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WHEN THE CHIPS ARE DOWN: THE HINDU EDITORIAL ON INDIA'S SEMICONDUCTOR MISSION

Relevant for: Indian Economy | Topic: Issues relating to Growth & Development - Industry & Services Sector incl. MSMEs and PSUs

The Union Cabinet's decision this week to set aside 76,000 crore for supporting the development of a 'semiconductors and display manufacturing ecosystem' is a belated but welcome acknowledgment of the strategic significance of integrated circuits, or chips, to a modern economy. The basic building blocks that serve as the heart and brain of all modern electronics and information and communications technology products, the ubiquitous chips are now an integral part of contemporary automobiles, household gadgets such as refrigerators, and essential medical devices such as ECG machines. The COVID-19 pandemic has dramatically thrown into sharp relief the vulnerability that a range of manufacturing industries and, by extension, national economies are exposed to in the face of disruptions in the supply of these vital semiconductors. The pandemic-driven push to take sizeable parts of daily economic and essential activity online, or at least digitally enable them, has also highlighted the centrality of the chip-powered computers and smartphones in people's lives. With the bulk of semiconductor manufacturing and supply capability concentrated in a handful of countries including Taiwan, South Korea, U.S., Japan and, more recently, China, governments worldwide have realised that it is in the national interest to treat chip manufacturing as a strategic imperative. The Cabinet decision to simultaneously establish an India Semiconductor Mission helmed by 'global industry experts' to drive long-term strategies for the sustainable development of the chip and display industry is therefore a step in the right direction.

The challenge ahead, however, is fairly daunting. For one, the level of fiscal support currently envisioned is minuscule when one considers the scale of investments typically required to set up manufacturing capacities in the various sub sectors of the semiconductor industry. A semiconductor fabrication facility, or fab, can cost multiples of a billion dollars to set up even on a relatively small scale and lagging by a generation or two behind the latest in technology. Even granting that India's Production Linked Incentive scheme intends to give only 50% of the cost of setting up at least two greenfield semiconductor fabs by way of fiscal support, not much of the current scheme outlay of approximately $10 billion is likely to be left to support other elements including display fabs, packaging and testing facilities, and chip design centres. Chip fabs are also very thirsty units requiring millions of litres of clean water and extremely stable power supply. It may be best if the new mission focuses fiscal support, for now, on other parts of the chip-making chain including design, where surely India already has considerable talent and experience.

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