Semiconductor Industry

Amidst growing competition between the United States and China, the semiconductor industry has become increasingly critical to both global economic activity and geopolitical security. Semiconductor devices, produced through the semiconductor device fabrication processes, are now utilized in many consumer technologies, modern infrastructure, and electronic devices. By 2030, the industry will be worth 1 trillion U.S. dollars. (Center for Strategic and International Studies).

The United States has become gradually dependent on foreign imports for critical minerals. The Chinese market share of essential inputs for semiconductor production makes up a majority of these imports, sourcing an economic interdependence between the two countries. The Taiwan Semiconductor Manufacturing Company Limited contributes to "a majority of the world's manufacturing capacity," concentrating the United States' reliance on Taiwan as well (U.S. International Trade Commission). For the United States, the integration of Southeast Asian countries into semiconductor fabrication processes could simultaneously strengthen U.S. supply chain resilience and help achieve national security objectives (Boston Consulting Group). This integration process is characterized as friendshoring.

Friendshoring + Southeast Asian Economies

Friendshoring allows countries achieve their geopolitical or national security objectives through diverse, multinational global value chains. Global value chains (GVCs) optimize supply chain efficiency through manufacturing and assembly in multiple countries, utilizing specialized, efficient means of production. Specifically, GVCs can source economic development by integrating value chains, often allocating higher-value-added tasks (that require advanced manufacturing and economically technology) to developing countries (World Bank).

Southeast Asian economies offer strategic resources and strengths that align with the United States' supply chain resilience and national security goals. Southeast Asia serves as one of China's largest regional trading partners, offering both a diverse supply of inputs for semiconductor production and technologically advanced infrastructure. As countries such as the Philippines, Indonesia, and Vietnam gain the production capacities to fulfill both upstream and downstream aspects of the semiconductor supply chain, they engage in geopolitical partnerships, bolstering their global competitiveness (Center for Strategic and International Studies).

Economic Development

The integration of allied countries along the supply chain requires businesses to consider the various complexities and asymmetries that come with collaboration alongside developing Regionally based economies. industrial incentives positively complement investment, output, and exports when inclusively integrated into global value chains, ultimately souring economic development (U.S. Agency for International Development). Should the United States engage in friendshoring with Southeast Asia, the U.S. can re-establish a resilient, global value chain, while replacing reliance on China with robust economic ties.

Key Takeaways

- The United States must effectively mitigate geopolitical partnerships with China and Southeast Asia.
 - This occurs through both supply chain resilience and diversification.
- How can all Southeast Asian economies develop the financial, technological, and educational capacities to engage in upstream aspects of the supply chain?