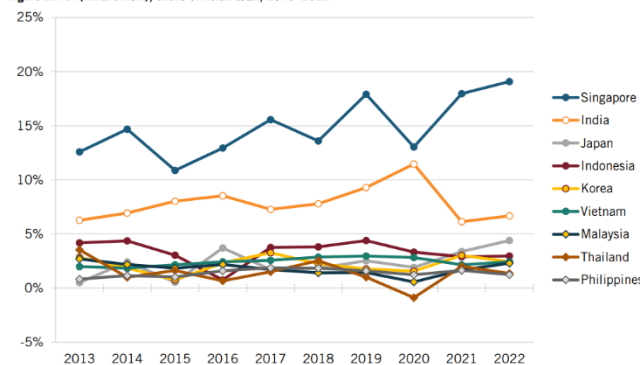


India's Participation in IC Value Chain

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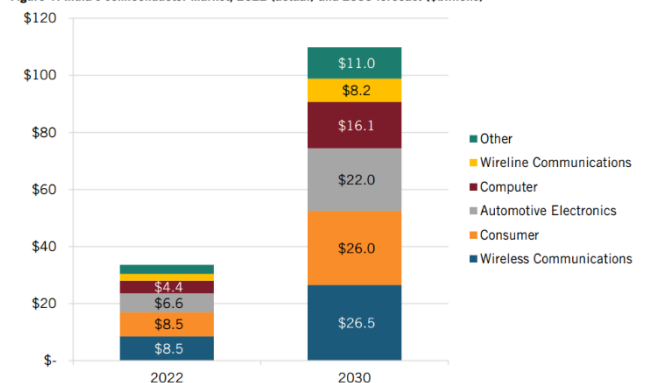
India is emerging as a notable player in the global semiconductor design market, currently holding 1% of the international trade and 0.5% of global sales, with an annual import expenditure of around US\$ 24 billion. Government initiatives, such as the Odisha Semiconductor Manufacturing & Fabless Policy, aim to attract investors by offering substantial incentives and supporting educational institutions in research and development. Notable developments include Larsen & Toubro's planned subsidiary in fabless chip design and the launch of iVP Semi by industry veteran P Raja Manickam, emphasizing local design and production. These efforts highlight India's potential to grow significantly in the semiconductor design sector.

Figure 2: FDI (inward flow), share of Asian total, 2013–2022²⁰



Source: United Nations Conference on Trade and Development

Figure 1: India's semiconductor market, 2022 (actual) and 2030 forecast (\$billions)²⁵



Source: Invest India

The Government of India has approved Tata Electronics' proposal to build a greenfield semiconductor assembly and test facility in Jagiroad, Assam, with an investment of INR 27,000 crore, expected to generate over 27,000 jobs. India's scheme provides 50% fiscal support for capital expenditure to eligible applicants for establishing semiconductor fabs and packaging facilities, aiming to set up at least 20 such units. The country conducts rigorous testing processes, including functional, parametric, and reliability tests, to ensure each integrated circuit (IC) meets stringent electrical and performance standards. These initiatives underscore India's commitment to advancing its IC assembly, testing, and packaging (ATP) capabilities.

India's improvement in trade facilitation, as evidenced by its rise in the Trading Across Borders indicator, has significantly enhanced its global distribution capabilities. The implementation of the WTO's Trade Facilitation Agreement by India has led to expedited movement, release, and clearance of goods, including ICs, contributing to a more efficient global distribution network for electronic components. The establishment of the National Committee on Trade Facilitation and the introduction of reforms such as a risk-based management system, reduction in documentation requirements, and the possibility of supporting out-of-port documentation online have streamlined the customs clearance process in India. These measures have directly impacted the distribution of ICs by reducing average dwell time for containers and improving customs clearance time for goods entering ports, making India a more attractive destination for the distribution of ICs in the global market.

L&T Semiconductor Technologies

L&T Semiconductor Technologies (LTSCT), a fully owned subsidiary of L&T, is the first major Indian Semiconductor product company - a fabless company for designing & delivering Smart Devices for Global Customers. A company that provides Semiconductor Devices and Technology partnerships by helping customers realise energy efficient, high-performance systems to benefit from data, electrification and software defined technology trends.

LTSCT aims to build an India-based semiconductor portfolio of Smart Devices across MEMS Sensors, Power, Analog Mixed Signal & RF products, to support Automotive, Industrial, Energy and Telecommunication verticals.

They have a presence in four prominent geographies i.e. US, Europe, Japan and India, with offices in Austin, Munich, London, Tokyo, Bangalore and Chennai.

Enabling their customers with a new generation of smart, efficient and market leading power, sense and control Integrated Circuits. Together, creating smart applications and driving decarbonization and digitalization.

R Shankar Raman said that L&T is in the process of assembling a team for the new business. "We will not venture into manufacturing, fab foundry, test packaging but we are into chip design. We want to remain technology agnostic. We want to cater to energy, communication, automobile companies and wider industrial applications," R Shankar Raman said. The Mumbai-headquartered company has invested ₹850 crore in setting up a wholly owned subsidiary - L&T Semiconductor Technologies. Further, the company is aggressively setting up its team in the international market for the ramping up of the semiconductor business.