Dynamic Gains from Trade Agreements with Intellectual Property Provisions

Ana Maria Santacreu

discussion by

Sina T. Ateş
Federal Reserve Board

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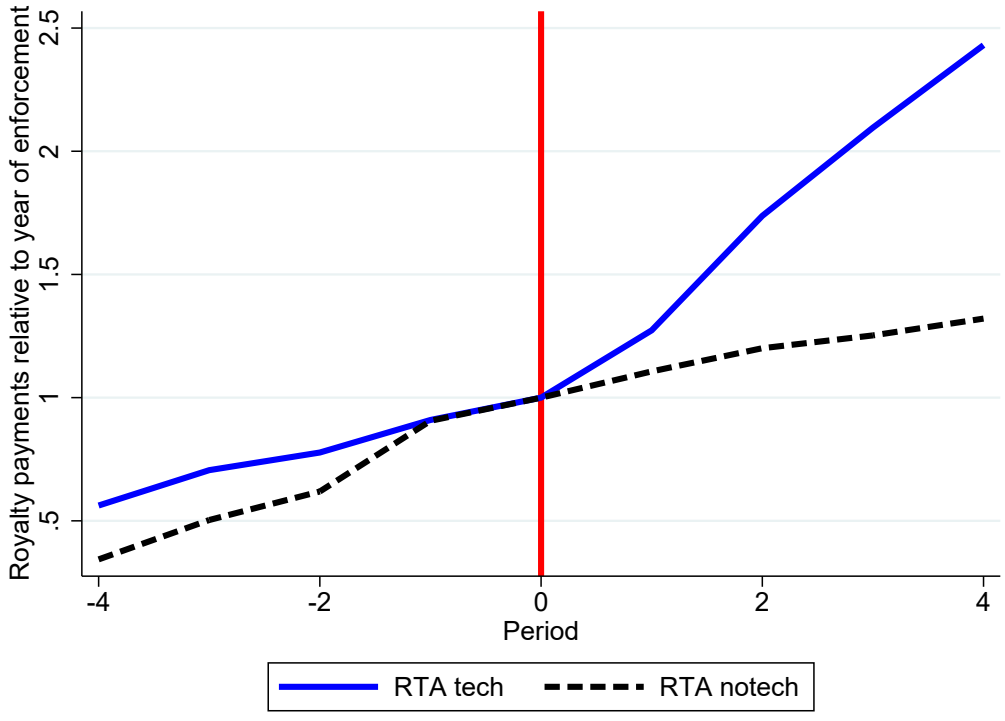
[†]The views expressed here are those of the authors and do not necessarily reflect those of the Board of Governors or the Federal Reserve System.

First take

- Very insightful paper!
- The interplay between tariffs and IP provisions in DTA
  - Rich dynamic framework of trade and endogenous growth
  - Particular attention to transitional dynamics
- Work in progress; first, specific comments on the analysis...
- ... and then make suggestions to enrich the analysis exploring
  - Various policy settings
  - Alternative scenarios / mechanisms

Empirical motivation for royalties

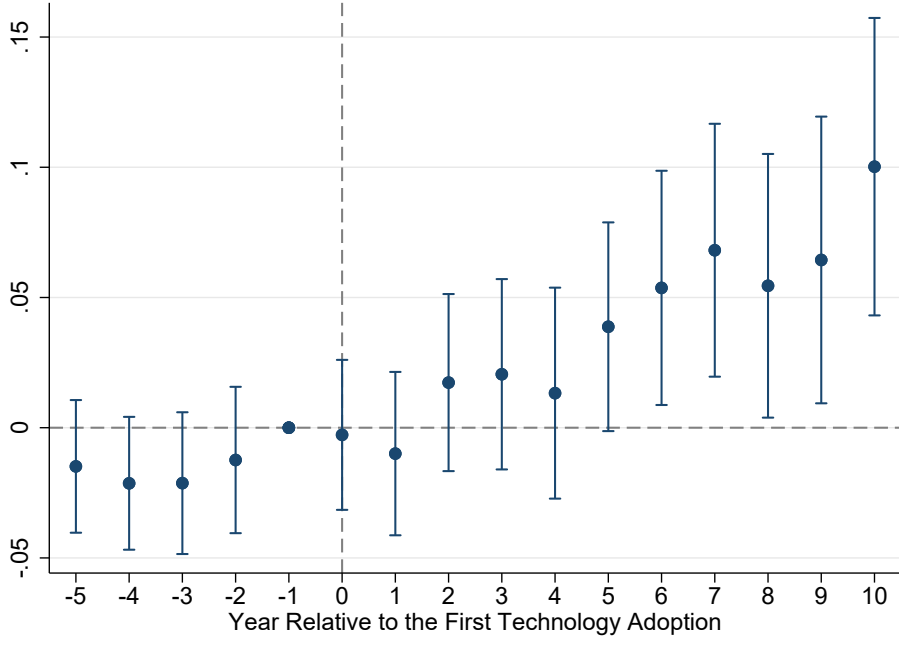
FIGURE: Licensing: RTA with vs. without IPP



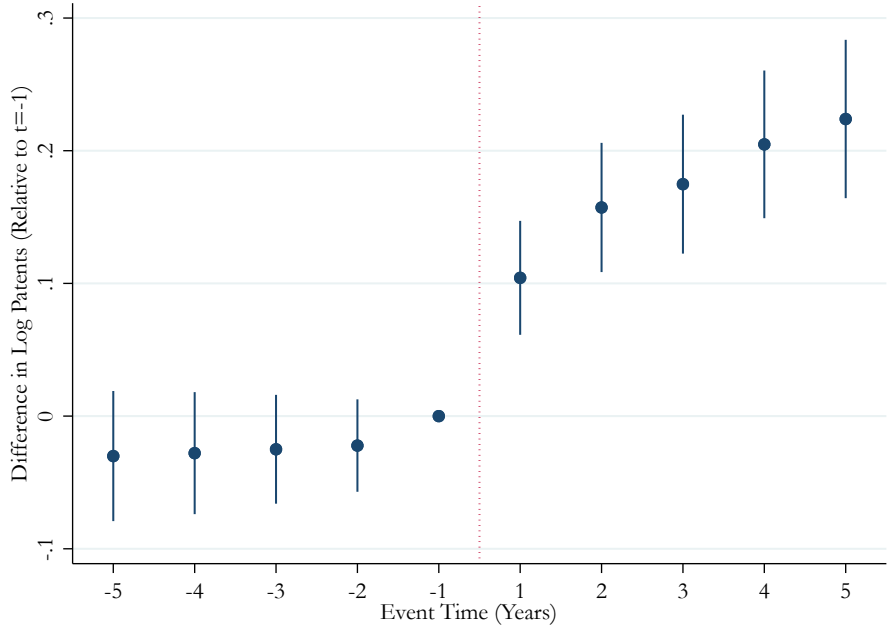
- Stronger than FDI and cross-border patenting
- Higher royalties (i.e., licensing) => higher adoption

A note on licensing

- Licensing, knowledge transfers, subsequent technology upgrade
  - Choi and Shim (2023): increased citation from Korea to licensed patents from Japan
  - Akcigit et al. (2023): increased patenting and citation by foreign firms to U.S. startups following cross-border investment and in their tech classes



A) Choi and Shim (2023)



B) Akcigit, Ates, Lerner, Townsend, Zhestkova (2023)

Comments I

1. Improving the exposition
   - Additional material (response functions, $\Delta Welfare$ over (τ, ξ) space, etc.)
   - Decomposition of welfare effects to its sources

2. How to think about imitation?
   - No profits from adoption when no agreement
   - What if there was a probability of genuine imitation?
     - Would affect the outside option of adopters

Comments II

3. Fleshing out policy implications
   - Independent IPR more welfare-enhancing
   - Enhanced IP protection useful only if domestic innovators benefit
   - Then, for countries reliant more on foreign ideas, is DTA suboptimal?

4. Adoption subsidies
   - Intertemporal externality through T_{nt}
   - Could it alleviate initial drop in adoption and output?

5. Regular trade agreement w/o IPP
   - Mutual decline in tariffs

Market size

- Market size matters for innovation incentives (e.g., Aghion et al., 2022)
- How do incentives of the US depend on China's size?
- Larger labor force or higher adoption efficiency in the China
- Would the US consider import subsidies?

Technology gaps

- Technology gaps matter
  - Sampson (2023): international income inequality
  - Akcigit, Ates, Impullitti (2023): foreign competition, optimal policy

- The relationship between adoption and technology gaps
  - Akcigit et al. (2023), Choi and Shim (2023)
  - Technology closer $\Rightarrow$ lower investment, higher fee

	Fixed fee	Royalty	Total fee
Relative productivity	0.141***	0.141***	0.644***
	(0.0413)	(0.0479)	(0.0493)
N	1,812	1,210	1,200
Adjusted R2	0.0947	0.0233	0.4177
Sector FE	yes	yes	yes
Year FE	yes	yes	yes

A) Choi and Shim (2023)

	$\mathbb{1}\{\text{Investment}_t\}$	
	(1)	(2)
Relative Knowledge$_{f,c,t}$	-0.103***	-0.173***
	(0.039)	(0.046)
Relative Knowledge$_{f,c,t-1}$		-0.089
		(0.092)
Relative Knowledge$_{f,c,t-2}$		0.137
		(0.140)
Country FE	Yes	Yes
Year FE	Yes	Yes
R-squared	0.040	0.040
Observations	71,646	56,108

B) Akcigit, Ates, Lerner, Townsend, Zhestkova (2023)

Technology gaps

- How can we think about tech gaps in this context?
  - Relative productivities as a candidate
  - Reflect knowledge spillovers from North to South, but not payoff-relevant
- Implications of DTA with a technologically close country?
  - Exercise: higher innovation efficiency in China
  - Still, licensing not influenced by technology gap
  - Empirical question: royalties vs. technology gap

Conclusion

- Enlightening work!
- Rich, meticulous quantitative analysis
- Additional analysis on some policies & mechanisms would enrich it
- Looking forward to the extended analysis!