

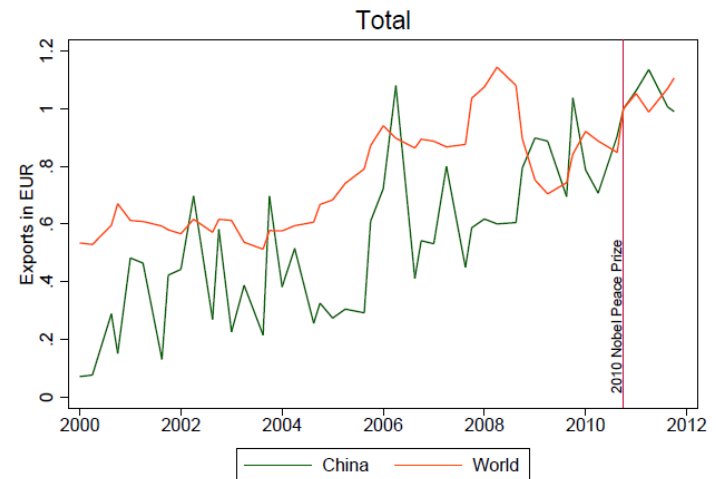
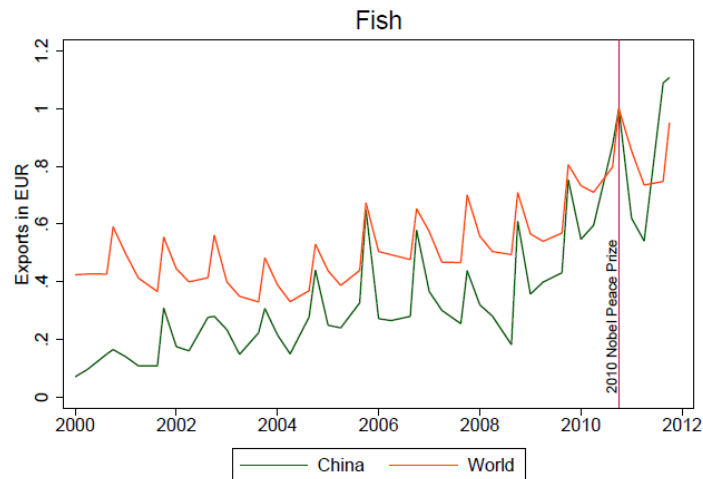
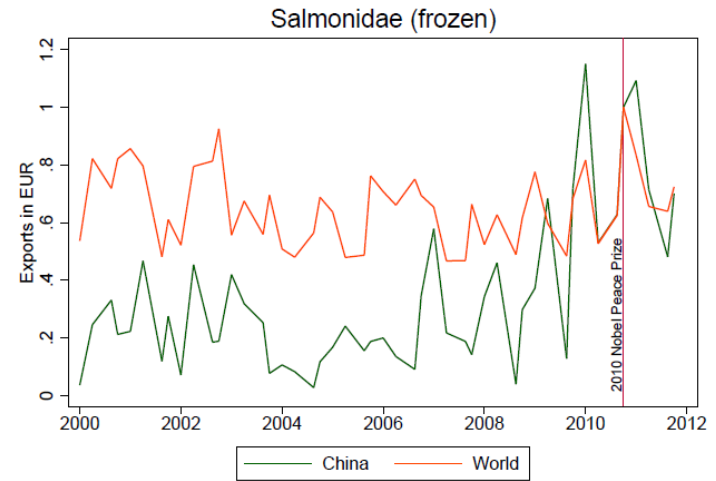
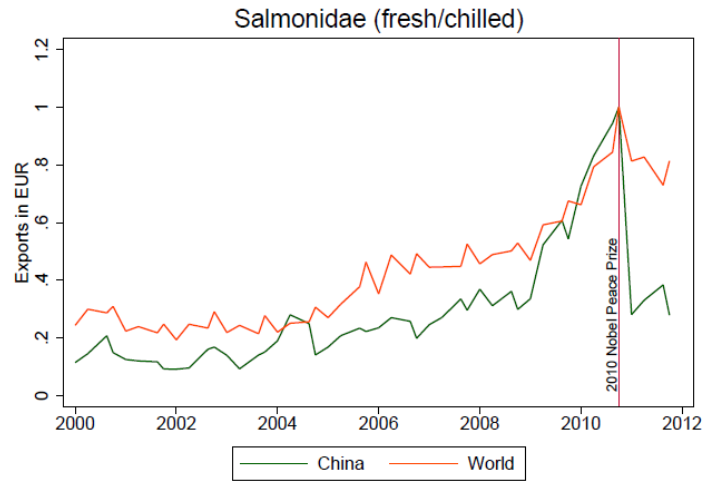
State Control and the Effects of Foreign Relations on Bilateral Trade

Christina Davis, Andreas Fuchs, and Kristina Johnson
Princeton University

Motivation

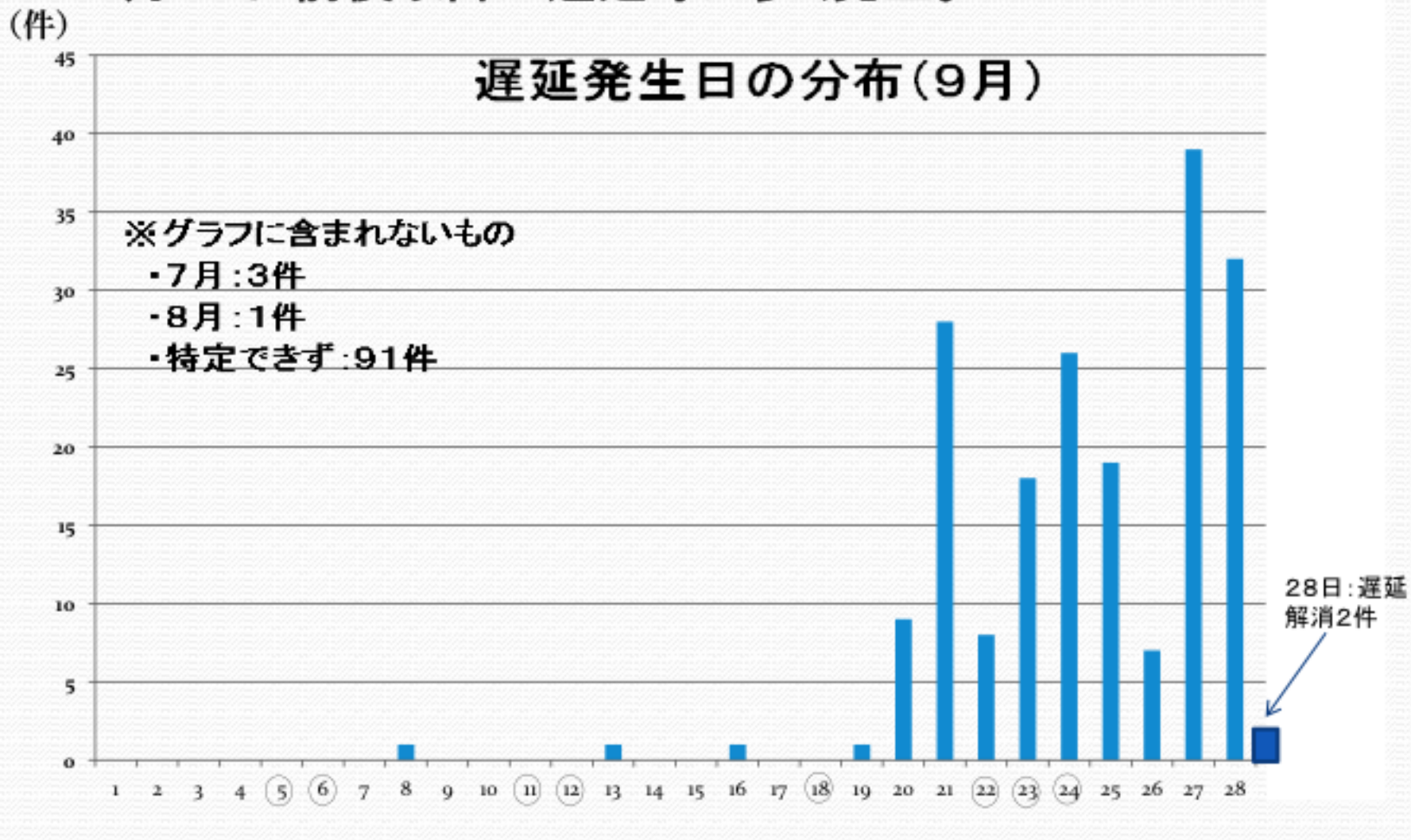
- Growing consensus that systemic changes limit trade manipulation in response to political disputes
 - WTO
 - Global production networks
 - Intra-industry trade and specialized production
- But examples of this behavior abound
 - Argentina (Falkland Islands)
 - Russia and Ukraine (gas wars)
 - India and Pakistan
 - China (salmon, rare earths)

Chinese Boycott of Norwegian Salmon

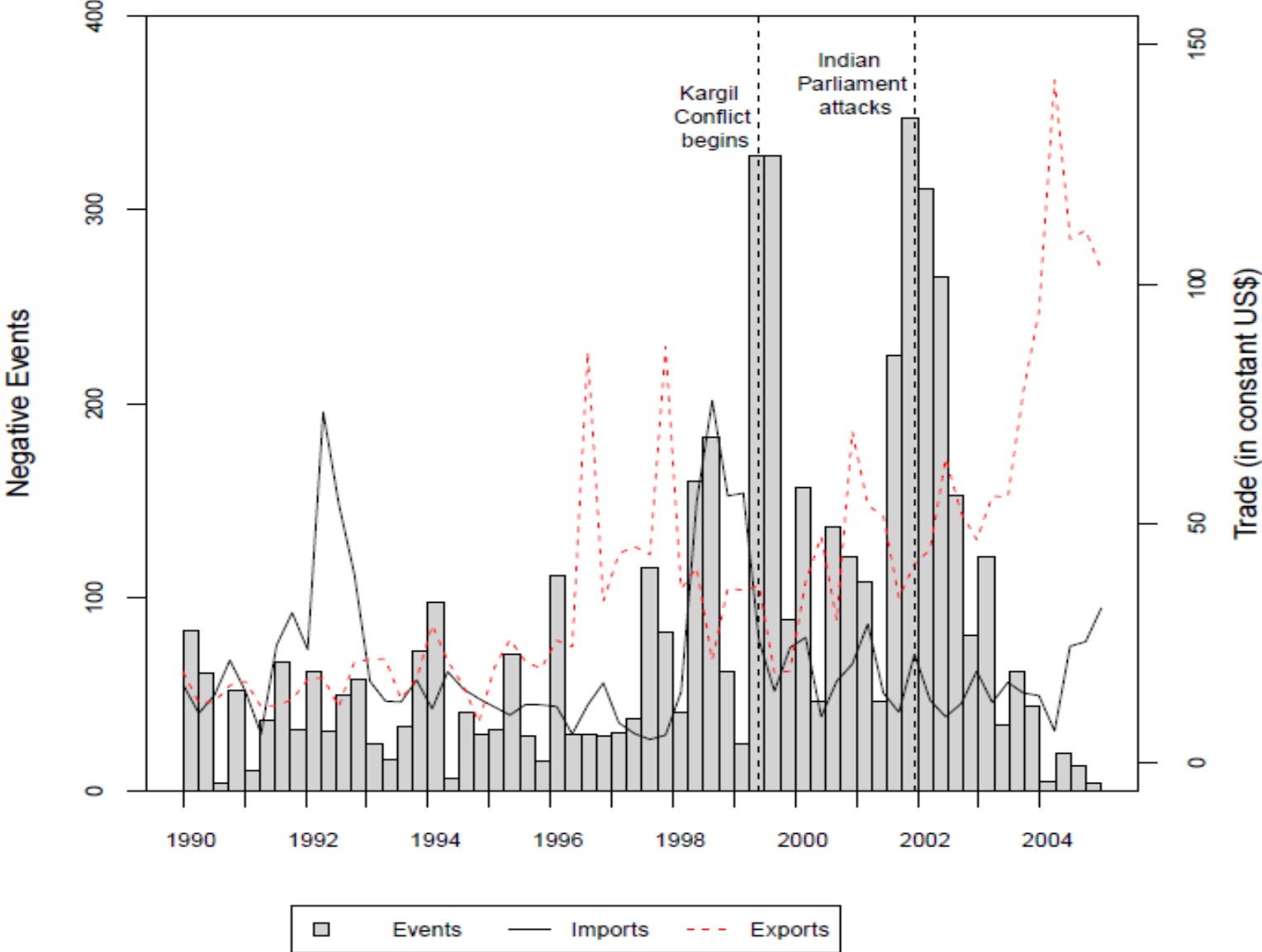


METI Survey On Customs Delays By China September 2010

9月20日前後以降に遅延等が多く発生。



India-Pakistan: Trade and Negative Events 1990-2004



Why State Control Matters

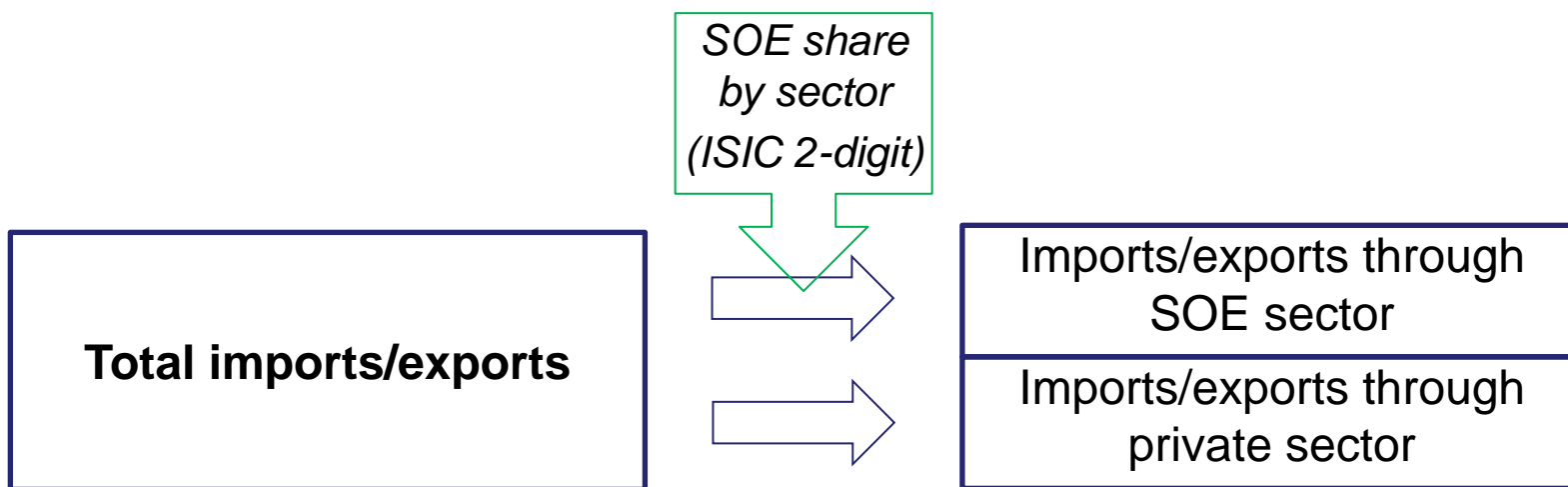
- Systemic changes reduce the *capacity* but not the *motive* to manipulate trade
- Trade manipulation can occur at the firm level
 - Capacity to influence firm decisions → manipulation
 - Capacity highest for *state-owned enterprises* (SOEs)
 - Less opposition from SOEs to trade diversion
 - Advancing political goals is a primary objective of SOEs
 - Close links between state leadership and SOEs
- Capacity varies:
 - Across governments
 - Across sectors (SOE vs. non-SOE sectors)

Overview

- Argument:
 - The impact of bilateral political events on trade is conditional on state control of the sector
- Empirical Analysis:
 - Measure variation in political relations
 - China and India
 - Imports vs. exports
- Findings:
 - Negative political events → lower imports
 - bigger effect in SOE sectors (China and India)
 - Political events → changes in exports sometimes
 - bigger effect in SOE sectors (India only)

Trade with the state-controlled sector of the economy

- Construct proxy measure, real SOE trade data coming soon!
- Match disaggregated bilateral trade data with industry-level data on the share of assets held by SOEs



- We multiply sectoral trade values with the respective SOE share in total assets and sum the resulting values

Sectoral Variation in State Ownership

China

ISIC sector	SOE
Extraction of crude petroleum and natural gas, related services	98.0%
Manufacture of basic metals	71.4%
Manufacture of chemicals and chemical products	57.6%
Manufacture of machinery and equipment n.e.s.	55.9%
Manufacture of radio, television and communication ...	43.0%
Manufacture of medical, precision and optical instruments, ...	42.9%

Source: *China Statistical Yearbook*

India

ISIC sector	SOE
Extraction of crude petroleum and natural gas, related services	89.9%
Manufacture of machinery and equipment n.e.s.	44.9%
Manufacture of coke, refined petroleum products and nuclear fuel	43.6%
Manufacture of basic metals	40.3%
Manufacture of chemicals and chemical products	13.1%
Other mining and quarrying	2.1%

Source: *PROWESS database*

Measuring political relations

1. Number of negative events (King and Lowe 2003)
2. Voting alignment in the UNGA (Voeten and Merdzanovic 2009)

China-specific measures:

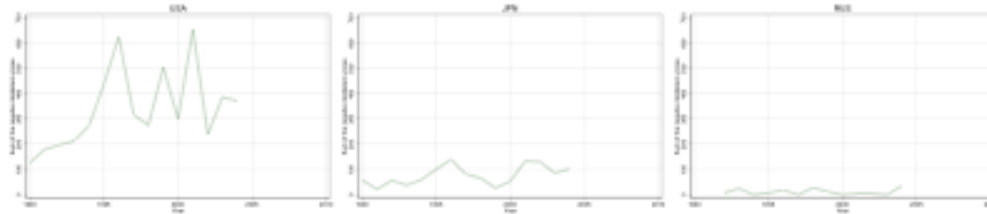
3. Count of People's Daily references to actions that “hurt feelings” of the Chinese people (Fang 2010)
4. Conflict-cooperation index (Yan et al. 2010)

We focus on the number of negative events

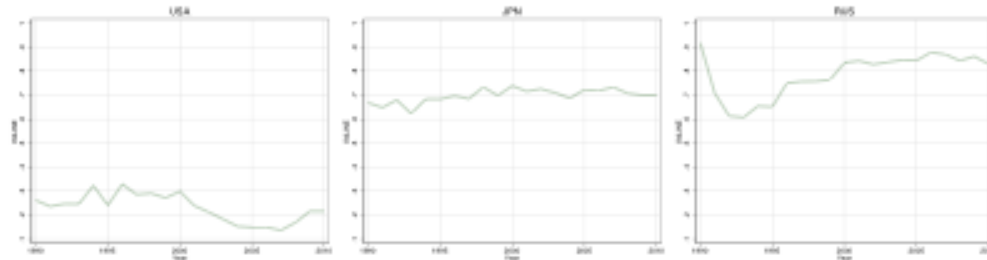
- *China's worst relations:* USA, Taiwan, UK, Japan, Philippines,...
- *India's worst relations:* Pakistan, USA, Bangladesh, Saudi Arabia, UK,...

China

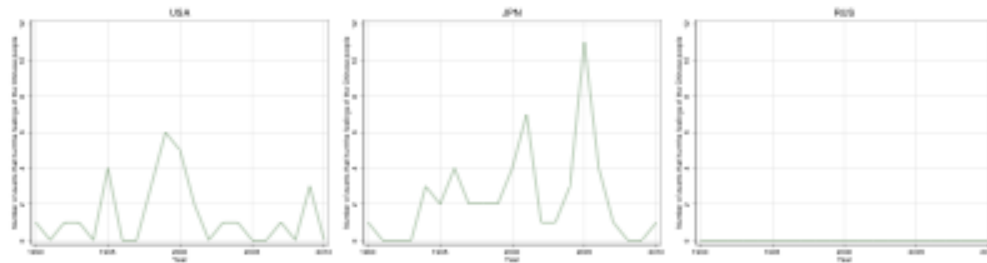
Negative events



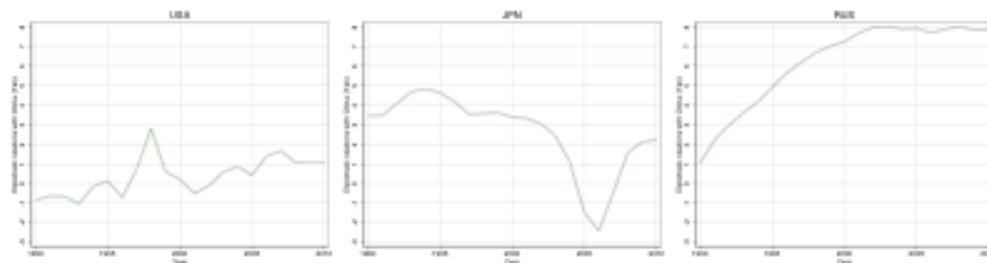
UN voting alignment



Hurt feelings



Yan index



Empirical strategy

- Gravity model of international trade

$$trade_{SOE,ij} = \beta_0 + \beta_1 relations_{ijt} + \beta_2 distance_{ijt} + \beta_3 gdp_{ijt} + \beta_4 X_{ijt} + \tau_t + \varepsilon_{ijt} \quad (1)$$

$$trade_{nonSOE,ij} = \tilde{\beta}_0 + \beta_1 relations_{ijt} + \tilde{\beta}_2 distance_{ijt} + \tilde{\beta}_3 gdp_{ijt} + \tilde{\beta}_4 X_{ijt} + \tau_t + \tilde{\varepsilon}_{ijt} \quad (2)$$

- *trade*: exports or imports (Source: WITS)
- *relations*: 1 of 4 measures of political relations
- Controls: Distance, GDP, Population, Neighbor, Common language, Landlocked, Both in WTO, PTA, Democracy, US ally, and time dummies (all IVs lagged)
- Time period: 1995-2009 (China); 1991-2009 (India)
- Seemingly unrelated estimations to combine estimation results
- Hypothesis: $\beta_1 > \tilde{\beta}_1$

Main results

	China Imports	China Exports	India Imports	India Exports
SOE Negative events	-0.004*** (0.001)	0.001 (0.001)	-0.007** (0.003)	-0.006*** (0.001)
Non-SOE Negative events	-0.003*** (0.001)	0.001 (0.001)	-0.005* (0.002)	-0.005*** (0.001)
<i>Observations</i>	1,654	1,863	2,006	2,412
<i>Wald test (p-value)</i>	0.007	0.527	0.005	0.004

- ✓ Controlled for distance, GDP, Population, Neighbor, Common language, Landlocked, Both in WTO, PTA, Democracy, US ally, and time dummies
- Results confirmed with “hurt feelings” variable
- Mixed results for UNGA voting and Yan index

Further results

- Consumer vs non-consumer goods
 - WTO membership restricts trade policy levers
 - State control of the media offers an alternative
 - Statistically significant difference in the coefficients on negative events for imports to China (but not for India)
- Partner country fixed effects
 - Similar results for India
 - No significant effect for China

Conclusions

- Trade is more likely to follow the flag when government controls firms
- Both democratic and authoritarian governments engage in this practice - *Government-business ties rather than regime type shape politicization of trade*
- Political relations may become more important drivers of trade patterns as more countries with partially state-controlled economies emerge as important players in international trade
- Challenge for WTO to regulate informal discrimination

China SOE Import Share --Selected Sectors

		Import Share of Total Inputs*	
	Sector	SOE	Non-SOE
1	Coke, petroleum, and nuclear fuel	61.7	38.3
2	Other transport equipment	50.0	50.0
3	Basic metals	49.5	50.5
4	Chemical and chemical products	35.1	64.9
5	Food products and beverages	50.0	50.0
6	Textiles	29.1	70.9
7	Leather, luggage, and footwear	18.3	81.7

Sources: China Statistical Yearbook, 2004; China Customs Info Database

* Data from 2003

India Productivity and Imports in Ten Largest Sectors

	Sector	Productivity (Rs./Worker)*		Import Share of Total Inputs*	
		SOE	Private	SOE	Private
1	Motor Vehicles	141,799	259,413		19.13
2	Petroleum	6,147,727	371,652	28.62	51.12
3	Basic Metals	199,783	257,080	24.61	19.28
4	Electricity, Gas, Hot Water		140,022	0.04	41.11
5	Chemicals	526,763	702,076	8.87	23.93
6	Other Transport Equipment	147,979	223,124	29.53	17.96
7	Paper	179,157	134,541	3.77	20.83
8	Electrical Machinery	442,866	276,529	15.44	16.12
9	Media Equipment	677,099	493,588	34.5	32.02
10	Fabricated Metal Products	361,056	189,953		18.23

Source: Annual Survey of Industries India, various years

* Productivity from 1999-2000; Import/Export Shares from 2009-2010