Return to Protectionism and Global Reallocations

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NBER Conference on Trade and Trade Policy in the 21st Century
Washington, DC, September 29, 2022
Road Map

A. The Trade War: A Brief History

B. Effects on the US and China
   a. Trade Flows
   b. Prices (i.e., Unit Values)
   c. Employment, Welfare, Political Consequences

C. Effects on Third (“Bystander”) Countries
   a. Trade Flows → Global Reallocations

D. Concluding Thoughts: Implications for the Future of Globalization
   Trade Diversion?
   Trade Creation/Expansion?
   De-globalization?
Based On:


and many other:
• Chor D, Li B. 2021. *Illuminating the effects of the US-China tariff war on China’s economy.* NBER Work. Pap. 29349

A. The Trade War: A Brief History

War unfolded in several waves:

- Feb. 2020: Section 201 investigation → tariffs on washing machines and solar panels
- Shortly thereafter: Section 232 → aluminum and steel
- Five waves of tariff increases vis a vis China starting in July 2018, with China retaliating in each stage
- China cut its MFN tariffs for all countries except the US
- Eventually 450 billion of annual aggregate trade flows affected
- Jan. 2020: Countries agree to halt tariffs → Phase One Agreement
- But tariffs have remained in place as of today.
The Trade War: A Brief History (contd.)

Some notable feature of this trade war:

– Unanticipated
– Initially targeted several countries. Later mainly China → US-China Trade War
– Biggest protectionist move since 1930 Smoot-Hawley legislation:

<table>
<thead>
<tr>
<th></th>
<th>2018-19 Trade War</th>
<th>1930 Smoot-Hawley</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Imports Targeted (as % of GDP)</td>
<td>2.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>US Exports Targeted (as % of GDP)</td>
<td>1%</td>
<td>0.6% (Canada retaliation)</td>
</tr>
<tr>
<td>US Tariff Increases</td>
<td>3.7% → 25.8%</td>
<td>34.6% → 42.5%</td>
</tr>
<tr>
<td># of Products Targeted</td>
<td>75% of 10-digit IM and EX products</td>
<td>27% of dutiable products</td>
</tr>
</tbody>
</table>
US Tariff Changes

\[ \Delta T_{US}^{CH} & \Delta T_{US}^{i} \]

- Agriculture
- Apparel
- Chemicals
- Machinery
- Materials
- Metals
- Minerals
- Miscellaneous
- Transport

US Tariff Changes

\[ \Delta T(US,CH) \]

\[ \Delta T(US,i) \]
China Tariff Changes

\[ \Delta T_{CH}^{US} \; \& \; \Delta T_{CH}^{i} \]

- Agriculture
- Apparel
- Chemicals
- Machinery
- Materials
- Metals
- Minerals
- Miscellaneous
- Transport
B. Effects on the US and China

a. Trade Flows:
   EX from US to CH, and EX from CH to US decline

b. Prices (Unit Values):
   Complete pass-through of tariff to US import prices at the variety level
   Not necessarily complete pass-through on consumer prices
   Overall: Tariff incidence was mainly on the US
   Similar results for China

c. Employment, Welfare, Politics:
   Employment: No benefit to the US, potential loss in manuf. employment
   Welfare: Loss of ca. 0.13% of GDP (relatively small)
      BUT: Distributional effects (consumer loss: ca. $114b or 0.6% of GDP)
   Politics: Areas affected by retaliation mainly Republican
C. Effects on Bystander Countries

- Focus on long-run differences (2017-2019). Stop before COVID onset
- Exploit variation across HS6 products

**Main Insights**

- US-China trade declines (as shown in earlier work)
- Many countries increase exports to the US (substitute for China)
- But they also increase their exports to the rest of the world
- As a result, global trade INCREASES!
  → not just trade diversion, but trade creation
- Effects heterogeneous across countries
- Pre-existing specialization patterns explain only a small part of the response
- Winners: countries with deep trade agreements and FDI stock
  → countries already well integrated in the trade system
Part of this variation could be due to trade war. Possible drivers?

- Specialization in products targeted by the trade war?
- Substitution patterns with US/China?
- Supply elasticities?
Countries’ Pre-War Export Baskets

Agriculture | Apparel | Chemicals | Machinery | Materials | Metals | Minerals | Miscellaneous | Transport

ARG | AUS | AUT | BEL | BGR | BRA | CAN | CHE | CHL | CHN | COL | CZE | DEU | DNK | ECU | EGY | ESP | ESP | FIN | FRA | GBR | GRC | HKG | HUN | DN | IND

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IND | IRL | ISR | ITA | JPN | KOR | MAR | MEX | MYS | NLD | NZL | PER | PHL | POL | PRT | ROU | SGP | SVK | SVN | SWE | THA | TUR | UKR | USA | VNM | ZAF

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## Implications of Export Responses to US Tariffs on China

<table>
<thead>
<tr>
<th>Increase to RW</th>
<th>Decrease to US</th>
<th>Exports:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>China Complement (+) sloping supply</td>
<td>Increase to US</td>
</tr>
<tr>
<td></td>
<td>China Substitute (-) sloping supply</td>
<td></td>
</tr>
<tr>
<td>Decrease to RW</td>
<td>China Complement (-) sloping supply</td>
<td>China Substitute (+) sloping supply</td>
</tr>
</tbody>
</table>

- Same logic applies to Chinese tariffs on US
China's Exports to US

Pre-period: $\beta = -0.00$ (0.29). Post-period: $\beta = -1.22$ (0.27).
$\Delta \ln X(US,CH)$

$\Delta T(CH,US)$

Pre-period: $\beta=1.15$ (0.41). Post-period: $\beta=-2.14$ (0.37).
Bystanders' Exports to US

\[ \Delta \ln X(i, US) \]

Pre-period: \( \beta = -0.01 \) (0.11). Post-period: \( \beta = 0.21 \) (0.09).
Bystanders' Exports to RW

Pre-period: $\beta = -0.06$ (0.07). Post-period: $\beta = 0.29$ (0.07).
Bystanders' Exports to China

Pre-period: $\beta = -0.03$ (0.16). Post-period: $\beta = -0.19$ (0.17).
Bystanders' Exports to RW

Pre-period: $\beta=0.14$ (0.06). Post-period: $\beta=0.30$ (0.07).
CH Substitutability and Supply Slope

- Upward sloping supply, CH complement
- Downward sloping supply, CH substitute

Coefficient on $\Delta T(US,CH)$ to RW

Coefficient on $\Delta T(US,CH)$ to US

Countries: CH, AUT, BEL, CHE, CHN, CZE, ECU, EGY, COL, ESP, CAN, FIN, GBR, HKG, IDN, IRL, BGR, ITA, DEU, JPN, KOR, MAR, MEX, MYS, NZL, POL, NLD, PRT, IND, HU, D, C, N, HK, L, GRC, FBR, ROU, SGP, SVN, SWE, ISR, THA, TUR, UKR, VNM, ZAF.
US Substitutability and Supply Slope

Coefficient on $\Delta T(CH, US)$ to RW

Coefficient on $\Delta T(CH, US)$ to CH

- Upward sloping supply, US complement
- Downward sloping supply, US substitute

Countries represented on the graph include:
- COL
- CZE
- BRA
- IDN
- ARG
- ZAF
- AUS
- TUR
- UK
- U
- SA
- KO
- V
- NM
- PRT
- ZAF
- ARG
- CAN
- PER
- CHE
- JPN
- NLD
- NZP
- AUS
- TUR
- HKG
- BGR
- SGP
- SVN
- SVK
- SW
- E
- N
- NLD
- T
- AUS
- TUR
- UK
- U
- SA
- KO
- V
- NM
- PRT
- ZAF
- ARG
- CAN
- JPN
- MAR
- MEX
- MTH
- H
- S
- UN
- PER
- PHL
- POL
- ROU
- GB
- S
- FI
- E
- N
- NLD
- TNHZAL
Predicted “Winners”

Log Change

Predicted Exports to US
Predicted Exports to CH
Predicted Exports to RW
Predicted Exports to WD

Countries:
- PHL
- ECU
- ISR
- CHL
- UKR
- BGR
- KOR
- USA
- HKG
- CAN
- IDN
- IRL
- BRA
- AUS
- CHN
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- ARG
- SGP
- FRA
- POL
- GBR
- MEX
- BEL
- MYS
- NZL
- COL
- EST
- ROU
- TUR
Correlates
Correlating “winners” to various country characteristics

- Distance to US
- Distance to CH
- GDP Per Capita
- GDP
- Labor Market Efficiency
- FDI stock
- Trade Agreement Trade Share
- Doing Business trading score

N = 48, 10/90 error bars
### Net Global Trade

**Aggregating Responses**

<table>
<thead>
<tr>
<th>from ↓/to →</th>
<th>US</th>
<th>CH</th>
<th>RW</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>-28.3%</td>
<td>3.1%</td>
<td>-0.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.2%)</td>
<td>(2.2%)</td>
<td>(2.0%)</td>
<td></td>
</tr>
<tr>
<td>CH</td>
<td>-9.4%</td>
<td>4.8%</td>
<td>1.1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.0%)</td>
<td>(4.8%)</td>
<td>(3.6%)</td>
<td></td>
</tr>
<tr>
<td>RW</td>
<td>2.2%</td>
<td>-4.6%</td>
<td>4.6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.3%)</td>
<td>(1.6%)</td>
<td>(0.6%)</td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>-0.6%</td>
<td>-7.5%</td>
<td>3.5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.1%)</td>
<td>(1.5%)</td>
<td>(0.6%)</td>
<td></td>
</tr>
</tbody>
</table>
D. Concluding Thoughts
Implications for the Future of Globalization

- Counterintuitive results on trade war effects on bystander countries
- Trade war → Increase in global trade
- Possible explanation: Countries/Firms willing to pay the fixed costs of major supply chain reallocation to take advantage of opportunities
- No evidence of de-globalization. But shift of trade flows towards other countries → relocation
- HOWEVER: Analysis predates COVID and Ukraine.
- Global environment very different today. Future highly uncertain.
- Open question: Did the trade war create the political conditions that enable the Ukrainian evasion?
THANK YOU!