

Discussion:
How do Firms Withstand A Global Economic Shock:
Evidence From Within-Firm Responses
by Xiao Cen, Vyacheslav Fos and Wei Jiang

Kai Li

Peking University HSBC Business School

ABFER Capital Market Development: China and Asia

October 19, 2023

Motivation

- **Research question:** How US corporation respond to the competition from China?
- A variety of literature study the impact of the China shock:
 - US local labor market (Autor et al., 2013, 2021)
 - Domestic innovation (Bloom et al., 2016; Autor et al., 2020)
 - Housing prices, tax revenue, consumer prices, migration, etc.
- **This paper:** Internal resource allocation within firm
 - Census-based plant level data
 - China shock: Five-Year Plans

Main Findings

- **This paper:** A novel within-firm adjustment channel to global shocks
- **Key messages:**
 - Industrial policies displace plants in the same industries.
 - Shocks not anticipated by the U.S. firms and stock market.
 - Firms adjust within-firm toward plants in beneficiary industries.
 - Such adjustments make firms resilient to global economic shocks.

Discussion Plan

- **Assessment:**
 - Document a novel within-firm resource allocation channel
 - Strong policy implications, well executed, thought provoking
- **My discussion plan:**
 - Why study internal resource reallocation?
 - **Suggestion:** how to position the key contribution?
 - Why use China's Five-Year Plan as the shock?
 - **Discussion:** potential caveats of this shock
 - How to identify within-firm allocation? Can or cannot?
 - **Discussion:** potential caveats of current scheme
 - Other considerations

Comment 1: Why Internal Resource Reallocation?

- Various ways that this paper contributes to the literature:
 - Empirically “prove” the existence of a within-firm channel.
 - Quantify the resilience effect at both micro and macro level, and policy implications.
- Which one is regarded as the main contribution?
- **My personal view:** the latter one; of course, more work is needed.

Comment 1: Why Internal Resource Reallocation?

- **Grioud and Mueller (2015)**: Within firm resource reallocation upon a positive shock to investment opportunities at one plant.
 - Use introduction of new airline routes as an exogenous shock
- Key message of GM(2015): Within firm adjustments is expected in response to major shocks.
- This paper confirms this expectation with a particular form of shock.
 - Global shock is more significant event than airline route changes.
 - Therefore, the observed effect is largely anticipated.

Comment 1: Why Internal Resource Reallocation?

- How to further enhance the marginal contribution of this paper?
- Connect to the important literature:
 - Autor et al. (2013, 2021): China's import competition has persistent adverse impact on manufacturing employment and income per capital.
- Quantify how large is the resiliency effect from this internal channel?
- How large is net gain between beneficiary and losing industries?
- Accounting for it will change our understanding of the above issue?
- A comprehensive answer to this question requires:
 - A rigorous identification of the channel
 - Careful quantification of the magnitude of the effect

Comment 2: Why China's Five-Year Plan shock?

- Potential caveats:
 - Potential endogeneity and confounding factors
 - Potential regime changes within the sample
 - To what extent the shock is anticipated?

Comment 2: Why China's Five-Year Plan shock?

- Events: 10th, 11th, 12th and 13th Five-Year Plans
 - came into effect in 2001, 2006, 2011, and 2016
- China's industrial policies may correlate with
 - Gov't reactions to US originated shocks: embargoes, trade wars, and technological decoupling.
 - e.g. Semiconductor industry
 - China's industries with comparative advantage
 - e.g. Labor intensive manufacturing, such as light textile industry
 - These competitive industries subject to US domestic skill-biased technological changes.

Comment 2: Why China's Five-Year Plan shock?

- Regime and mechanism may be different before and after 2012.
 - Before 2012: export boom as a world factory.
 - After 2012: direct competition at the tech frontier.

(a) China share of world exports

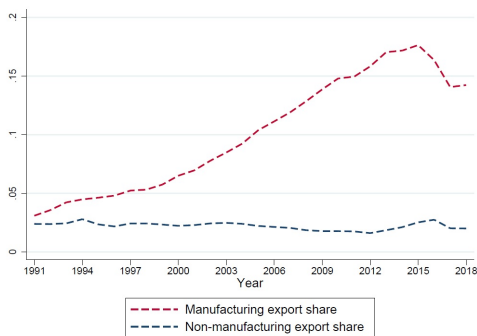


Figure: China Share of world Export, Figure 1 of Autor et al. (2016)

Comment 2: Why China's Five-Year Plan shock?

- Much of the Five-Year Plan shock expected to be anticipated.
- Decision process:
 - The Politburo discuss and propose recommendations ahead of time.
 - People from different social strata participate in plan formulation.
- Some industries repeatedly show up in consecutive plans.
- Intriguing to see no pre-response of US companies or industries.
- More reasonable to see some heterogenous pre-trends across industries.
- It is helpful to see a summary table of the evolution of preferred industries.

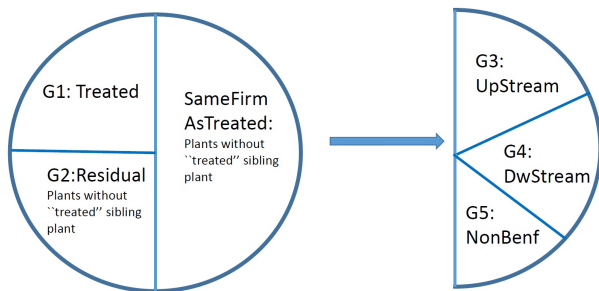
Comment 3: How to Identify Within-firm Allocation?

- Regression equation (5):

$$y_{it} = \theta G_{1,itp} + \delta_1 G_{3,itp} + \delta_2 G_{4,itp} + \delta_2 G_{5,itp} + \alpha_{ip} + \alpha_{tp} + \varepsilon_{itp}$$

- Reference group: Group 2-residual firms. Findings: $\theta < 0$, $\delta_1 > 0$, $\delta_2 > 0$
- This still does not reflect the within-firm channel yet. The next step:

Partition of Plants into Five Groups



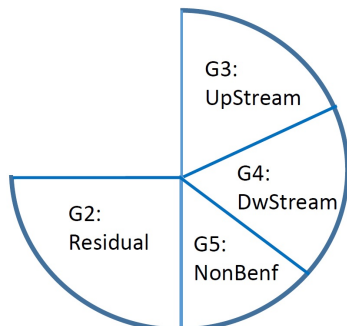
Comment 3: How to Identify Within-firm Allocation?

- Regression equation (6):

$$y_{it} = \delta_1 G_{3,itp} + \delta_2 G_{4,itp} + \alpha_{ip} + \alpha_{jtp} + \varepsilon_{itp}$$

- Reference group is now different: Group 2 + 5.
- Within-firm comparison by controlling firm-year-Plant fixed effect α_{jtp} : $\delta_1 > 0$, $\delta_2 > 0$

Focus on Non-treated Plants Only



Comment 3: How to Identify Within-firm Allocation?

- Recall regression equation (6):

$$y_{it} = \delta_1 G_{3,itp} + \delta_2 G_{4,itp} + \alpha_{ip} + \alpha_{jtp} + \varepsilon_{itp}$$

- Two remaining caveats:
- $\delta_1 > 0$, $\delta_2 > 0$ may encompass two effects:
 - Direct effect: passive outcome
 - Indirect effect: actively reshuffle resources
 - That is: may not purely capture “resource reallocation”
- Control for location-year fixed effect?
 - Industries might concentrate in certain locations.
 - This captures location time varying patterns.

Comment 3: How to Identify Within-firm Allocation?

- Recent advances in econometric theory:
 - Standard DiD regression estimates with staggered treatment timing often do not provide valid estimates of the causal estimands.
- Baker et al. (2021) explains when and how staggered DiD estimators are biased.
 - in the context of finance and accounting research.
- It would be helpful to correct such bias in the staggered DiD context.

Comment 4: Other Considerations

The Effect of Financial Constraint

- **Empirical finding:** only financially unconstrained firms display within-firm reallocation
- **Theory:** two offsetting effects:
 - **Paper:** Only unconstrained firm afford the adjustment costs.
 - **Alternative:** constrained firms have stronger desire to allocate scarce resource to more productive plant.
 - Consistent with GM (2015)'s finding.
- Paper suggests the first channel dominates, worth further exploring.

Comment 4: Other Considerations

The Effect of Firm Adjustability on Valuation

- **Empirical finding:** study the interaction effect of firm's adjustability.
 - Adjustability is a dummy whether firm is pre-positioned before the shock.
- Adjustability at year -1 may be endogenous!
 - May correlate with firm's ability, risk capacity, financing condition, etc.

Comment 4: Other Considerations

Wish List for Direct Evidence

- It is helpful to provide some aggregate industry-level evidence on replacement.
 - So far, the replacement effect is mainly at the plant level.
 - Aggregate level evidence allow us gauge the net gain/loss of internal allocations.
- It is valuable to provide some “smoking gun” evidence on replacement.
 - For example, showing that the export of US treated industry to China/world is taken over by China.
- Heterogeneity study: labor-intensive v.s. high tech treated industries, SOE v.s. Non-SOE, etc.
 - A careful summary statistics of the evolving preferred industries and their characteristics is beneficial.

Comment 4: Other Considerations

Possible Extensions

- It is informative to check the persistence of internal reallocation effect.
 - Autor et al. (2021) finds China's shock competition has long-lasting effect.
- China industrial policies includes many forms besides subsidy.
 - For example: Easy loans (e.g. green credit), market regulation, state-led innovation, etc.
 - In defining treat and control, this paper only considers subsidy.
- Policy implications?
 - Policies to promote internal resource allocation, and undo the China shock.

Conclusive Remarks

- This paper:
 - Document a novel within-firm resource allocation channel
 - Strong policy implications, well excused, thought provoking
- My discussion:
 - Why study internal resource reallocation?
 - Why use China's Five-Year Plan as the shock?
 - How to identify within-firm allocation? Can or cannot?
 - Other considerations
- I recommend everyone to read it seriously!