



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 Department of Homeland Security (DHS) Science and Technology Center of Excellence for Cross-Border Threat Screening (CBTS) and Supply Chain Defense at the Texas A&M University System, is carrying out a research project on “The Economics of Supply Chain Risk.” This work is being done in collaboration with the National Bureau of Economic Research (NBER) and with the generous support of the DHS.

This initiative will be led by three co-organizers: 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 up to eight research projects on global supply chain risk. There is particular interest in studies of industries that DHS has identified as supporting National Critical Functions (NCFs). 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 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 as it relates to critical functions, 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, December 2, 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, from individuals with disabilities, and from veterans are especially welcome.

The co-organizers will review the proposals for scientific merit and feasibility. Final project selection will be made in consultation with DHS collaborators and sponsors who will review the relevancy to issues in the DHS' scope. The research team for each project will receive funds for principal investigator support, a graduate research assistant, and travel. Researchers whose proposals are selected for support will be notified by December 31, 2020. All research teams that receive support will be expected to participate in a video preconference in February 2021 and a capstone research conference in September 2021.

NBER affiliates should apply for support through NBER, and all NBER-supported projects must have at least one NBER-affiliated investigator. Other researchers, provided they are eligible to receive federal research support, should apply to CBTS.

To Apply to CBTS:

Investigators applying for CBTS funding should refer to the CBTS website (<https://cbts.tamu.edu>), and in particular review the **CBTS Proposal Guide** and use the **White Paper Template**. These documents contain detailed information regarding proposal format, evaluation criteria, flow-down clauses, and eligibility requirements.

CBTS will provide support through sub-awards of up to \$60,000, including indirect costs, to recipients' institutions. CBTS may accept proposals from accredited U.S. higher education institutions, for-profit organizations, and organizations that meet the definition of a non-profit entity in OMB Circular A-122, excluding those described in section 501(c)(4) of the Internal Revenue Code that engage in lobbying activities. It may not support proposals from federal government agencies or federally-funded Research and Development Centers.

Proposals should be sent by email (file size no larger than 24 MB) to cbts@ag.tamu.edu. Questions about submissions to Texas A&M/CBTS should be directed to Dr. Heather Manley Lillibridge (heather.manley@tamus.edu).



To Apply to NBER:

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. NBER grants are net of indirect costs. Proposals should be uploaded to

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

For those submitting proposals to NBER, questions can be directed to Ms. Elisa Pepe (epepe@nber.org).