

Resilience and Vulnerability: Taiwan's Semiconductor Industry Amid U.S.–China Tariff Conflicts

Kendall Goodland

PPPE 6V81.001

Political Economy of Technology

Research Puzzle and Question

“In what ways has Taiwan’s SME-oriented industrial structure shaped its ability to adapt to recent tariff struggles in the global semiconductor supply chain?”

- Taiwan dominates global semiconductors.
- Industry is built on **SME networks**, not just TSMC.
- U.S.–China tariff war + export controls disrupted supply chains.

Theory and Framework

- **Developmental state:** SMEs fostered by state policy (Wade, Amsden).
- **Global value chains (GVCs):** Semiconductor production spread across countries (Gereffi).
- **Hypotheses:**
 - H1: SMEs enhance resilience via flexibility.
 - H2: SMEs hinder resilience due to capital constraints.



Data and Methodology

- **Quantitative:** Descriptive trade analysis (UN Comtrade, WITS).
- Track Taiwan's exports 2010–2023 (HS 8541, 8542).
- Compare with South Korea.
- **Qualitative:** Process tracing (SMESA White Papers, policy reports, TSMC/UMC filings).
- **Design:** Sequential explanatory — numbers show *what*, process tracing shows *why*.



Limitations and Contributions

- **Theory:** Links developmental state legacy with GVC resilience.
- **Empirical:** Shows SMEs' role in absorbing or amplifying trade shocks.
- **Policy:** Should Taiwan double down on SMEs, or lean on big firms?



References

Amsden, A. H. (1989). *Asia's next giant: South Korea and late industrialization*. Oxford University Press.

Gereffi, G. (2014). Global value chains in a post-Washington Consensus world. *Review of International Political Economy*, 21(1), 9–37. <https://doi.org/10.1080/09692290.2012.756414>

Mathews, J. A., & Cho, D.-S. (2000). *Tiger technology: The creation of a semiconductor industry in East Asia*. Cambridge University Press.

Miller, C. (2022). *Chip war: The fight for the world's most critical technology*. Scribner.

Small and Medium Enterprise and Startup Administration (SMESA). (2023). *White paper on small and medium enterprises in Taiwan*. Ministry of Economic Affairs. <https://www.sme.gov.tw/list-en-2572>

United Nations. (2023). *UN Comtrade database*. United Nations Statistics Division. <https://comtradeplus.un.org>





Thank you

Questions?
Comments?
Concerns?