

India's High-Stakes Bid to Become a Global Semiconductor Hub: Will It Succeed?

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This case study examines the evolution of India's semiconductor industry over six decades, focusing on key milestones, challenges, and their impacts on the country's technological landscape. Starting from the 1960s, it traces the establishment of the Semiconductor Complex Ltd. (SCL) in 1984 and the subsequent struggles due to inadequate infrastructure and bureaucratic hurdles. The liberalization of the economy in the 1990s brought an influx of companies, but the industry continued to face significant issues. Renewed efforts began with the "Make in India" initiative in 2014 and the India Semiconductor Mission (ISM) in 2019, culminating in a \$15.2 bn investment plan approved in 2024 to reduce reliance on imported chips. The case highlights India's journey to secure a position in the global semiconductor ecosystem, addressing historical and current challenges. It provides a comprehensive view of quick wins, short-term ambitions, and long-term goals for developing a robust semiconductor ecosystem in India.

Keywords: India's semiconductor market, Semiconductor manufacturing, Integrated circuit (IC) technology, Germanium semiconductors, Silicon technologies
