Industrial Policy Wars and Inequality: Who Loses and When?

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The paper in one slide

Question. How do different industrial policy instruments affect inequality between workers?

Model. Two countries (US, China), two sectors (H, L), two skills (h, l), four worker type per country:

- **workers** à la Lechthaler & Mileva (2021): incumbents cannot relocate, entrants choose, retirement at rate s
- **firms** à la Ghironi & Melitz (2005), Zlate (2016): heterogeneous firms, entry, exporting, offshoring one task
- **4 instruments**: tariff τ_{IM}, offshoring friction τ_V, domestic production subsidy s_D, entry subsidy s_E

Experiments. 1% shock to each instrument, one instrument at a time:

- the shock is a transitory AR(1) process ($\zeta = 0.56$)
- instruments affect the two sectors simultaneously
- the steady state is computed in a zero-policy world
- evaluate first-order responses

Welfare evaluation. Cumulative consumption equivalents $\nu^{ih}(T)$ for the eight households.

Contribution and positioning

What is valuable.

1. A timely question and a rich framework allowing to compare several instruments in one **dynamic GE model**
2. Rich supply-side setup with extensive/intensive margins of adjustment and household heterogeneity
3. Workers reallocation gives short-run Ricardo–Viner and long-run Stolper–Samuelson effects

Relative to the literature.

1. It enriches LM (2021) with offshoring decisions, but less ambitious on policy scenarios
2. It enables studying heterogeneity in workers and firms jointly
3. The model is flexible enough to accomodate multiple instruments (Juhász et al., 2022)

The contribution sits in the quantitative assessment of the instruments. My comments ask whether the household block, the instruments choice, and the calibration are credible enough to be informative.

Households and workers: where is the heterogeneity?

Households/workers' choice set:

$$\max_{\{C_t^{ih},\, B_{t+1}^{ih}\}} \mathrm{E}_t \sum_{k\geq 0} \beta^k \ln(C_{t+k}^{ih}) H_{t+k}^{i} \qquad \text{entrant: } H \text{ if } V_t^{Hh} + \varepsilon_t^h \geq V_t^{Lh},\ \ \varepsilon_t^h \sim N(\mu, 1)$$

- **Households choose only C and B.** No intensive margin of labor adjustment and no unemployment.
- **Very limited heterogeneity in assets.** Same utility, no equity choice (mutual fund), and no foreign assets.

$$1 + \eta B_{t+1}^{ih} = \beta(1 + r_t)\, E_t \left[\frac{C_t^{ih}}{C_{t+1}^{ih}} \right]$$

- **The role of adjustment costs.** η disciplines the redistribution of wealth after a transitory shock and pins $B = 0$.
- **A stationarity device should be tiny**: GM and LM use 0.0025, "small enough so that adjustment dynamics are not affected". Here $\eta = 0.5$, i.e., **200× GM**.

EXTRA COST OF BORROWING

Borrow (% of C)	$\eta = 0.5$	$\eta = 0.0025$
1%	**2.0%/yr**	0.01%/yr
10%	**21.6%/yr**	0.10%/yr

At this premium, a low-wage worker hit by a policy shock has little incentive to borrow.

Financial autarky, current account, and the real exchange rate

The Balance of payments can be expressed as:

$$TB_t = \sum_{i=H,L} \Big[\underbrace{Q_t F_t^{N,i}}_{\substack{\text{fixed cost of} \\ \text{offshoring to the South}}} - \underbrace{F_t^{S,i}}_{\substack{\text{fixed cost of} \\ \text{offshoring to the North}}} \Big]$$

Current account and the real exchange rate.

- Trade balance implies net fixed offshoring costs: the **current account** $= 0$ in every period
- Any policy that changes import demand can only be offset by a movement in the RER, Q_t

Softening financial autarky?

1. Re-introduce the international bond market as in LM (2021)
2. International borrowing provides a new lever for consumption smoothing
3. Add a wedge to calibrate current account imbalances that are key to understand the US-China “trade war”

The instruments: offshoring "distance" as policy

The marginal cost of offshoring:

$$mc^i_{V,t}(z) = \frac{1}{z}\left(\frac{\tau^i_V\, Q_t\, w^{il*}_t}{Z^*_t(1-\alpha^i)}\right)^{1-\alpha^i}\left(\frac{w^{ih}_t}{Z_t\alpha^i}\right)^{\alpha^i}$$

What is τ^i_V?

- In Zlate (2016), it's the iceberg trade cost — a physical friction due to distance, not a policy instrument
- Here offshored tasks are *shipped goods* yet *untaxed* like Grossman-Rossi-Hansberg service tasks
- "Decoupling" becomes pure waste: no revenue is rebated → container shipping bottlenecks
- Moreover, this exemption causes tariffs to raise offshoring in the policy experiment

Pick offshoring in either goods or services.

1. **If goods**: add the import tax τ^{IM} on offshored products and use it for policy counterfactuals
2. **If services**: calibrate the offshoring friction τ^i_V accordingly

Calibration and Experiments (1/2)

Parameter	Value (GM/LM)	Data	Why it matters
Iceberg trade cost τ	1 (1.3/1.71)	US–China trade in mfg	openness undisciplined
Adjustment cost η	0.5 (0.0025)	–	consumption smoothing
Import tariffs τ^{IM}	0 (3%)	Global Tariff Database (Teti, 2024)	other parameters absorb the policy
Sunk / Fixed cost	0.01–0.056 (0.01)	share of exporters/offshorers	large f_X offsets $\tau = 1$
Workforce	0.23–0.054	World Bank / ILO data	drives the skill premium, offshoring, aggregate productivity

US–Mexico, applied to China: calibration and targeted moments based on Zlate (2016), i.e. the offshoring of intermediates between US and Mexico (Maquiladoras story). **Caveat**: US-Mexico NAFTA tariffs were almost zero.

Calibration and Experiments (2/2)

- **The current policy experiment.**

1. The instruments are not targeted, i.e. they apply to both sectors. However, a CHIPS-type programme supports the skill-intensive sector, while a Section 301-type tariff impacts labour-intensive Chinese imports.
2. Transitory shocks dilutes cumulative welfare effects. The model allows for reallocation, butwith a small r the transitory shock has almost no impact. Permanent shocks should constitute the baseline result.

- **What policy experiment(s)?**

1. **US-China Trade War.** Ideally you would like to calibrate the steady state in the pre-2018 period to exploit the 2018-19 escalation. This allows you to cross-validate results against previous evidence (Amiti, Redding & Weinstein 2019; Fajgelbaum et al. 2020) and offers out-of-sample checks.
2. **Persistency of comparative advantage**. How large industrial policy shocks should be to shift comparative advantage?
3. **Quantify actual industrial policy**. Exploit evidence in Juhász et al. (2025, NBER) to quantify its impact on US inequality.

Minor comments:

- **Cumulative $\nu(T)$ is diluted by construction.** The numerator stops accumulating, the denominator $\sum \beta^k$ keeps growing.
- **What measure of inequality?** Define a measure of country-level inequality and assess who gains, who losses, and how much inequality changes after the policy shock.
- **Offshorers vs reshoring**: a fall in the number of offshorers is not reshoring if survivors expand; report offshored value added (extensive vs intensive margin, as in Zlate).
- **Missing outcomes**. China-shock losses concentrate in non-employment, which is absent. Worth discussing.
- **Comparability of instruments**. A "1 pp" shock is different across policy instruments. Compare at a common target.

Thank you

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