, and ably supported by the Ministry of External Affairs and the US State and Commerce departments. iCET is a progressive policy framework to enable transfer of dual-use technologies. This implies supporting innovation through strategic trade partnerships resulting in the creation of INDUS-X, a defense accelerator jointly steered by the Defense Innovation Unit of the US and Innovations for Defense Excellence (iDEX) from India's Ministry of Defence. It could result in a new generation of start-ups that can truly skyrocket across a spectrum of emerging technology areas like AI & autonomous decision-making, quantum computing, biosecurity, space etc.

The India Semiconductor Mission (ISM) has demonstrated great efficacy with a slew of announcements aimed at developing a robust ecosystem for electronics indigenization.

Backed by more than $10 billion dollar worth of subsidies, ISM is well-positioned to continue bringing in FDI into the country with the support of state governments to facilitate the last-mile clearances on land, electricity, water, and access to the sorely needed quality talent pool. India has never been short of software engineering and IC design talent, however, especially when it comes to hi-tech and hardware manufacturing. The country needs vast numbers to achieve self-reliance and, of course, effectively compete against other global giants. It is notable that Taiwan and China have often brought people from agriculture to work on the chip assembly lines. How will India act to expedite talent shortage?

The access to critical minerals remains a stumbling block in the supply chain—the Quadrilateral Security Dialogue ("Quad") and Critical Mineral Partnerships is expected to smoothen the flux in the coming years. In the history of IC manufacturing, no country has been able to own the entire supply chain, as some are strong in minerals and natural resources, some in manufacturing, while others dominate in tools and designing. To indigenize a significant portion of India's electronic supply chain is a worthwhile

objective. Can we make more than 50% of mobile phone components in India and reduce imports drastically? Can we ensure all white goods and automotive brands source chips and other electronic hardware from India?

Can we become a trusted partner of manufacturing dual use chips like the recent deal with US space power and MQ-9B UAVs with MRO out of India?

In essence, as much as the new US administration will remain hawkeyed about national security and trade tariffs, the vast progress made by India and the US in shaping the iCET framework will stand in good stead.

Of course, export controls are heightened to ensure critical technologies are not misused owing to fear of India's multi alignment foreign policy—this has been deftly handled by the US State Department and MEA through workshops like the one recently in Bangalore with contract manufacturers including start-ups, and in continuously developing a calibrated entity list to ward off any action in bad faith by counterparties.

The role of Indian states in pitching directly for investments beyond realpolitik is a welcome approach to cut the red tape and to ensure zero graft—states with existing economic clusters and talent pool will stand out.

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