Supply Chain Shortages, Large Firms’ Market Power, and Inflation

by Francesco Franzoni, Mariassunta Giannetti, and Roberto Tubaldi

Discussion

Almut Balleer, RWI - Leibniz Institute for Economic Research, TU Dortmund, IIES, CEPR

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Research question

What drives inflation?

1. Does exposure to supply-chain shortages vary across firms?
    - Are large firms or firms which face less competition less exposed to supply shocks?
2. Does lower exposure to supply-chain shortages enable firms to gain market power?
    - Cost advantage allows to gain market share
3. Does this increase in market power drive inflation?
    - Is there evidence for narratives of "greedflation"?

Summary

- Stylized model on the relationship between firm-specific costs and competition
- Collect data on supply-chain shortages, profitability, markups and consumer price inflation inside/outside pandemic at different levels of aggregation from different sources
- Separate regressions address sub-questions
    1. Profitability (markups) decreases less in large (superstar) firms when supply shocks occur
    2. Large (superstar) firms can increase market shares
    3. Inflation rises more strongly after supply shocks in sectors with higher concentration
- 25% of inflation during pandemic can be explained by mechanism

Assessment: Firm exposure to supply constraints

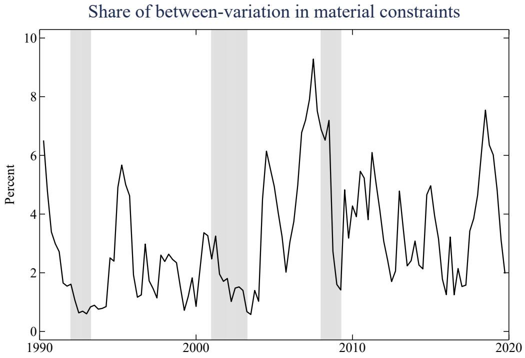
- Key measure of supply constraints
  - Firm-level information on finances (Worldscope) and suppliers (Factset Revere)
  - Assessment from Survey of Purchasing Managers on delivery times of inputs and supplier backlog (sectoral)
  - Delivery time more direct measure of supply shortage than backlog
  - Measure is sectoral rather than firm-specific unless firms within same industry have (large) sectoral variation in suppliers
- Narrative of the paper
  - Supply shocks (shortages) the same within industry, but exposure to these shocks varies within industry
  - Cannot only indirectly be tested with this data: profitability

A look at direct firm-level supply constraints

- ifo Business Climate Survey
  - Firm-level survey for Germany; underlying the ifo Business Climate Index
  - Leading managers; representative for manufacturing
  - Sample used here: 1990-2019 (1990-2021)
  - Quarterly question: Our domestic production is currently constrained by
    - lack of raw materials or pre-materials
    - ... other reasons (financing difficulties, lack of employees, insufficient demand, technical reasons)
- We can consider heterogeneity in supply constraints within and across industries and look at firm characteristics

A look at direct firm-level supply constraints

- Between industry variation accounts for only 3.2 percent of the total variation in material constraints on average (up to at most 10 percent in peak)
- Large firms do not experience material constraints less frequently on average



	Material constraint		
Large firm	0	1	Total
0	0.95	0.5	217090
1	0.955	0.45	77270

Assessment: Lower exposure to supply shocks and market share

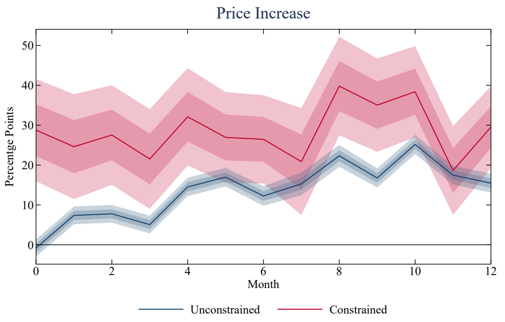
- Key contribution of the paper
  - Stylized model that outlines mechanism
  - Empirical exercise supports shifts in market shares within sectors
- A few open questions remain
  - Units of observation and measurement not always clear
  - Measure of supply constraints varies (delivey time or backlog)
  - Sample not always clear: time range with, without or only Covid; coverage of industries, countries, number of observations in these
  - Higher market share may also be driven by firm-specific demand rather than exposure to supply

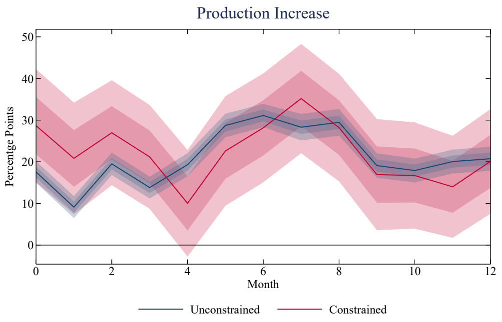
Assessment: Does this mechanism increase inflation?

- How do supply constraints affect firm behavior?
  - Narrative: Firms gain market share and (then) increase prices
- Paper has no direct evidence on price setting or timing of events
  - Most macroeconomic models suggest that large firms would decrease prices first (Bilbiie and Kaenzig; Conlon et al.; Gichrist et al.; ...) which has a negative effect on inflation
- Inflation could also be driven by smaller firms with larger supply constraints
  - This is consistent with evidence shown

A look at direct firm-level supply constraints and price setting

- Local projections with heterogeneous states
  - How do firms with and without supply constraints set prices in response to a monetary policy shock?





What does this mean for economic policy?

- Some firms are less affected by and gain from supply shortages more than others (profitability, markups,...)
  - Clear message for economic policy makers to monitor and regulate competition
- Not entirely clear whether and how these gains translate into inflation
  - May be a result of demand-side policy
  - No clear case for profit tax to fight inflation