China’s Threat to Global Semiconductor Innovation

- China’s $170 billion National IC Plan targets global semiconductor leadership.
- Seeks import substitution and autarkic outcome.
- Distorts global markets with massive subsidization, state-financed foreign firm acquisitions, IP theft, etc.

China Increasingly Capturing Global Semiconductor Market Share


China Increasingly Capturing Global Semiconductor Fab Share

Change in Countries’ Share Semiconductor Fab Capacity, 2007-21

Chinese Semiconductor Firms Enjoy Substantial Subsidization

State Subsidies as a Percentage of Revenue for Chip Fabs, 2014-2018

Source: Khan and Flynn, “Maintaining China’s Dependence on Democracies for Advanced Computer Chips”
China’s Semiconductor Firms Not Nearly as R&D-Intensive

Most-Advanced Logic Semiconductor Manufacturers (nm)

Most-Advanced Memory Semiconductor Manufacturers (nm)

China’s Semiconductor Firms Not Nearly as Innovative

Share of USPTO Semiconductor Patents Granted by Country/Region, 2018