

ATTRACTING CHIPS INVESTMENT: INDUSTRY RECOMMENDATIONS FOR POLICYMAKERS

Chips are integral to the 21st century economy, from electric vehicles, AI data centers, and medical technologies to mobile devices, energy grids, and streaming platforms. Historically, semiconductor supply chain production activities have concentrated in a handful of regions. But as global chips demand increases, and the industry responds to geopolitical uncertainty and other disruptions, companies are diversifying their global investment footprint to improve supply chain resilience. In our new SIA-BCG report, *Attracting Chips Investment: Industry Recommendations for Policymakers*, we recommend policy actions governments can undertake to better attract investment, based on the following five key factors that semiconductor companies evaluate when making investment decisions:

1 Investment and Operational Costs

Semiconductor development, both design and manufacturing, is expensive. In 2023, the industry's R&D and capital expenditure represented over 40% of global semiconductor sales. In evaluating site options, companies thoroughly analyze site specific costs, including land, utilities, equipment, materials, labor, and taxes.

Recommendations:

- Design simple and flexible incentive programs
- Prioritize incentives that offset construction and equipment costs

2 Workforce and Talent

The semiconductor industry requires skilled workers, including engineers, technicians, and computer scientists, with an interdisciplinary skillset grounded in STEM fields. They seek countries where the education system and public-private partnerships coalesce to generate a rich talent pipeline. When evaluating new sites, companies consider a range of factors, including the labor pool, costs, the education system, and opportunities to apprentice future workers.

Recommendations:

- Develop skills roadmaps, update curricula, and develop “micro-steps” certification
- Upskill faculty to teach relevant curricula
- Incentivize STEM education
- Permit flexible work shifts
- Increase flexibility

3 Infrastructure

Infrastructure is paramount for semiconductor facilities that run 24 hours a day, 365 days a year. Even a “micro power outage” can cause substantial operational losses. Key investment criteria include site construction conditions, utility infrastructure, transportation and logistics networks, and disaster risk.

Recommendations:

- Support efficient utilities infrastructure
- Ensure stable power supplies
- Develop green energy
- Optimize communications and transportation logistics



4 Regulatory Environment

Semiconductor investments concentrate in countries with market-friendly trade policies. Barriers and delays at the border significantly impact operational efficiency. By the same token, onerous permitting can delay timelines for multi-billion-dollar projects. IP protection is also critical in an industry with high R&D-to-revenue ratios. Moreover, companies now face a more complex geopolitical environment, with attendant trade compliance and data requirements.

Recommendations:

- **Trade:** Liberalize tariffs; optimize trade facilitation; and leverage free trade zones
- **IP:** Promote a “culture” of IP protection in regulatory and business practices; enforce criminal penalties; and adopt clear conformity assessments
- **Permitting:** Establish a “single window”; eliminate redundant requirements; and harmonize environmental standards
- **Trade controls compliance:** Implement a transparent export control regime; educate local companies on how to support trade compliance work
- **Data regulations:** Ensure free movement of semiconductor data; avoid unnecessary data localization rules

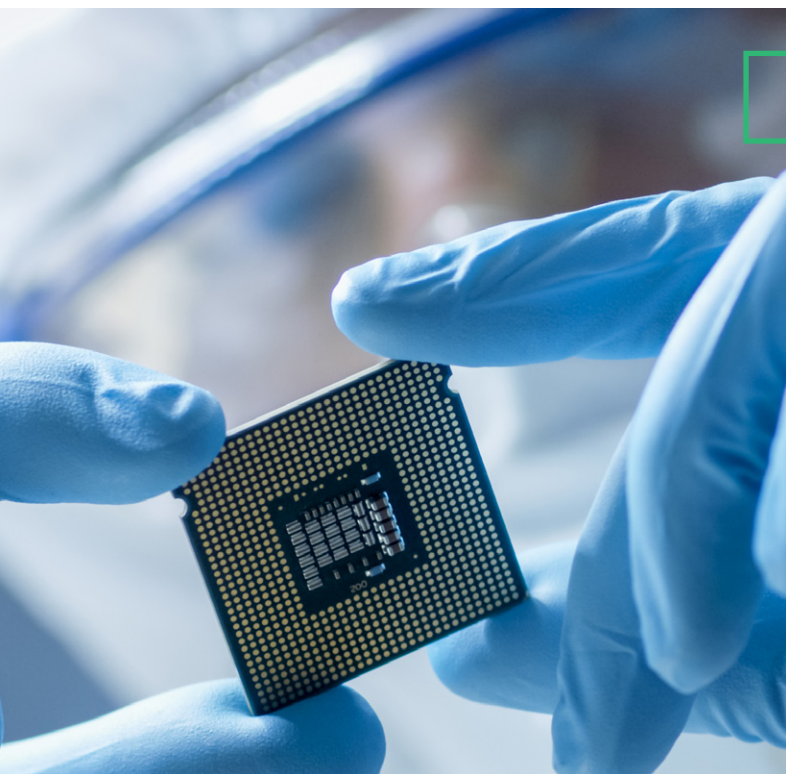
5 Integrated Ecosystems

Semiconductor companies prefer locations with vibrant ecosystems of suppliers, customers, R&D partners, innovation hubs and, ideally, downstream industries, such as electronics and automotive. These clustered locations can benefit from talent, know-how, and the presence of major downstream industries such as electronics and automotive.

Recommendations:

- Develop clusters that concentrate suppliers
- Link semiconductors to downstream industries
- Seek deliberate evolution, focusing first on supply chain segments with lower barriers to entry

To take advantage of the current window of opportunity, policymakers seeking to win semiconductor ecosystem investments should move quickly and deliberately, mindful that other governments are likewise competing for such projects. By implementing these policy actions, governments can better attract and facilitate chips investments, and in turn drive greater security, resilience, and diversification in global semiconductor supply chains.



Read the full SIA-BCG report,
*Attracting Chips Investment: Industry
Recommendations for Policymakers*