

Investigating resiliency and vulnerability of global supply chains during the COVID-19 pandemic

November 1 2023



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It's no secret that the COVID-19 pandemic disrupted supply chains

across the globe. In the United States, it often seemed like stores couldn't keep certain items in stock. Now, new research is diving more deeply into the resiliency and vulnerability of global supply chains during the COVID-19 pandemic.

The research team investigated the U.S.-China supply chain during each of its economic shutdowns in the COVID-19 pandemic and focused on measuring credit risk through one of its most liquid variables called credit default swaps, which essentially is insurance against default. The paper, "[The impact of COVID-19 on supply chain credit risk](#)," was published in the journal *Production and Operations Management*.

Researchers found that when China experienced its economic shutdown first and the rest of the world was not yet impacted, U.S. firms with Chinese suppliers and customers were vulnerable to the economic downturns happening in China.

Conversely, when China's economy reopened and the United States went into an economic shutdown, U.S. firms with Chinese suppliers and customers remained more resilient to the local shocks of the U.S. economy. Essentially, firms with [global supply chains](#) remain resilient to local shocks, but it exposes firms to global shocks.

Additionally, the researchers find that factors like firm size, investment grade rating, cash holdings, inventory, number of business segments, network centrality, and capital redeployability make a firm more resilient to global risks. On the other hands, factors like high financial leverage, operational leverage, and strong market competition make a firm more vulnerable to global economic shocks.

Senay Agca, study author and a professor of finance at the George Washington University, says this study demonstrates how markets adjust to global supply chain risks. She said it'll be important for companies

moving forward to weigh these pros and cons as they re-evaluate their supply chain strategies.

More information: Şenay Ağca et al, The impact of COVID-19 on supply chain credit risk, *Production and Operations Management* (2023). [DOI: 10.1111/poms.14079](https://doi.org/10.1111/poms.14079)

Provided by George Washington University

Citation: Investigating resiliency and vulnerability of global supply chains during the COVID-19 pandemic (2023, November 1) retrieved 28 April 2024 from <https://phys.org/news/2023-11-resiliency-vulnerability-global-chains-covid-.html>

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