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# Securing Semiconductor Supply Chains

*An Alternative Agenda for International Cooperation*

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Short-term supply chain disruptions for the semiconductor industry are compounded by long-term









supply chain **report** the following June, providing a comprehensive overview of risks, vulnerabilities, and opportunities to strengthen and secure U.S. semiconductor supply chains. Also in June 2021, the United

*Trade policy can play an important role in helping domestic industry*



decides whether to encourage or require restrictions on technologies such as semiconductors. Building secure semiconductor GVCs thus requires multilateral cooperation among governments of foreign semiconductor producers, whether specializing in R&D, production, or back-end packaging. It is also incumbent on companies to be familiar with policy developments in this area and make location and investment decisions consistent with them.

*For trade policy to succeed in achieving desired geopolitical outcomes, it needs to be based on determined end goals and on a calculation of how best to achieve those goals.*

#### MULTILATERAL INITIATIVES



e next section of this paper evaluates which EU member states are best positioned for increased



**Benefits and Risks:** The Netherlands is an attractive partner for closer U.S. collaboration for several reasons. In the 2021 International Institute for Management Development (IMD) [World Competitiveness Ranking](#), the Netherlands ranked fourth overall, surpassed by Switzerland, Sweden, and Denmark. The Netherlands placed second for overall economic performance, fourth for business efficiency, and seventh for infrastructure. The country also scored well on international trade, international investment, and technology infrastructure. The most recent edition of the World Economic Forum's [Global Competitiveness Index](#), in 2019, also ranked the Netherlands as the most competitive country in Europe.

The Netherlands also excels in education. Dutch expenditures on higher education are 30 percent higher than the [OECD](#)

## FRANCE

France is the second-largest economy in the European Union and maintains a significant presence in the European semiconductor industry, with centers for R&D, manufacturing, and packaging. In 2019, France **exported** €1.05 billion (\$1.15 billion) in semiconductor devices, primarily to Singapore, Germany, China, and the Netherlands. The French semiconductor industry will receive not only support from the EU initiatives on semiconductors, but also funding from the **France 2030** initiative. As part of the €30 billion (\$30.7 billion) France 2030 investment initiative, France is **committing** nearly €6 billion (\$6.5 billion) to











the Group of Seven (G7), currently under German leadership, has also proven adroit at navigating security and supply chain issues. The G7 **responded** swiftly to Russia's invasion of Ukraine, revoking Russia's most favored nation status and initiating sweeping sanctions on key Russian officials and business elites. Given the near impossibility of expelling Russia from the Wassenaar Arrangement and the improbability of Russia







## *Recommendations and Conclusion*





perspective, both in terms of national security considerations and overall supply chain resiliency, are Belgium, Germany, and the Netherlands. Each has an educated population, a relatively open immigration system that can attract foreign talent, and an existing close relationship with the United States on issues of national security.

*For both the United States and foreign partners, governments need to identify—and then implement policy based on—where they want to lead and where they can afford to follow.*

Overall, disruptions throughout the semiconductor supply chain are a significant concern for the United States and its allies.