

Technological Interdependence and National Security-Related Investment Restrictions: Firm-Level Evidence of CFIUS Reviews

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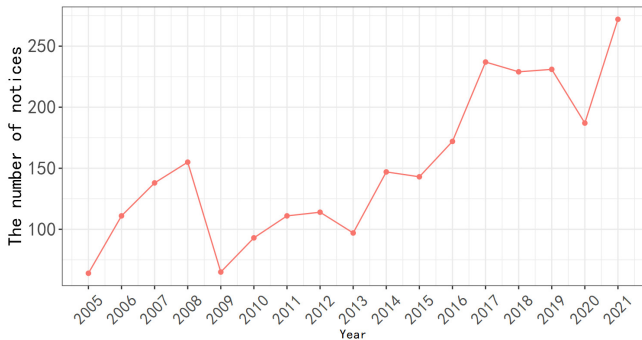
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Research Question

What explains the rise in national security-based restrictions on inward foreign investment?

National Security Reviews of Cross-Border M&As

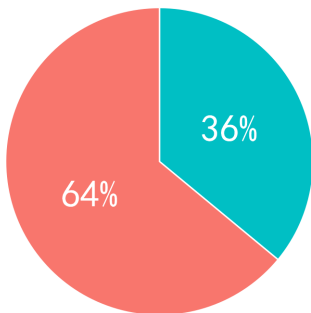
- The Committee on Foreign Investment in the United States (CFIUS) is in charge of national security reviews in the US



CFIUS Reviews between 2005 and 2021

Source: CFIUS' Annual Report to Congress.

Share of CFIUS Reviews Targeting High-Tech Firms (2014-2021)



High-tech
Pharmaceuticals
Semiconductors
Chemicals
ICT services
Low-tech
Agricultural produce
Finance

Sectoral Breakdown of CFIUS Reviews

Sources: CFIUS' Annual Report to Congress and OECD High-Technology Sector and Product Classification

Opposition from High-Tech Firms

- Tech giants invested heavily in lobbying against CFIUS reviews



General Electric



IBM



Lattice Semiconductor

The Puzzle

- **Economic exchange** → **Powerful pro-globalization coalitions**
(Keohane and Nye Jr, 1973; Meckling and Hughes, 2017; Osgood, 2018; Kim et al., 2019; Lee and Osgood, 2021)
- **Governments respond to powerful firms** → **Less investment restrictions**
(Milner, 1988; Melitz, 2003; Bombardini, 2008; Kim and Osgood, 2018)
- **Why do governments of advanced economies impose national security-related investment restrictions despite the fact that powerful firms oppose them?**

Theory

- **Governments as relative power maximizers**

Cross-border M&As → technology diffusion → relative power concerns
(Krasner 1978, Lake 1988, Lobell et al. 2009, Mastanduno et al. 1989, Ripsman et al. 2016, Skocpol et al. 1985)

- **Purpose 1: Preventing technology diffusion to rivals**

- **Purpose 2: Enhancing the regulatory influence on weakly regulated firms**

Hypotheses

- H1: Governments of developed economies are more likely to impose national security-based investment restrictions on domestic firms if the latter control key technologies (chokepoints).
- H2: Firms that are weakly regulated are more likely to be targeted by these investment restrictions.

Research Design

$$H1 : R_c = \beta_1 \text{Centrality}_f + \beta_2 \text{Exposure}_f + \gamma S_c + \alpha E_c + \epsilon_c$$

- Universe of cases: 337 M&A deals between US public firms and Chinese buyers from 2000 to 2021 (Thomson ONE, EMIS, Zephyr)
- Unit of analysis: M&A deals

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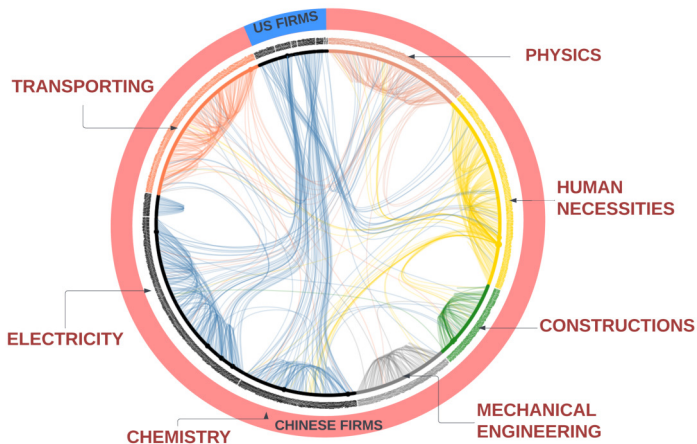
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- Control variables: the number of employees, total assets, government procurement experience, and R&D investment

The Patent Licensing Network Between China and the US



The Patent Licensing Network Between China and the US

Results

Table: The Effect of Centrality on CFIUS Reviews

	CFIUS Reviews		
	(1)	(2)	(3)
Centrality	2.185*** (0.311)		2.288*** (0.390)
Regulatory Exposure		-0.008* (0.004)	-0.008* (0.004)
Government Procurement	-0.225 (0.720)	-0.685 (0.715)	-0.609 (0.745)
Employee	-0.004 (0.006)	-0.006 (0.004)	-0.009 (0.009)
Total Assets	0.020 (0.011)	0.020* (0.009)	0.021* (0.010)
R&D	0.038** (0.014)	0.030 (0.016)	0.027 (0.014)
Observations	121	81	81
Log Likelihood	-59.773	-37.853	-37.540
Akaike Inf. Crit.	167.545	117.706	119.079

Notes: Logit models are shown in the table. Standard errors are clustered within firms. Time dummies are added in all models. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

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Takeaways

- Governments' relative power concern over technology diffusion increases investment restrictions
- Gaps in government regulatory power lead to securitization of investment policies
- New data: 700 CFIUS reviews
- New measurement: chokepoints in the patent license and assignment network

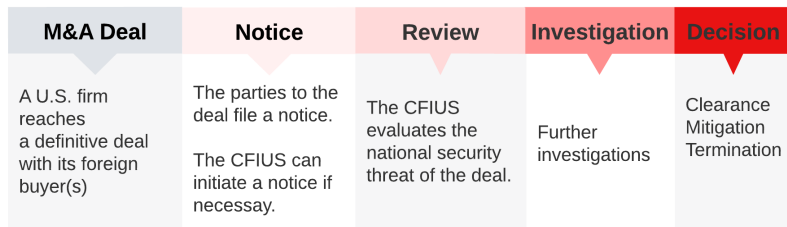
Thank you for listening!

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Supplementary Information

The CFIUS Review Process

- The Committee on Foreign Investment in the United States (CFIUS)



Difference in Differences

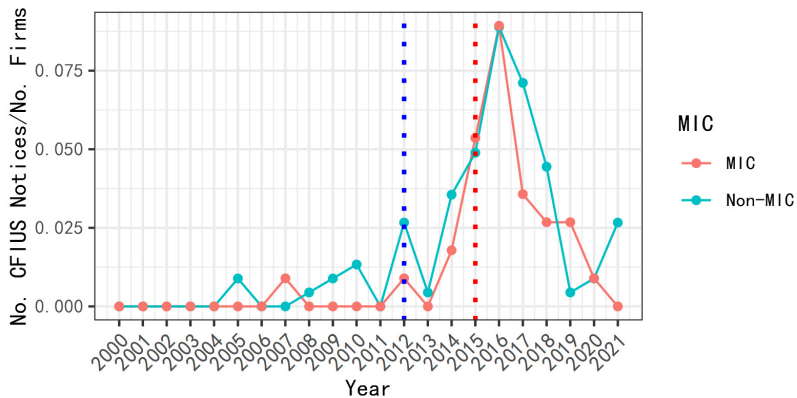
Table: Made in China 2025 and CFIUS Reviews

	CFIUS Reviews	
	(1)	(2)
DID 2015	0.039*** (0.007)	0.047* (0.021)
Government Procurement		-0.007 (0.019)
Employee		0.001* (0.0003)
Total Asset		-0.000*** (0.000)
Observations	6,424	1,504
R ²	0.036	0.095
Adjusted R ²	-0.010	-0.013
Residual Std. Error	0.136 (df = 6131)	0.154 (df = 1343)
F Statistic	0.787 (df = 292; 6131)	0.884 (df = 160; 1343)

Note:

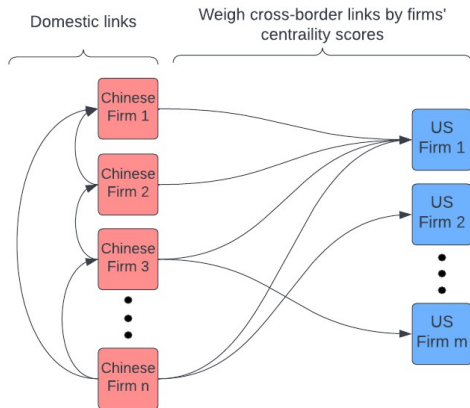
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Difference in Differences



Parallel Trends

A Network-Based Measurement of Chokepoints



Measurement of Chokepoints

Exposure to Government Regulations

Hassan et al. (2020a, 2019, 2020b)

- The proportion of firm conference calls devoted to discussions of political risks
- Two-word combinations regarding political matters: the constitution, the states, public opinion, interest groups, of government, the GOP, in Congress...
- An example of high exposure to government regulations:
National Mentor Holdings, Inc.: “both **President Obama’s budget proposal** and separate **legislation** pending in **Congress** would provide **funding** to continue the Medicaid stimulus”

The Lattice-Canyon Bridge Deal

- Donald J. Trump: “There is credible evidence that leads me to believe that [the Chinese buyers] might take action that threatens to impair the national security of the United States”
- After the agreement was reached:
Darin G. Billerbeck, President and CEO of Lattice, commented, “This transaction...delivers certain and immediate cash value to shareholders...We are excited to leverage Canyon Bridge’s resources and market connections [in China] as we enhance our focus on...continued innovation.”
- After CFIUS blocked the deal:
Lattice Semiconductor: “We are obviously disappointed in today’s decision by the President of the United States to forgo what we believe to be an excellent deal for Lattice’s shareholders and its employees by expanding the opportunity to keep jobs in America.”