# Input Sourcing under Supply Chain Risk: Evidence from U.S. Manufacturing Firms

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# Overview

Analysis of the firms' sourcing behaviour in reaction to weather-induced supply chain risk.

Main contributions:

1. new measure of risk;
2. analysis of firms' behaviour using transaction-level data;
3. rationalization of the results using a theoretical model.

General comments:

- original, clear
- very rich dataset that combines different sources

# Risk measure

I would suggest to add some background literature and compare your risk measure with other measures computed using different approaches, e.g.:

- Adland, R., Jia, H., Lode, T. and Skontorp, J. (2021)
  $\longrightarrow$ combine high-frequency vessel tracking data from the Automatic Identification System with weather data and try different estimation techniques

- Kretschmann, L. (2020)
  $\longrightarrow$ leading risk indicators using machine learning based on accident frequency

# General comments

Firms' characteristics

- Control for firms' **inventories**, which can influence their preference for faster/slower shipments
- Some US regions are particularly affected by hurricanes, others are less affected: control for firms' **location** and its hurricane frequency.
- Consider the possibility of **insurance** against shipping risk

Weather issues

- **Accuracy** in forecasting weather conditions has improved in your sample period. Have you explored this aspect?
- Bad weather implies not only delays but also **loss** of containers: how do you distinguish these two cases?

# Further possible analyses

- It would be interesting to quantify the effect of delays on **prices**

- What is the evolution of weather-induced shipping risk? Is **climate change** an important factor? Has the behaviour of firms changed in more recent years, when natural disasters have been more frequent?

# References


- Adland, R., Jia, H., Lode, T. and Skontorp, J. (2021), *The value of meteorological data in marine risk assessment*, Reliability Engineering & System Safety

- Kretschmann, L. (2020), *Leading indicators and maritime safety: predicting future risk with a machine learning approach*, Journal of Shipping and Trade