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# Trade Diversion and Government Led Credit Provision: Evidence from China's VAT Rebate Loan Program

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Full Paper

## Motivation

- Trade barriers impose substantial adjustment costs on firms. (Alfaro et al., 2025; Crosignani et al., 2024)

**Research Questions**:

- How do multi-product firms reallocate exports across markets in response to trade barriers?
- What is the role of **credit access** in **trade diversion**?

## Main Findings

- **Cross-country diversion**. Following anti-dumping investigations, affected firms reduce exports of tariff-hit products to initiating countries while expanding exports of the same products to non-initiating destinations.
- **Role of credit access.** VAT Rebate Loan Program attenuates cross-country diversion, but increases the probability that firms continue exporting in hit product–market pairs.

## Data

Firm-product-destination panel for Chinese exporters:

- Transaction-level customs records
- Firm-level tax and financial data (National Tax Survey)
- Anti-dumping investigations (World Bank)
- VAT Rebate Loan Program adoption

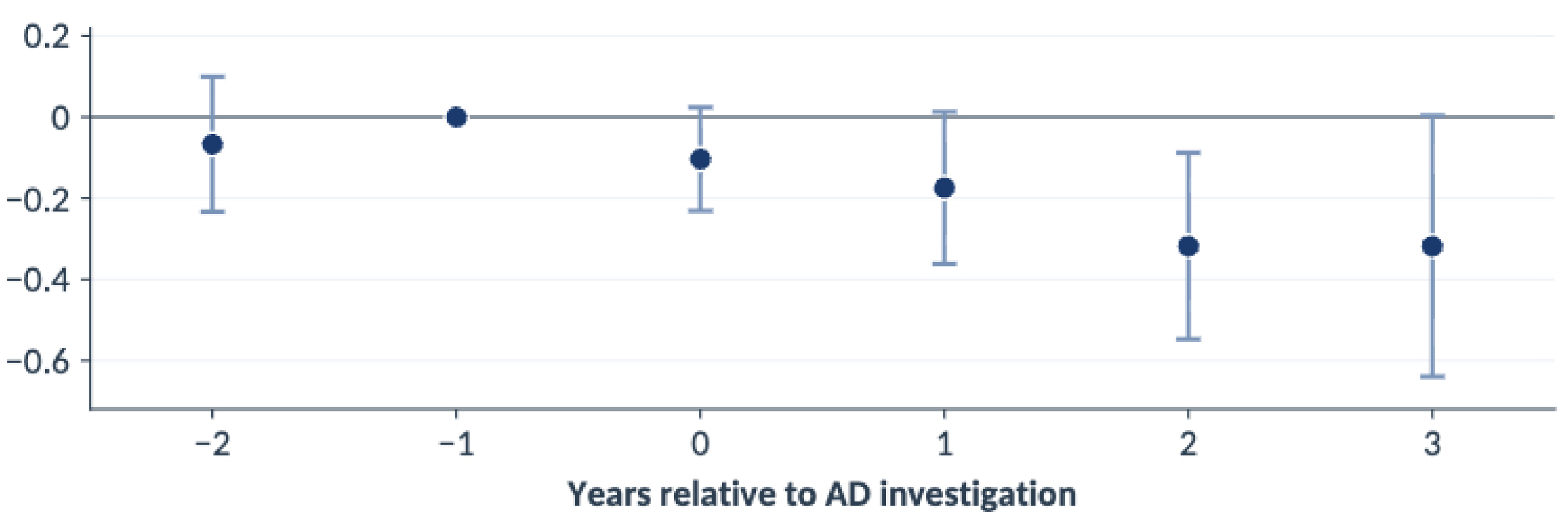
## Empirical Strategy

**Stacked Difference-in-Differences**:

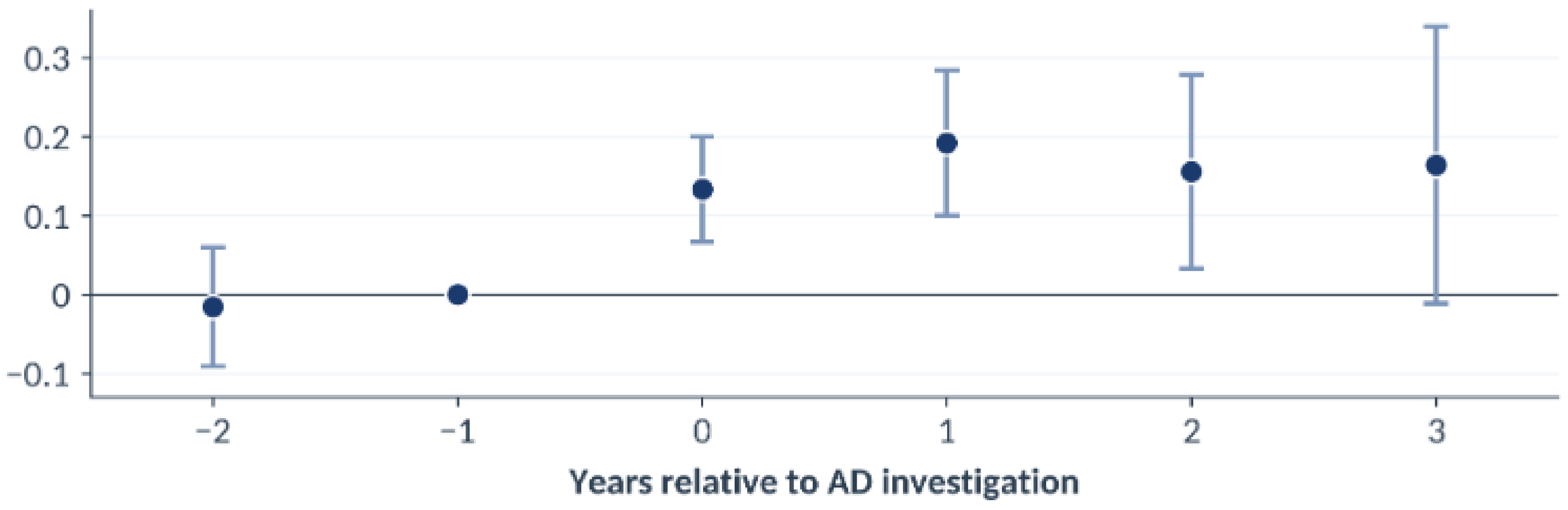
$$y_{f,p,c,t} = \beta(Treat_f \times Post_t) + \mu_{f,p,c} + \theta_{c,t} + \varepsilon_{f,p,c,t}$$

- $y_{f,p,c,t}$: export outcome of firm $f$ or product $p$ to country $c$ in year $t$.
- $Treat_f = 1$ for firms hit by AD; 0 for never-hit firms.
- $Post_t$: indicator for periods after the AD shock
- FEs: Firm-product-country-cohort, country-year-cohort

**Direct effect**: exports of hit firms in hit product–country pairs, *before* vs. *after* AD.

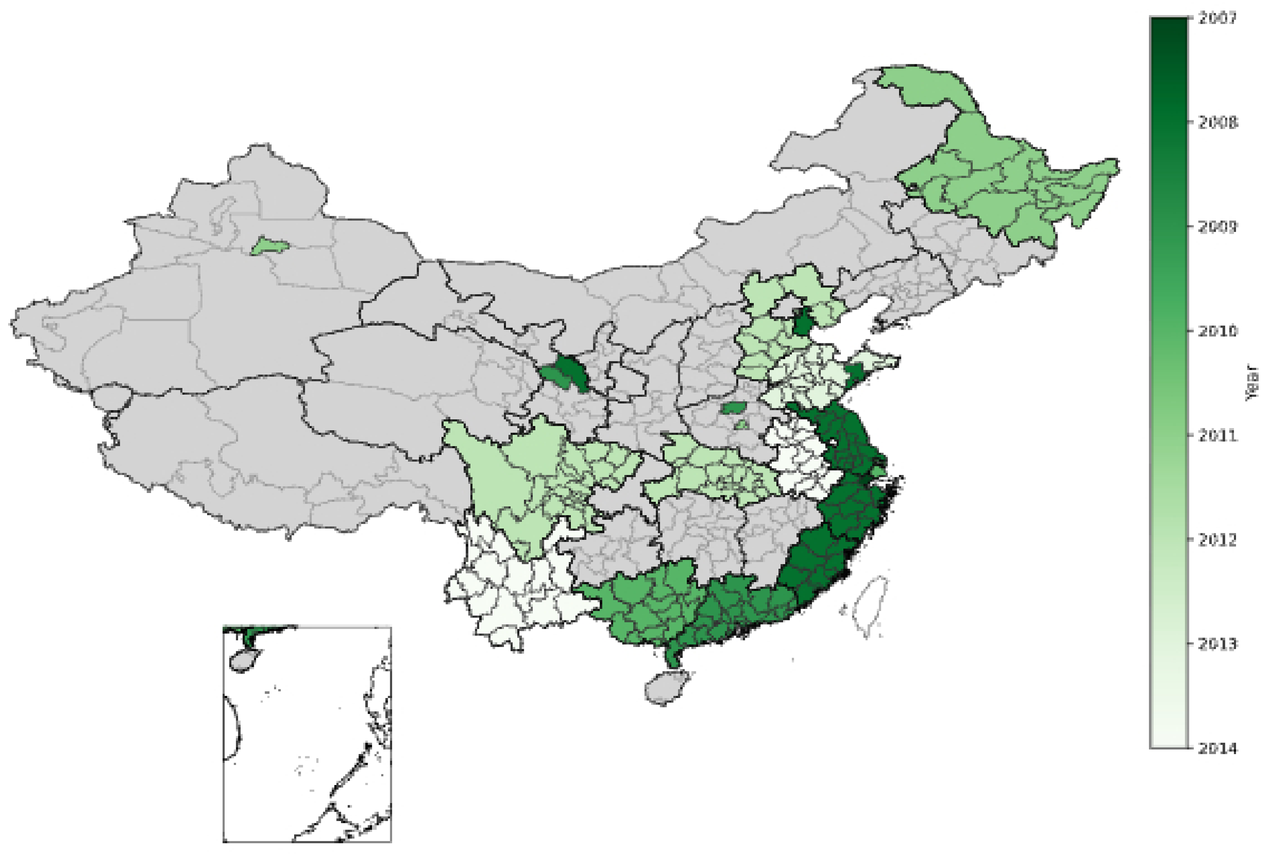



**Diversion effect**: exports of *hit* vs. *never-hit* firms in *non-hit* product–country pairs.




## VAT Rebate Loan Program

Exporters can pledge **unfulfilled** value-added tax rebates as collateral for *short-term* bank loans.




## Loan Program and Trade Diversion

1. Loan program **reduces** cross-country diversion.

| | *Log(Volume)* | *Log(Exports)* |
|---|---|---|
| $Treat_f \times Post_t$ | 0.316*** | 0.320*** |
| | (0.094) | (0.087) |
| $Treat_f \times Post_t \times Loan_{city}$ | -0.232** | -0.232** |
| | (0.105) | (0.097) |

- Standard FEs + city-year-cohort FE

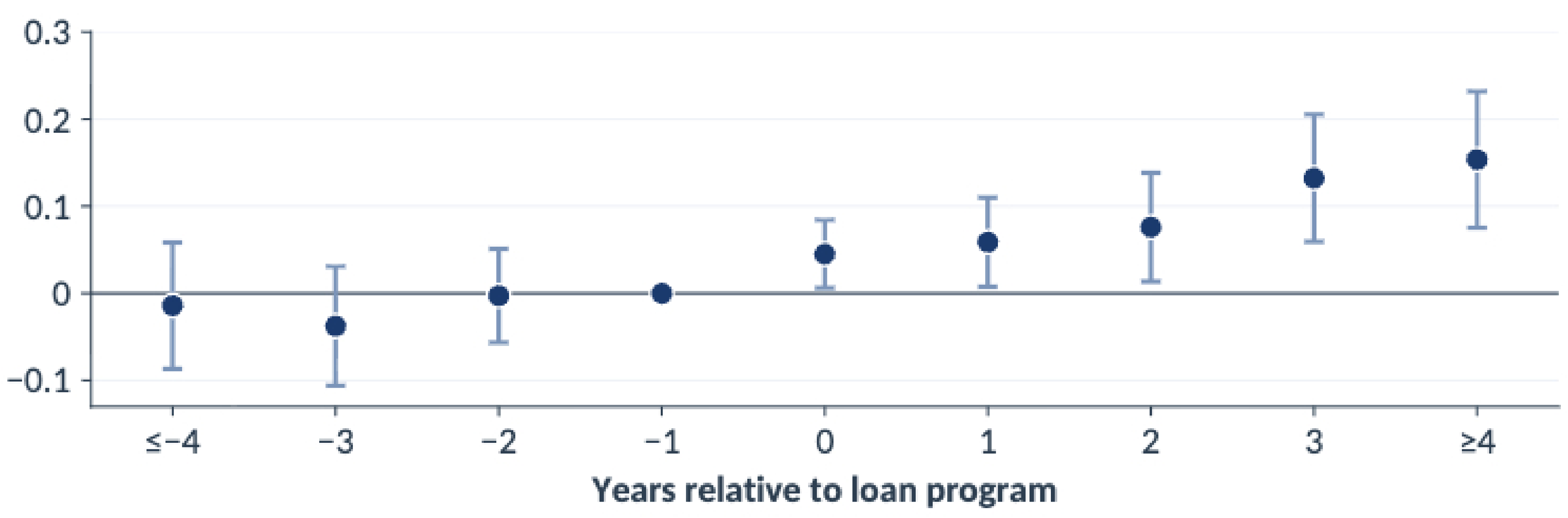
2. **Increase** the likelihood that firms **continue** exporting in hit product–market pairs.

| | *Have Export* | *Log(Volume)* |
|---|---|---|
| $Post_t$ | -0.175*** | -0.136 |
| | (0.017) | (0.118) |
| $Post_t \times Loan_{city}$ | 0.044** | 0.014 |
| | (0.021) | (0.141) |

- Firm-product-country-cohort FE

## Loan Program and Borrowing

- Firms with higher rebate delay ratio increase short-term borrowing after program adoption.




## Conclusion

- Anti-dumping shocks trigger cross-country diversion.
- Credit access helps firms remain in hit product-market rather than make cross-market reallocation.

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