To Attest or Not to Attest: China Requires Registration of Overseas Dairy Manufacturers

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USDA

United States Department of Agriculture

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Views expressed here do not represent the USDA or Economic Research Service.

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Our results Using a difference-in-difference-in-difference causal inference methodology.

Our results We find that dairy exports increased.

Background

Decree 145, Article 1

To strengthen the supervision and management of overseas manufacturers of imported food...

- **Meat:** Began on May 1, 2013.
  - **U.S.** Slaughter facilities are exempt because of superseding provisions of the 1999 U.S.-China Agreement on Agricultural Cooperation.
- **Seafood:** Began for all seafood on May 1, 2013.
- **Dairy:** Began for all dairy on May 1, 2014.

Background

Article 7

Submit the statement made by the competent authorities of the country (region) where the manufacturer is located that the recommended **manufacturer is in compliance with the requirements as defined by the laws and regulations of China.**

Seafood: No issues from FDA.

Dairy: On May 1, 2014, after China automatically certified 200 U.S. dairy export facilities, no other U.S. dairy export facilities were registered until after June 2017 MOU allowing third-party attestation.

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Research Question

Did the miscommunication between the FDA and CNCA affect U.S. dairy exports?

What type of intervention?

- A miscommunication over a food safety regulation.
- Failure to coordinate, began in May 2014 for U.S. dairy exports.

What is the empirical strategy?

- A single commodity, single trading-partner issue.
- Difference-in-difference-in-difference (DDD) methodology.

An ambiguous predicted effect

- Restricted access to a market should decrease trade.
- Altered competition (200 grandfathered-in U.S. exporters.)

Data

Outcome U.S. Exports

- June 2010 to June 2017 (one year June to June).
- Grouped by two-digit harmonized description code.
- Includes only agricultural trade, HS code 1 to 24.

Intervention June 2010 - May 2014 is pre-treatment. June 2014 - May 2017 is treatment period.

Covariates Trading partner characteristics (yearly)

- GDP per capita
- Total trade/total imports
- Purchasing power parity with dollar
- Population density

Methodology

$$
\begin{aligned}
v =& \phi_C + \phi_t + \phi_D + \beta_0 + \beta_1 dD + \beta_2 dC + \beta_3 dD \cdot dC \\
&+ \delta_0 d2 + \delta_1 d2 \cdot dD + \delta_2 d2 \cdot dC + \boldsymbol{\delta_3 \mathbf{d2} \cdot \mathbf{dD} \cdot \mathbf{dC}} + u
\end{aligned} \tag{1}
$$

- v is the value of U.S. exports.
- ϕ_c, ϕ_d and ϕ_t are commodity type, destination market, and time effects.
- $d2$ is a dummy variable for the second period (after June 2014).
- dC captures possible differences between China and other trading partners.
- dD captures possible difference between dairy and other commodities.

Estimate

$$\hat{\delta}_3 = (\bar{v}_{C,D,2} - \bar{y}_{C,D,1}) - (\bar{v}_{A,D,2} - \bar{v}_{A,D,1}) - (\bar{v}_{C,N,2} - \bar{v}_{C,N,1}) \quad (2)$$

- **A** subscript means the trading partner is not China and the **N** subscript represents non-dairy commodities
- *Difference-in-difference-in-difference* (DDD) estimate finds the expected value of the six groups appearing in the equation.

Methodology

Successful DDD

Decree 145 does not spillover into counterfactual units both directly and indirectly.

- Non-dairy exports to China.
- Non-dairy exports to other countries.
- Dairy exports to other countries (130 facilities on waitlist over three years).

Overview of Empirical Analysis

Baseline Analysis Impact on U.S. Dairy Exports

Sensitivity Checks Changing counterfactual for U.S. Exports

- Removing soy exports
- Comparing dairy to meat exports

Placebo Test #1 U.S. Seafood Exports

Placebo Test #2 New Zealand Dairy Exports

Baseline Analysis

	Baseline (1)	No Soy (2)	Only Meat (3)
Decree 145=1	0.152*	0.148	-0.894*
	(0.0873)	(0.0913)	(0.481)
Decree 145=1 × China=1	-0.362**	-0.365**	-0.662
	(0.169)	(0.177)	(0.477)
Decree 145=1 × Dairy=1	-0.497***	-0.491***	-0.150
	(0.183)	(0.182)	(0.284)
Decree 145=1 × China=1 × Dairy=1	0.701***	0.700***	1.039***
	(0.243)	(0.248)	(0.284)
Obs.	11017	10477	969

Standard Errors are clustered at the partner country-commodity unit.

Placebo Tests

	US Seafood (1)	NZ Dairy (2)
Decree 145=1	0.148*	0.146
	(0.0841)	(0.175)
Decree 145=1 × China=1	-0.278	0.789***
	(0.181)	(0.267)
Decree 145=1 × Seafood=1	-0.0709	
	(0.131)	
Decree 145=1 × China=1 × Seafood=1	**0.0175**	
	(0.212)	
Decree 145=1 × Dairy=1		-0.167
		(0.251)
Decree 145=1 × China=1 × Dairy=1		**-0.372**
		(0.367)
Obs.	11544	5532

Standard Errors are clustered at the partner country-commodity unit.

Overview of Results

Baseline Analysis Impact on U.S. Dairy Exports (+)

Sensitivity Checks Changing counterfactual for U.S. Exports

- Removing soy exports (+)
- Comparing dairy to meat exports (+)

Placebo Test #1 U.S. Seafood Exports (no effect)

Placebo Test #2 New Zealand Dairy Exports (no effect)

- Supported with U.S. seafood and New Zealand dairy which remain unchanged.
- Change in competition for 200 U.S. export facilities may have countered negative effects of increased costs.

How could there be a positive effect on trade value?

- Reduced competition $\rightarrow$ economies of scale $\rightarrow$ charging a lower price for the product in a foreign market.
- Elastic demand for dairy in China.

Thank you - Comments welcome

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