

Strategic Trade Theory in the Brazil-Canada WTO Dispute

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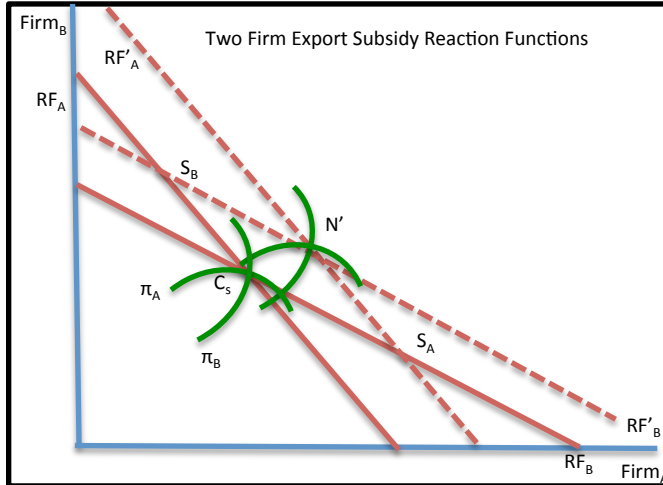
Background

The Brazilian commercial aircraft manufacturer, Embraer, maintains a competitive position in the global market despite Brazil's low capital-stock and paucity of high-technology exports. Traditional notions of comparative advantage contend that the commercial aircraft market should be the exclusive domain of highly developed nations (e.g. USA, EU, Canada).

An investigation into the company reveals a long history of government largesse. The support provided was critical to the company's success as it afforded Embraer access to innovative technology and lucrative contracts. In particular, the Brazilian government's Programa de Estímulo às Exportações (PROEX) vaulted the company to global success in the 1990's

PROEX was not without its costs however, as the subsidy program embroiled Brazil and Canada in one of the most heated WTO disputes to date.

Strategic Trade Theory and Reaction Functions



		Country A		
		Export Tariff	No Policy	Export Subsidy
Country B	Export Tariff	15, 15 C_t	20, 8	25, 3
	No Policy	8, 20	10, 10 C_s	20, 5
	Export Subsidy	3, 25	5, 20	7, 7 N'

Research Questions

Why did the trade dispute between Brazil and Canada turn so bitter and last so long despite the jointly-suboptimal nature of the countries' respective subsidy programs?

Can the jointly-suboptimal nature of the subsidy program be simulated using strategic trade models?

Method

The body of work known as the "strategic trade literature" was developed during the 1980's to analyze the potential gains from subsidizing a domestic firm that competes in an imperfectly competitive market [1]. The most influential model of strategic trade was described by Brander and Spencer in their 1985 paper. Their model demonstrated how export subsidization could help a domestic firm capture super-normal profits.

Though widely regarded as influential, the Brander and Spencer model fails to take into account the reaction of foreign governments and therefore is not regarded as sound policy advice. Rather, an agreement to *limit* subsidies has been proven to be jointly welfare improving. From a political-economy standpoint, Marc Busch's *Trade Warriors* is very effective at proving this.

Trade Wars: Ideas, Interests, and Cooperation in WTO Disputes

"Beggars Thy Neighbor" Prisoner's Dilemma [2]

		Country A		
		No Intervention	Limited Intervention	Full Intervention
Country B	No Intervention	3, 3	2, 8	1, 9
	Limited Intervention	8, 2	6, 6	4, 7
	Full Intervention	9, 1	7, 4	5, 5

Though Marc Busch's depiction of a similar commercial aircraft dispute (Airbus v Boeing) highlights that an agreement to limit subsidies is jointly welfare increasing, the Brazil vs. Canada dispute dragged on for years. Andrea Goldstein and Steven McGuire point to a set of ideas and interests within each country's government that raised the stakes of the WTO dispute and lowered the possibility of an amicable resolution. [3]

Future Research

My advisor and I are still in the process of simulating the impact of Brazil and Canada's subsidies. Using a model developed by Dr. Sheldon in a paper simulating environmental policy and the aluminum industry, we hope to demonstrate that an agreement to limit subsidies would be jointly welfare-increasing.

References

1. Markusen, James, James Melvin, William Kaempfer, and Keith Maskus. *International Trade: Theory and Evidence*. McGraw-Hill, 1995. .
2. Busch, Marc L. *Trade Warriors: States, Firms, and Strategic Policy in High Technology*. Cambridge [England: Cambridge University Press, 1999.
3. Goldstein, Andrea E., and Steven M. McGuire. "The Political Economy of Strategic Trade Policy and the Brazil-Canada Export Subsidies Saga." *The World Economy* 1994: 541-66