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Semiconductor Design-Linked Incentive (DLI) Scheme

Why in news?

India's semiconductor [Design-Linked Incentive \(DLI\)](#) scheme needs to be revised to boost the chip design sector

Status of Semiconductor Industry in India

- **Workforce** - India's semiconductor design engineers makes up 20% of the global workforce.
- About 2,000 integrated circuits and chips are designed in India every year with engineers involved in varied aspects of design and verification.
- **Semiconductor market** - As per Deloitte report, India's semiconductor market is to reach \$55 billion by 2026 with more than 60% of the market being driven by 3 industries
 - Smartphones and wearables
 - Automotive components
 - Computing and data storage
- Global players operating R&D in the country include Intel, Micron and Qualcomm among others.

What is Design Linked Incentive scheme?

- **Launched by-** Ministry of Electronics and Information Technology (MeitY).
- **Launch year-** 2021
- **Nodal agency-** Centre for Development of Advanced Computing (C-DAC), a scientific society operating under MeitY.
- **Aim-** To offer **financial incentives** as well as **design infrastructure support** across various stages of development and deployment of semiconductor designs.
- **Eligibility-** Financial incentives is provided for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked designs.
- **Target-** To support 100 startups over **5 years**.
- **Components-** It is given for
 - Design Infrastructure support
 - Product Design Linked Incentive (P-DLI)
 - Deployment Linked Incentive (DLI)

Goals of India's Semiconductor Strategy

- **Reduce import bill-** Reduce dependence on semiconductor imports, particularly from China, and especially in strategic and emerging sectors.
- **Build supply chain resilience-** This can be done by integrating into the semiconductor global value chain (GVC).
- **Leverage India's comparative advantage-** India should double down its comparative advantage as it already hosts the design houses of every major global semiconductor industry player.

What are the issues with the scheme?

- **Limited goal-** The scheme has fallen short of its goal of supporting 100 start-ups in 5 years, as only 7 have been approved so far.
- **Lack of policy scrutiny-** The DLI scheme has not been reviewed or revised, unlike the Production Linked Incentive schemes for the other stages.
- **Restriction on foreign investment-** The scheme mandates that beneficiary start-ups maintain their domestic status for at least 3 years after receiving incentives, thus limiting the chance of getting long term funding.
- **High cost-** The chip design startups in India face high costs and low funding opportunities which discourage domestic investors.
- **Conflict of interest-** C-DAC's role as a competitor in the chip design market raises the issue of capacity and suitability to be the implementing and regulating agency.

Steps taken to promote semiconductor in India

- **Indian Semiconductor Mission-** An independent business division within Digital India Corporation having administrative and financial autonomy.
- **Scheme for setting up of Semiconductor and Display Fabs -** Provides fiscal support to eligible applicants for setting up of Semiconductor and Fabs which is aimed at attracting large investments.
- **SPECS scheme-** For promotion of manufacturing of electronic components and semiconductors and provides financial incentive of 25%.
- **Program for Development of Semiconductors and Display Manufacturing Ecosystem-** The modified programme offers fiscal support of 50% of project cost.
- **Semicon India Program-** Launched in 2021 to support the development of semiconductors and display manufacturing ecosystem in India.
- **Semicon India Conclave 2023-** India will emerge as global hub of semiconductor and chip-making industry.

What lies ahead?

- The DLI scheme should delink ownership from design development and adopt more start-up-friendly investment guidelines in order to boost their financial stability and provide them global exposure.
- A new implementing agency should be created under [India Semiconductor Mission](#), inspired by Karnataka's Semiconductor Fabless Accelerator Lab (SFAL).
- The scheme should be updated to support the design of various types of chips by any entity registered in India, regardless of its origin. This would align with the Union government's vision of having "***India designed chips***".
- A recalibrated policy focused on chip design can tolerate a certain failure rate and treat beneficiary start-ups as exploratory risk-taking vehicles to establish India's

foothold in this high-tech sector.

References

1. [The Hindu- Need to overhaul a semiconductor scheme](#)
2. [India Semiconductor Mission- Design Linked Incentive scheme](#)



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