Geopolitics and Export Miracles: Firm-Level Evidence from US War Procurement in Korea

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- **This paper:** provides the first quantitative evidence of the impacts of US Vietnam War procurement on Korea's export miracle

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- Using unique export target data set by the Korean state, we are able to support identification assumptions

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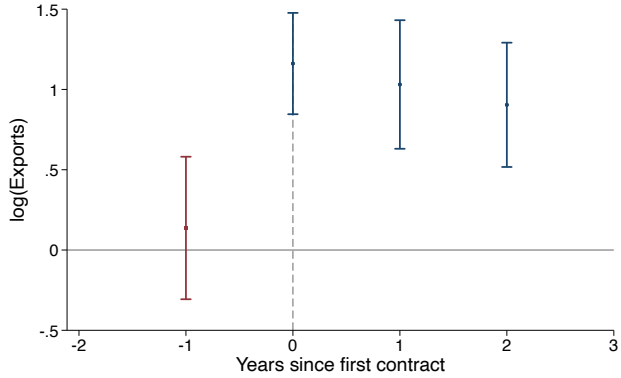

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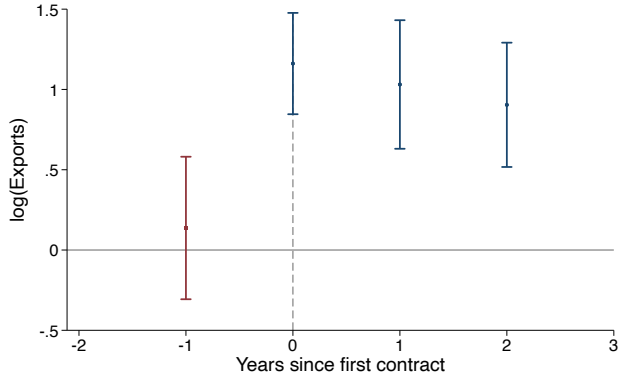


- Back-of-the-envelope calculations suggest US military procurement increased South Korean exports by 20-26%

Literature

Historical Context: The Brown Memorandum

- In 1961, South Korea was heavily dependent on U.S. aid (12% of GDP, or 73% of imports) ⏩ Data
- With the US's War in Vietnam expanding, Park Chung-hee struck a deal: sending Korean troops in exchange for procurement contracts and $150M in aid (Brown Memorandum, 1966)
- Korea ultimately sent 350,000 troops—second-largest force on the anti-communist side after the U.S.
- South Korean firms supplied goods like uniforms, boots, cement, and services like construction and engineering for the war effort
  - In particular, crucial to the growth of *chaebol* conglomerates like Hyundai, Samsung, and LG

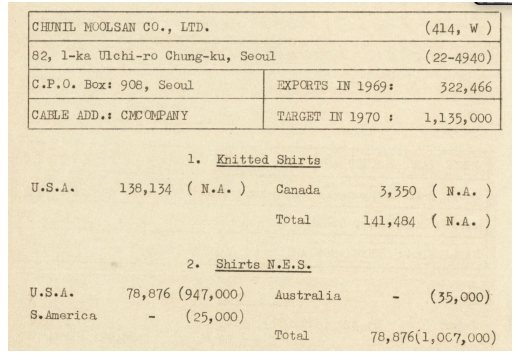
Two Sides of Korea's War

The Contract Procurement Process

- In theory: contracts should have been awarded through a sealed, competitive bid process evaluated by the U.S. military
- In practice: the Korean state partly captured the procurement process:
  - Korean nationals in U.S. offices (e.g., the U.S. Korean Procurement Agency (KPA), a unit of the Eighth Army) leaked information
  - Industry associations colluded to coordinate the winner of bids
- Procurement contracts thus (inadvertently) acted as a form of *joint* Korean-American industrial policy
- Raise concerns about identification that contract winners may differ systematically from losers

Korean Exports Data

- Comprehensive Export Directory (KOTRA), 1968-77:
  - Data is at the firm $\times$ destination country $\times$ product level
  - Goods exports (no services)
- After consolidating names, $N = 1952$ firms
- Another critical feature of this data: firm–level export *targets* for 1970-72
  - More on this in a bit



CHUNIL MOOLSAN CO., LTD.			(414, W)
82, 1-ka Ulchi-ro Chung-ku, Seoul			(22-4940)
C.P.O. Box: 908, Seoul		EXPORTS IN 1969:	322,466
CABLE ADD.: CMCOMPANY		TARGET IN 1970 :	1,135,000

1. Knitted Shirts

U.S.A.	138,134 (N.A.)	Canada	3,350 (N.A.)
		Total	141,484 (N.A.)

2. Shirts N.E.S.

U.S.A.	78,876 (947,000)	Australia	- (35,000)
S.America	- (25,000)		
		Total	78,876(1,007,000)

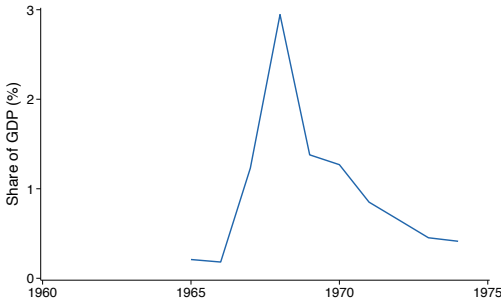
U.S. Department of Defense DD-350 military procurement forms

- Covers all purchases over USD 10,000 for Korean firms 1965-1974
- 433 contracts matched to export firms via Anglicized firm names
  - USD 135,000 median contract value
  - USD 450,000 mean contract value
- Note: the largest categories of contracts are services, not goods:

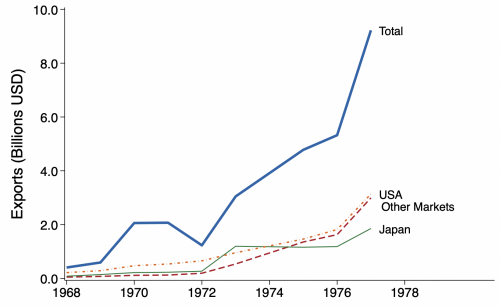
Service/product	Share
Operations and management	12.6%
Liquid propellants & fuels	12.0%
Construction	8.1%
Guard services	6.0%
Fuel oils	5.3%

The Procurement and Export Booms in Aggregate

(a) Procurement contracts peak in 1968



(b) Exports grow 10-fold in a decade



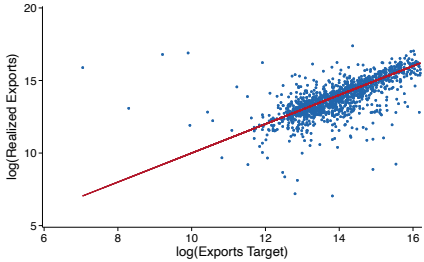
Empirical Strategy

- Staggered event-study approach looking at firm-level export outcomes using the Borusyak, Jaravel, and Spiess (2024) estimator
- Treatment variation comes from the *timing* of when a firm wins its first U.S. procurement contract

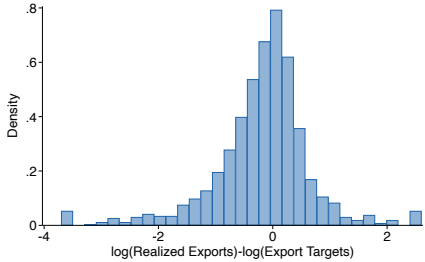
Testing Identification with Export Targets

- **Key event study assumptions**: no anticipation and parallel trends
  - Capture of the procurement process by the Korean state raises concerns
- Uniquely, we can test this with a rare feature of our dataset: firm-level export targets set one year ahead by firms and the Korean government
- Export targets were a famous policy instrument of Park Chung Hee's developmental state
  - Aggregate export targets were set by the state
  - Firm-level targets were negotiated with the firms

Year-Ahead Export Targets Were Good Predictors

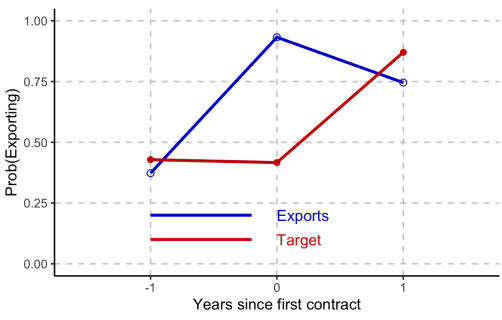


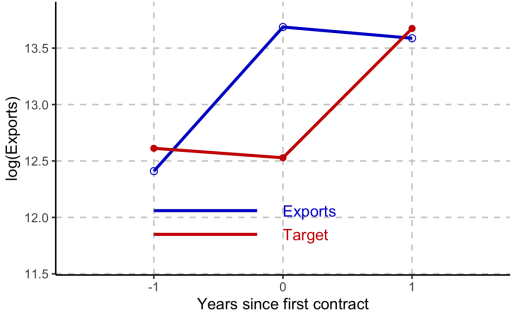
55% of obs: exports $<$ target



Median target error: -0.09
Mean target error: -0.18

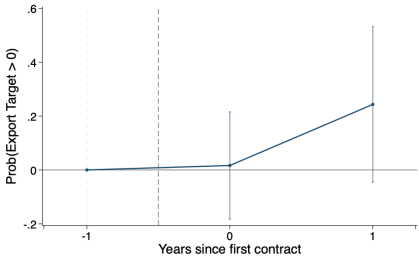
Winning a contract was unanticipated

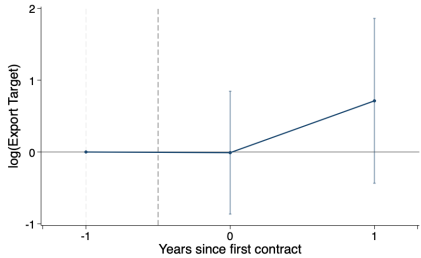




- Probability of exporting (left) and export volumes (right) jump at $t = 0$, but targets for $t = 0$, set in $t = -1$, do not

Event Study: Export Targets around the First Contract Win





- Using the de Chaisemartin and D'Haultfœuille (2020) estimator, export targets do not move differentially between treated and control firms in the event year
- Suggests that the Korean state did not select firms *ex ante*

↠ Parallel Trends

Estimation

- Staggered event-study using the Borusyak, Jaravel, and Spiess (2024) estimator:

$$y_{i,t} = \sum_{h \neq -1} \tau_h 1\{K_{i,t} = h\} + \theta_i + \kappa_t + \varepsilon_{i,t},$$

where τ_h is the effect of firm i winning its first contract h years ago

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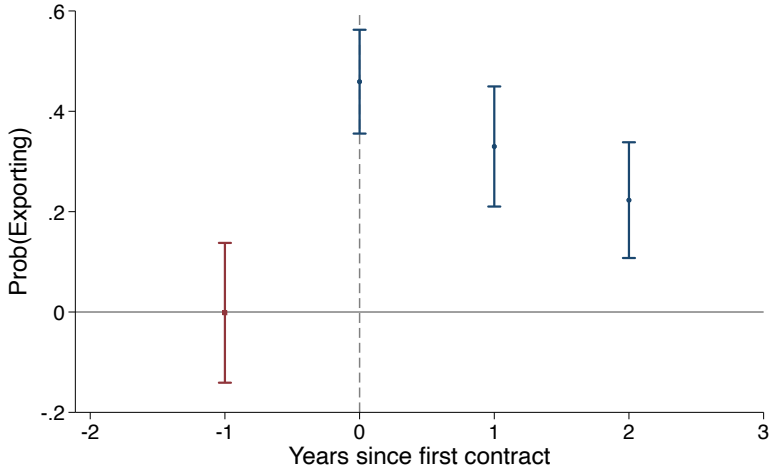
- **Two Main Outcome Variables:**
  - Extensive margin: Indicator for exporting more than $100,000
  - Intensive margin: Log exports, censored at $100K following Chen and Roth (2024):

$$y_{it} = \begin{cases} \log(100{,}000), & \text{if exports}_{it} < 100{,}000, \\ \log(\text{exports}_{it}), & \text{otherwise.} \end{cases}$$

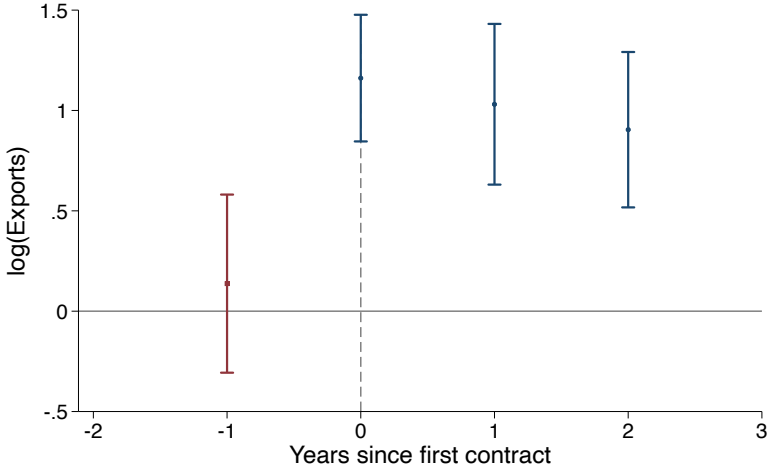
↞ Identifying Assumptions

Procurement contracts increase the extensive margin of exporting



- Winning a first contract raises the probability that a firm is exporting by 46pp

Intensive margin too



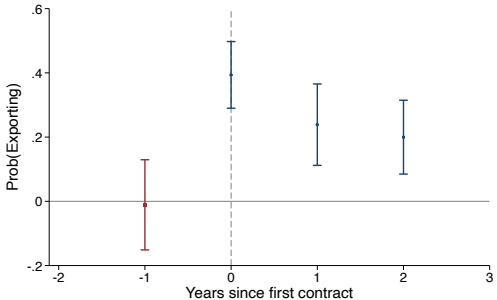
- Total export volumes increase by 1.2 log points $\simeq$ 220%

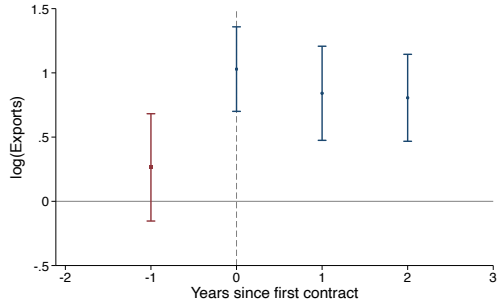
Some Immediate Natural Concerns

- Is this just mechanical? Does this just reflect exports to the US going up?
- Should we expect the effects of a demand shock to persist?

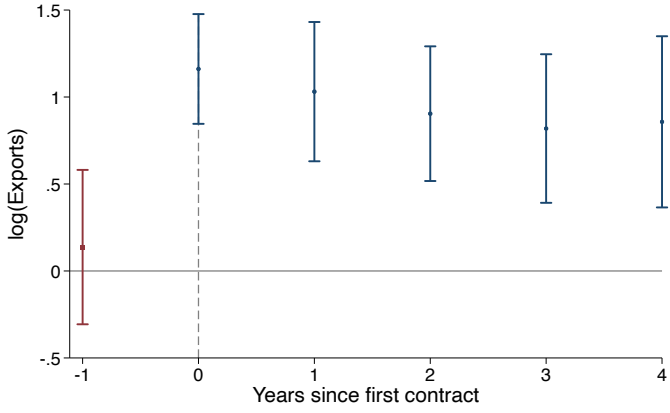
Effects Are Not Mechanical

- Goods exports $\neq$ service-dominated procurement contracts
- Effect on exports to other countries (rest-of-world, excluding the US) show similar effects:

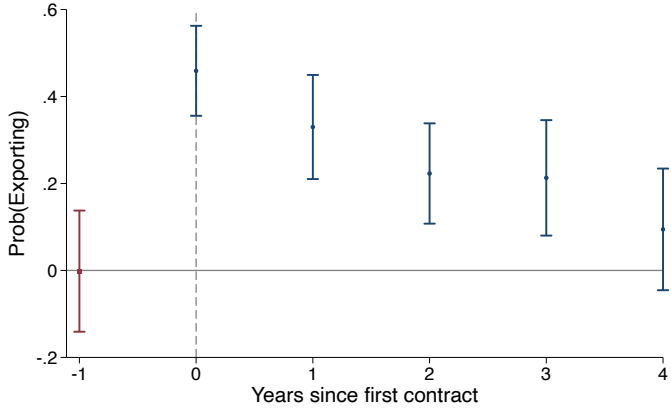




Effects Persist For Years on the *Intensive* Margin



But Decay A Bit on the Extensive Margin



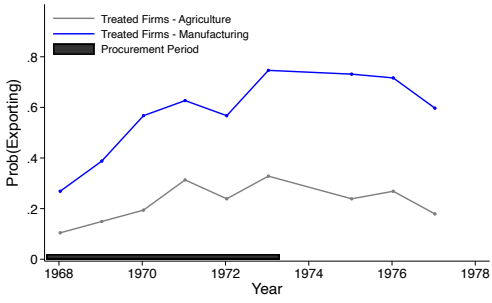
- Effects persist out to $h = 3$, but are no longer significant after
- Decay is likely partly driven by the control group catching up

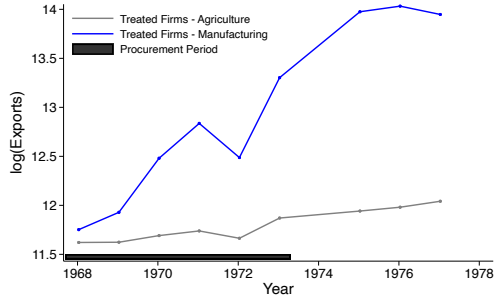
Persistence (Restriction)

Aggregate Effects

- We can gauge the overall impact of the procurement shock by applying some back-of-the-envelope calculation to our estimates
- On the extensive margin, procurement accounted for **68 additional exporting firms** by 1973—8.3% of large exporters
- Treated firms' exports would have been $\sim$**70% lower** without contracts
- Taken together, implies that procurement was responsible for $\sim$**20%** of Korea's total exports in 1973

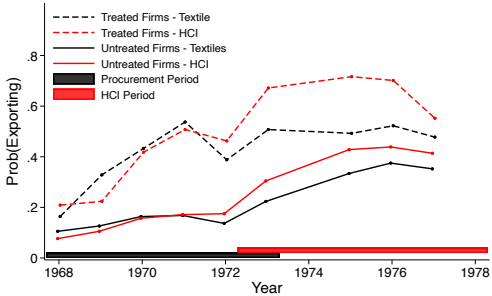
What Sectors Benefited Most?

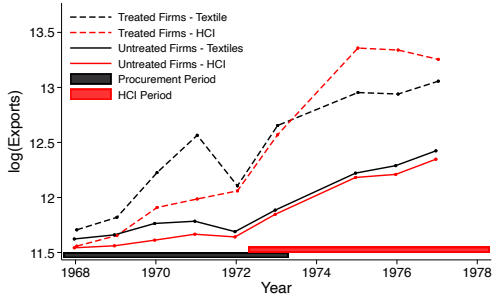




- Export growth in treated firms was concentrated in **manufactures**
- This raises the question: how did this interact with later Korean industrial policy? Most of all, the famous 1973 Heavy and Chemical Industry (HCI) Drive?

The Export Shock and Industrial Policy





- Pre-1973, treated firms experienced higher growth in **both** textiles and heavy and chemical industries
- Post-1973, HCI sector begins to pull away—suggests export shock and industrial policy were complements, not substitutes

Conclusion

- U.S. military procurement had large, persistent effects on Korean firm exports
- Effects were broad-based—not just U.S.-bound—consistent with capability building
- Procurement responsible for $\sim$20% of Korea's exports by 1973
- Potential lessons for modern export promotion (e.g., AGOA[1]): procurement through firms may succeed where direct aid has not
- Future work to explore mechanisms and heterogeneity

[1] African Growth and Opportunity Act

Thank you!

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Appendix

Where This Paper Fits in the Literature

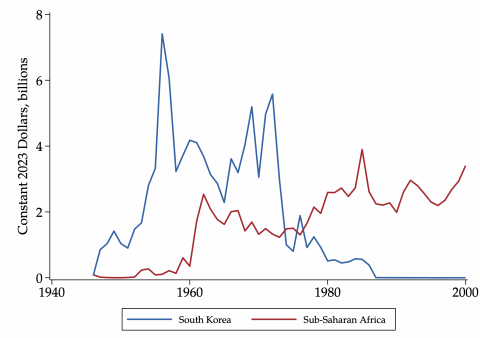
- First quantitative analysis of how Cold War procurement shaped the East Asian miracle
  - Geoeconomics: Clayton et al. (2023), Kleinman et al. (2024), Mohr and Trebesch (2025)
- Adapts military procurement shocks (common in macro) to study external economic development
  - Ramey (2011), Nakamura and Steinsson (2014), Brunet (2024), Mitrunen (2025)
- New evidence that external demand fosters firm-level export capacity and long-run upgrading
  - Atkin et al. (2017), Hanlon (2020), Alfaro-Urena et al. (2022)
- Highlight a neglected channel of aid—government procurement through firms, not fiscal transfers
  - Easterly (2003), Casey et al. (2012), Qian (2015)

Go Back

Understudied (Huge) Role of U.S. in East Asian Development

- From 1946–1978, South Korea received $12.6 billion in US aid
- All of Africa received $6.9 billion
- In 1961, US aid was approximately 12% of Korean GDP (73% of imports)

⏩ Go Back



Parallel Trends

Should not be correlated with treatment

- Firm i's target $T_{i,t+1}$ for year $t+1$ (set in year t) is given by

$$T_{i,t+1} = \alpha_i + \beta_{t+1} + r_{i,t}$$

reflecting firm characteristics, market-wide conditions, and temporary firm-specific factors $r_{i,t}$

- An event study on selection:

$$T_{i,t+1} = \alpha_i + \beta_{t+1} + \sum_{\ell=0,1} \delta_\ell \cdot 1\{(t+1) - G_i = \ell\} + \varepsilon_{i,t+1},$$

where G_i is the first contract year

- The parallel trends assumption means $\delta_0 = 0$
  - $\delta_1 > 0$ implies that export targets incorporate information about the procurement shock's effect on exports, but only after the contract has been awarded

Go Back

Identifying Assumption, Again

- $Y_{it}(0)$: firm i's exports **absent treatment**, reflecting firm characteristics, market-wide conditions, and temporary firm-specific factors u_{it}, given by

$$Y_{it}(0) = \theta_i + \kappa_t + u_{it}$$

- **Parallel trends**:

$$\mathbb{E}[Y_{it}(0) \mid \theta_i, \kappa_t, G_i] = \theta_i + \kappa_t \quad \text{for all } i, t$$

  which is

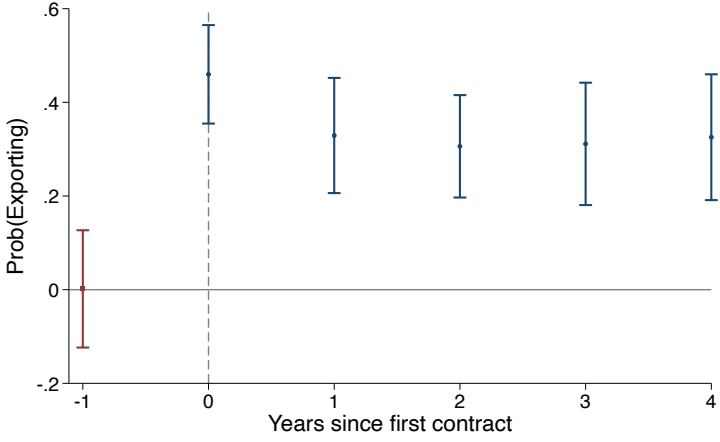
$$\mathbb{E}[u_{it} \mid G_i] = 0$$

- **No anticipation**:

$$Y_{it} = Y_{it}(0) \quad \text{for } t < G_i$$

Go Back

Persistence of Exports (Restricted Sample)



- Restricting the sample to firms that exported before 1969 helps avoid mechanical catch-up in the control-group

Go Back