

Call for Proposals Economics of Supply Chain Risk

To promote research on the determinants and effects of lengthy global supply chains, which often span several continents, the National Bureau of Economic Research (NBER), with the generous support of the Department of Homeland Security (DHS) and in collaboration with the DHS Science and Technology Center of Excellence for Cross-Border Threat Screening (CBTS) at Texas A&M University, is carrying out a research project on “The Economics of Supply Chain Risk.” This initiative will be led by Laura Alfaro of Harvard University and NBER, Greg Pompelli of CBTS, and Chad Syverson of the University of Chicago and NBER. It will bring together researchers in various subfields of economics – international trade, industrial organization, labor economics, organization economics, productivity economics, and regulation -- to study issues of current importance and to frame the future research agenda.

This initiative will support eight distinct research projects on global supply chain risk. Studies of industries that support the National Critical Functions (NCFs) that have been identified by DHS are of particular interest. These functions, which involve supply, distribution, management, and connection in a number of industries, are described here:

<https://www.cisa.gov/sites/default/files/publications/national-critical-functions-set-508.pdf>

NCF-related industries include, but are not limited to, chemicals, communications, emergency services, information technology, manufacturing, and transportation.

Examples of potential research topics include:

- How can the degree of potential substitution between potential suppliers within or across nations be measured? How does the time interval being studied -- a month, a quarter, a year -- affect estimates of substitution possibilities?
- How large are the substitution possibilities in the supply chains for critical products such as pharmaceuticals, computing and communication equipment, and raw materials such as rare-earth minerals? What factors contribute to the variation in these substitution possibilities?
- What is the potential for re-shoring global supply chain activities for products used in the US to either North America or to the US, and how would this affect supply chain risks?

- What products represent potential bottlenecks in supply chains because of inherently limited substitution opportunities? How can the impact of such bottlenecks on multiple production processes be measured?
- What investments do firms with global supply chains make in risk mitigation and in the development of more resilient and robust suppliers?
- What share of the benefits of reductions in supply chain risk accrue to the firms that make such investments? Do the national benefits from risk mitigation exceed the firm-specific benefits?
- Do “just-in-time” manufacturing practices create vulnerabilities in supply chains? How do transportation networks contribute to supply chain risks?
- How does the organizational structure of supplier relationships, such as arms-length versus integration, subsidiaries versus distinct businesses, and the degree of delegation, affect the risk of supply chains?
- What is the role for industry or governmental superstructure in critical industries? Are there lessons from existing institutions in some industries, for example the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC) in electricity generation?
- What lessons can be learned from case studies of specific instances of supply chain interruptions, and how can these episodes be used to assess the risks of other supply chains?
- How do trade policies such as tariffs and associated regulations for cross-border transactions affect the length, composition, and riskiness of supply chains?
- What role do criminal organizations play in global supply chains, through producing counterfeit goods as well as distribution, money laundering, and rent extraction in transport? How well do current policies such as IP and trademark protection, third-party verification, and customs interdiction mitigate these effects?
- What aspects of the labor market are most vulnerable to disruption during times of national emergency, such as a pandemic, and what are the potential effects of such disruption on supply chains?

Researchers interested in studying these topics, or others that relate to supply-chain risk, should submit a proposal of no more than five pages, single spaced, including references, tables, graphs, and other supplementary material, in PDF format by **11:59pm**

EST on Wednesday, November 18, 2020. Each proposal should describe the research question to be studied, the data and methods to be used, and the composition of the research team that will be carrying out the project, along with a conflict of interest statement describing any financial or other interests of the research team that might bear on the proposed work. Proposals from early-career researchers from members of under-represented groups are especially welcome.

The organizers and CBTS researchers will review the proposals and recommend up to eight projects for support. Final project selection will be made in consultation with DHS collaborators and sponsors. The NBER can only support projects on which at least one investigator is an NBER affiliate; CBTS does not have any restrictions on affiliation. Investigators should only apply through the appropriate mechanism, and not through both. Researchers applying for support through NBER should upload proposals to

<http://conference.nber.org/confsubmit/backend/cfprop?id=SCRf20p>

Those applying through CBTS should send proposals by email (file size no larger than 24 MB) to cbts@ag.tamu.edu.

Researchers whose proposals are selected for support will be notified by December 31, 2020. The research team for each project will receive funds to be used for principal investigator support, a graduate research assistant, and travel. Investigators and research assistants on NBER-supported projects must be eligible to be paid as NBER employees; the NBER will not make sub-awards. Funding on NBER projects includes direct costs of \$15,000 in investigator salary support and \$9,000 in graduate student support. Projects funded by CBTS will be structured as sub-awards to recipients' institutions, and may include up to \$60,000 of sub-award funding, including indirect costs. Investigators applying for CBTS funding should refer to the CBTS website (<https://cbts.tamu.edu>), and in particular review the **CBTS Proposal Guide** (<https://cbts.tamu.edu>). This document contains detailed information regarding proposal format, evaluation criteria, flowdown clauses, and eligibility requirements.

Research teams will be expected to participate in a video preconference in February 2021 and a capstone research conference in September 2021. If the capstone conference can be held in-person, the cost of domestic travel and hotel expenses for up to two authors per paper and for discussants will be covered. Additional co-authors are welcome to attend. Questions related to research proposals or other aspects of this research initiative should be directed to Elisa Pepe (epepe@nber.org) for projects submitted to NBER and to Heather Manley Lillibridge (heather.manley@tamus.edu) for projects submitted to CBTS.