

# Conflict and Inter-Group Trade: Evidence from the 2014 Russia-Ukraine Crisis

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# Big-Picture Motivation

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  - Big literature on effects of direct exposure of individuals to violence (Blattman and Miguel, 2010)
- Understudied: Ramifications of conflict for areas without combat
- Why should we care?
  - **>2.6 bln people** live in conflict-ridden countries but outside violent areas
  - Traditional estimates comparing violent and non-violent areas (e.g., Abadie and Gardeazabal, 2003) may differ from the total economic cost of conflict

# Economic Exchange in Non-Combat Areas

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## Economic Exchange in Non-Combat Areas

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- **This paper:** Does conflict reduce economic exchange even in non-combat areas through erosion of inter-group social capital?
- Economic exchange relies on perceptions of reliability and willingness of both sides to cooperate
- Conflict severely damages trust and affinity between social groups, which may lead to disruptions in economic exchange
- Theory (Rohner et al., 2013b ReStud) but no empirical evidence

# This Paper

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- Ongoing Russia-Ukraine conflict (Feb 2014–)
  - Most of Ukraine not directly affected by violence
  - Trade continued with few regulatory changes
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- Ongoing Russia-Ukraine conflict (Feb 2014–)
  - Most of Ukraine not directly affected by violence
  - Trade continued with few regulatory changes
  - Large Russian minority within Ukraine
- Universe of Ukrainian trade transactions in 2013–2016
- Difference-in-differences strategy
  - Differential drop in trade with Russia along ethnic lines?
  - Mechanisms: Trust? External pressure?
  - Implications for firms?

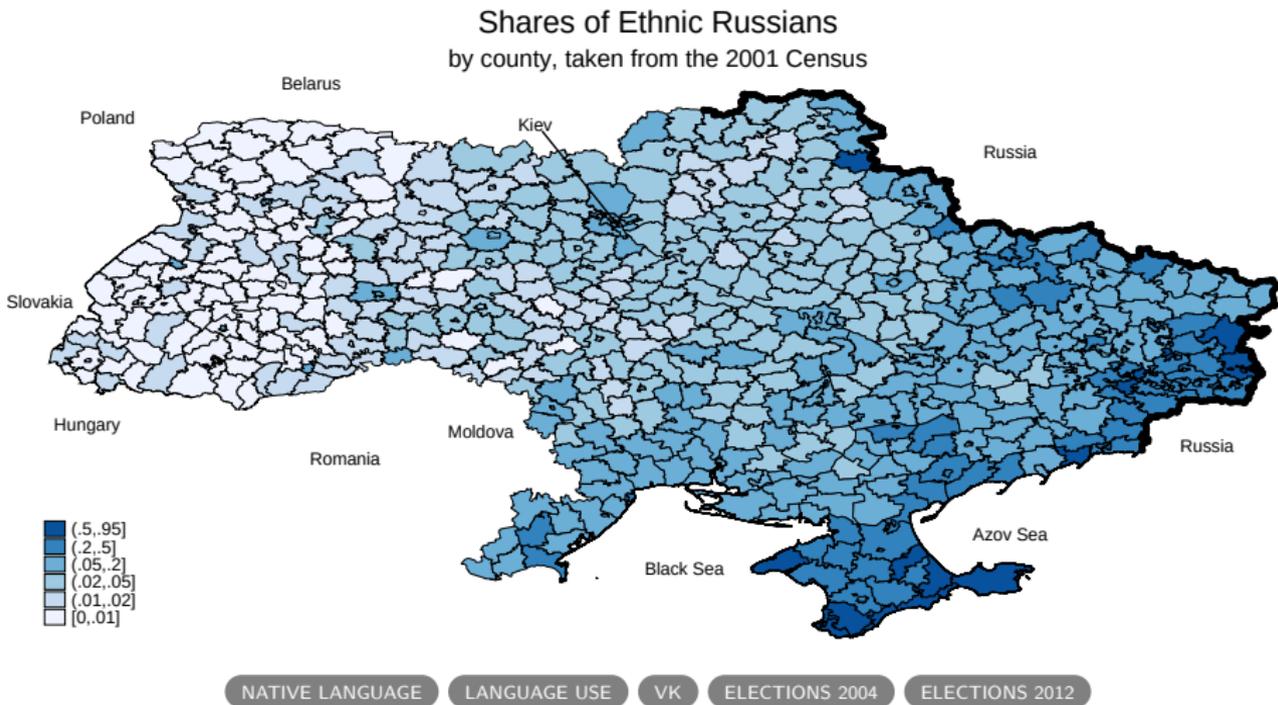
LITERATURE

# Conflict Regions in Ukraine (Feb 2014–)

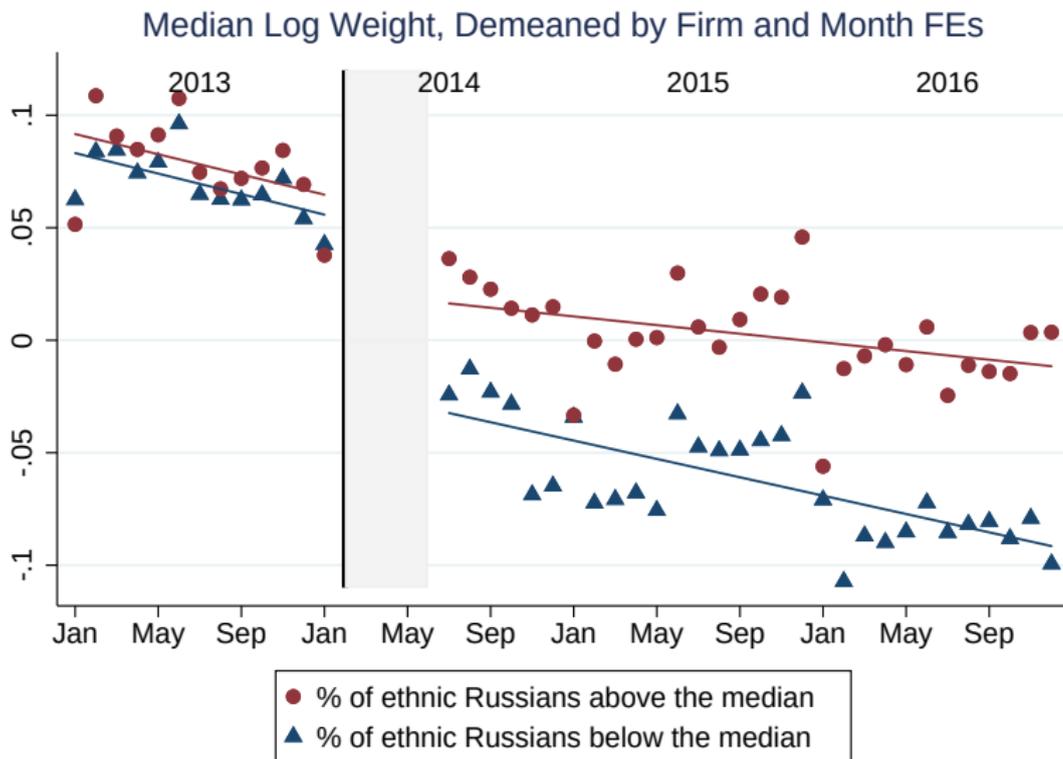


- This paper: Study firms located outside of Crimea and Donbass

# Ethnic Heterogeneity in Ukraine



# Change in Trade with Russia



DATA

# Empirical Strategy

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- Does conflict disrupt trade between ethnic groups in non-combat areas?
- Difference-in-differences strategy:

$$Y_{idmy} = \alpha_i + \delta_m + \theta_y + \beta \times Rus_d \times Post_{my} + \gamma \times Post_{my} + \varepsilon_{idmy}$$

- $Y_{idmy}$  — trade intensity with Russia (export+import) of firm  $i$  in district  $d$  at calendar month  $m$  of year  $y$
- $\alpha_i, \delta_m, \theta_y$  — firm, month, and year FEs
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- $Rus_d$  — share of ethnic Russians in district  $d$  of firm  $i$
- $Post_{my}$  — indicator for months after February 2014
- **Identifying assumption:** Absent the conflict, trade between Russia and Ukrainian firms from districts with different shares of ethnic Russians would have evolved along parallel trends

# Baseline Results

VARIABLES	(1) Any Trade Activity	(2) Log of Total Weight Traded	(3) Log of Total Value Traded
(Post Feb 2014) × (Share of Russian Ethnicity)	0.090** (0.035)	1.139*** (0.388)	1.265*** (0.464)
(Post Feb 2014)	-0.076*** (0.006)	-0.809*** (0.066)	-1.048*** (0.083)
Year and Month Fixed Effects	YES	YES	YES
Firm Fixed Effects	YES	YES	YES
# of Observations	590,419	590,419	590,419
# of Firms	12,848	12,848	12,848
# of Counties	426	426	426
# of Months	48	48	48
Mean of the Dependent Variable	0.201	1.970	2.726
SD of the Dependent Variable	0.400	4.141	5.506

*Notes:* \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Standard errors in parentheses are clustered at the county ("raion") level. The logs of total value and net weight of shipped goods (export+import) are calculated by transforming the initial variable X with  $L(X) = \log(X + 1)$ . Data on ethnolinguistic composition is at the county level, and it comes from Ukrainian 2001 Census.

EXPORT/IMPORT

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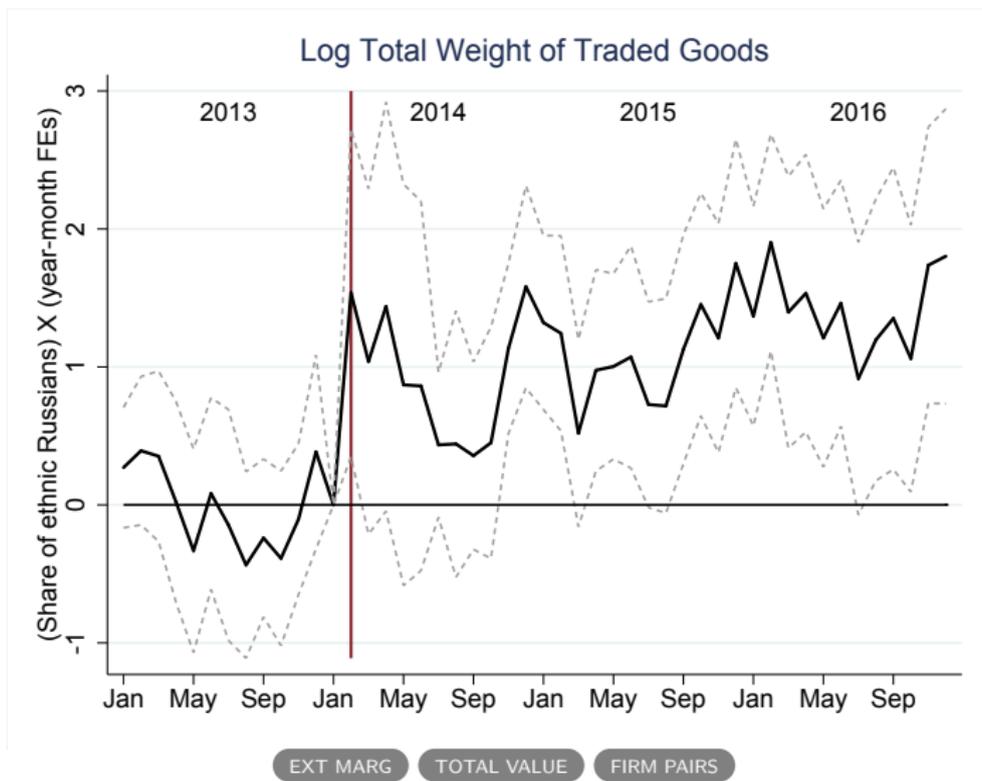
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EXPORT/IMPORT

# Baseline Results: Month-by-Month Specification



# Mechanisms: Overview

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- Conflict erodes inter-group trust (Rohner et al., 2013a,b)
  - Trust is critical for economic exchange (Guiso et al., 2009)
  - Lack of trust leads to disruption of trade
  
- Conflict leads to change in local attitudes
  - Directly affect demand for Russian products via consumer boycotts
  - Causes reputational pressure on firms to stop trading with the enemy

# Mechanisms: Decline in Trust

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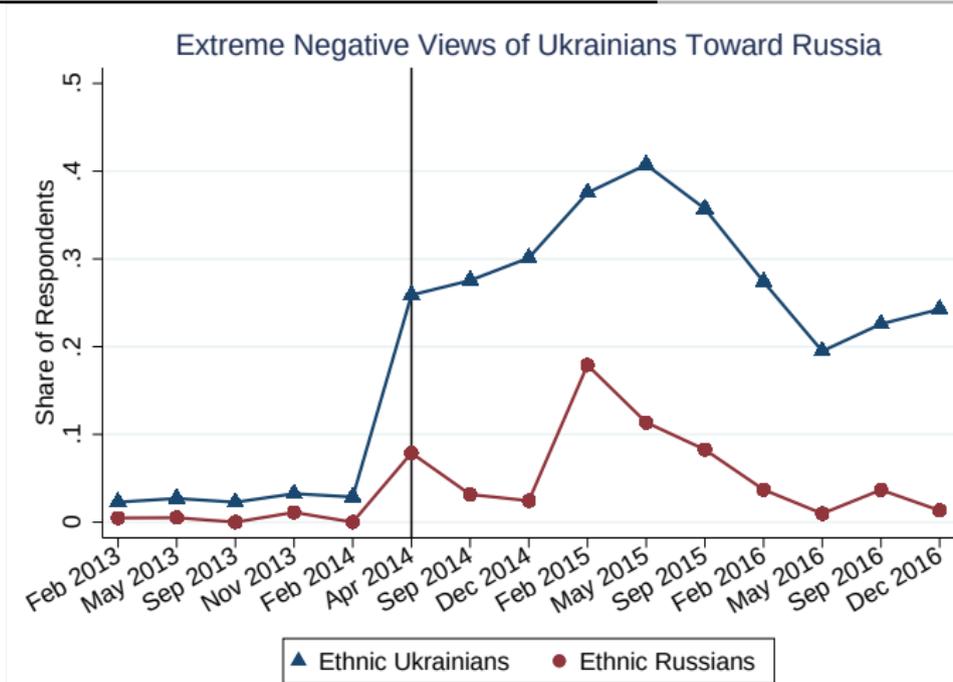
- Exploit timing of payment in international trade contracts
  - Open Account (OA) contracts expose exporters to risk of non-payment
  - Cash-in-Advance (CIA) contracts expose importers to risk of non-payment
- Lower trust  $\implies$  Expect larger effects for firms that rely on contracts making them exposed to risk of non-payment or non-delivery of products

# Mechanisms: Trust

VARIABLES	(1)	(2)	(3)	(4)
	Any Export Activity		Any Import Activity	
	Exporters are exposed to risk	Importers are exposed to risk	Exporters are exposed to risk	Importers are exposed to risk
	<i>Diff p-value: 0.034</i>		<i>Diff p-value: 0.006</i>	
(Post Feb 2014) × (Share of Russian Ethnicity)	0.218*** (0.043)	0.005 (0.090)	0.014 (0.024)	0.124*** (0.034)
Year-Month Fixed Effects	YES	YES	YES	YES
Firm Fixed Effects	YES	YES	YES	YES
# of Observations	176,343	121,948	231,936	139,728
# of Firms	4,101	2,836	4,832	2,911
# of Districts	279	271	275	229

- Use data on trade contracts used between Russia, Ukraine, and Turkey in 2004–2011 at HS4 product level to predict which side is more exposed to risk of contract breach (Demir and Javorcik, 2018)

# Mechanisms: Change in Attitudes of General Population



Notes: The figures displays the share of respondents who answer the question "What is Your Overall Attitude Towards Russia?" as 'very bad' plotted over time. The February 2014 survey was conducted on 7-17 February 2014, i.e., before the annexation of Crimea and the start of the conflict. Conflict regions are excluded from the analysis.

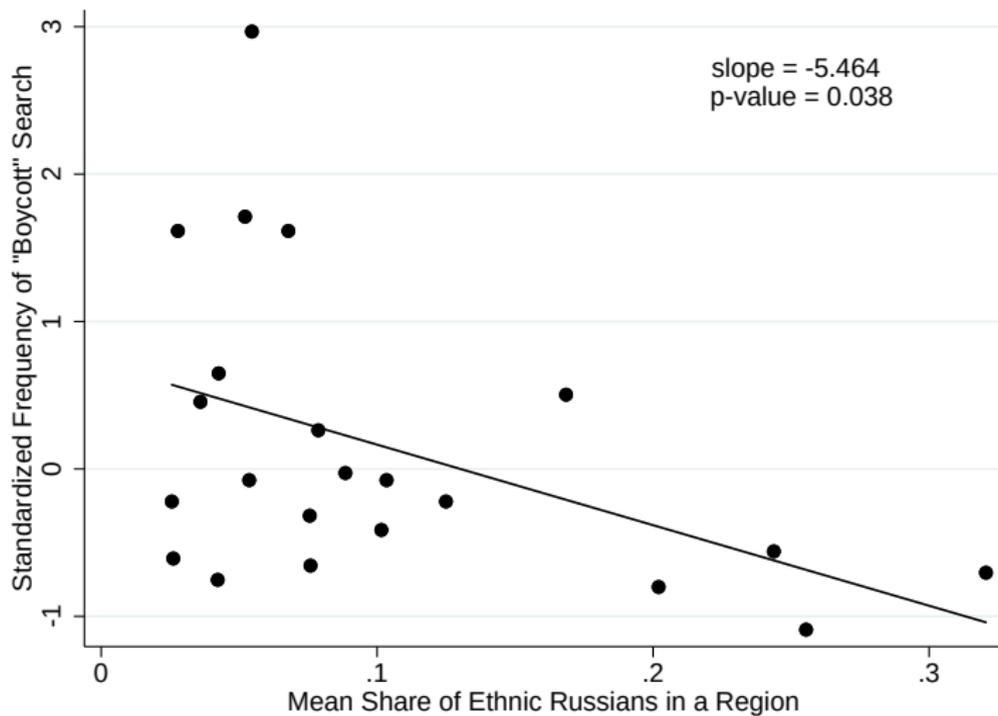
BY REGION

# Mechanisms: Consumer Boycotts

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- Widespread and durable boycotts of Russian consumer goods:
  - **39%** of Ukrainians participated in March–April 2014
  - **45%** of Ukrainians participated in March 2015
- Examples of boycott strategies:
  - Special labels on Russian products in supermarkets
  - Smartphone app developed to identify Russian products

# Mechanisms: Consumer Boycotts



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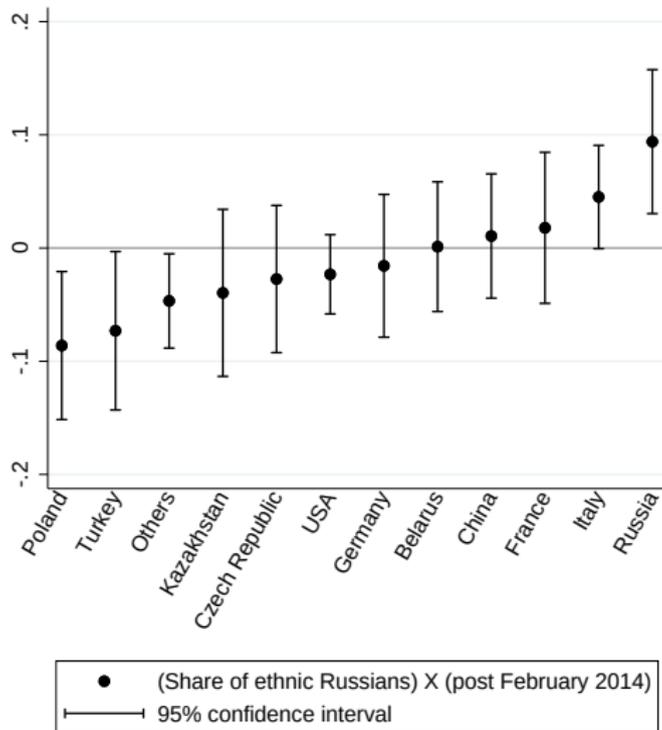
DEPENDENT VARIABLE	(1)	(2)	(3)	(4)
	Any Import Activity			
SUMBSAMPLE	Firms with >50% of Transactions in Consumer Goods	Firms with >50% of Transactions in Intermediate Goods	Firms with >0% of Transactions in Consumer Goods	Firms with 100% of Transactions in Intermediate Goods
	<i>Difference p-value: 0.084</i>		<i>Difference p-value: 0.065</i>	
(Post Feb 2014) × (Share of Russian Ethnicity)	0.204** (0.092)	0.036 (0.026)	0.154** (0.052)	0.057** (0.026)
Year-Month Fixed Effects	YES	YES	YES	YES
Firm Fixed Effects	YES	YES	YES	YES
# of Observations	41,040	277,392	84,432	206,592
# of Firms	855	5,779	1,759	4,304
# of Counties	91	288	149	260
# of Months	48	48	48	48
Mean of the Dependent Variable	0.188	0.190	0.268	0.119
SD of the Dependent Variable	0.391	0.392	0.443	0.324

## Mechanisms: Reputational Concerns

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- Ukrainian firms publicly pledged to reduce use of Russian inputs
  - E.g., an association of >700 companies in construction pledged to abandon Russian materials
- Ukrainian companies faced pressure for trading with Russia, even when trading intermediate goods
  - E.g., bus producer Bogdan was targeted for importing Russian inputs
- Being associated with Russia became costly, even for B2B firms
  - E.g., a law firm changed its name to distance from Russia

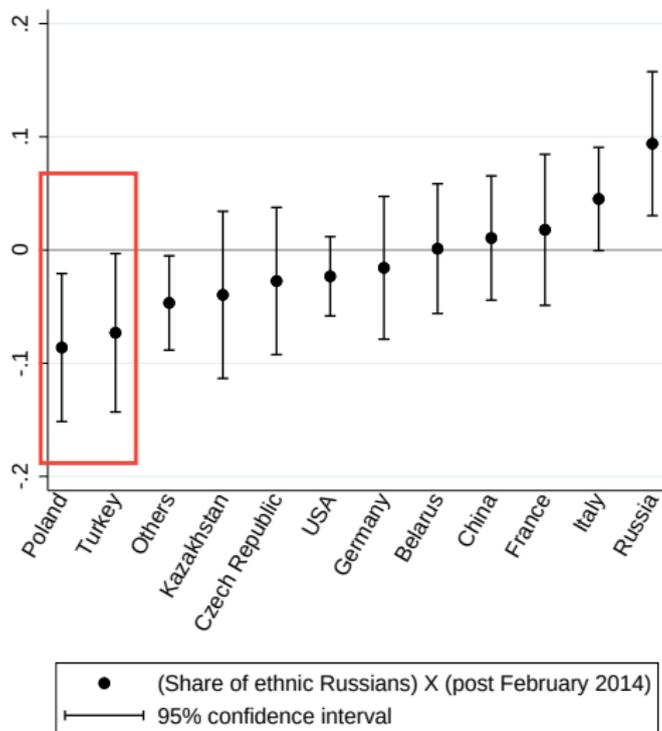
# Implications: Diversion of Trade



[MONTH-BY-MONTH GRAPH](#)

[MORE EVIDENCE](#)

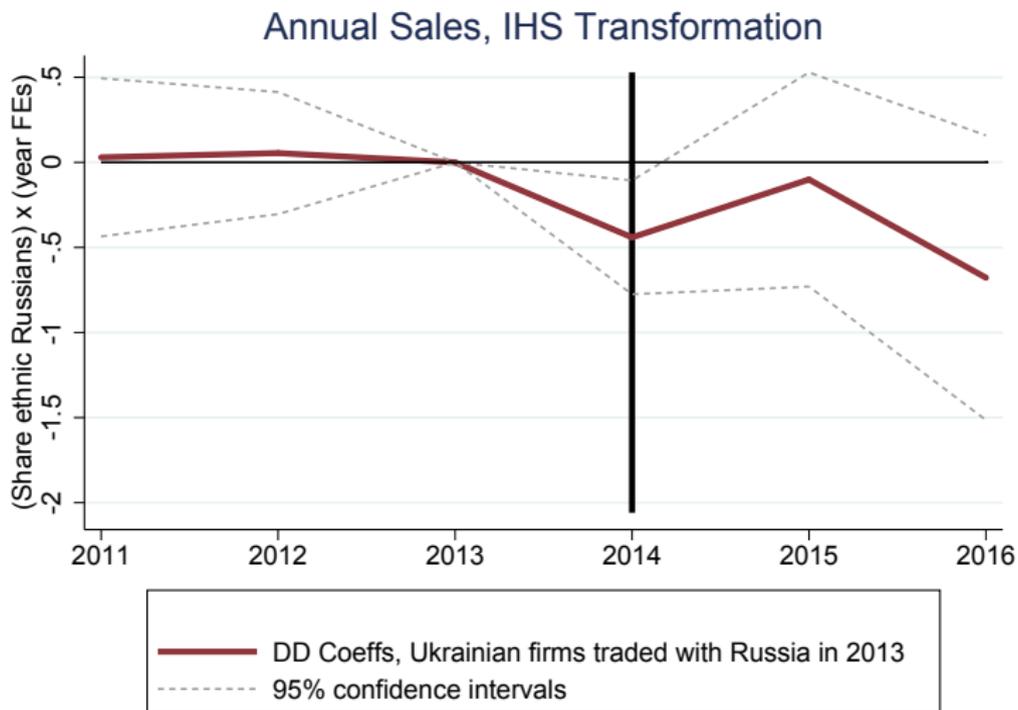
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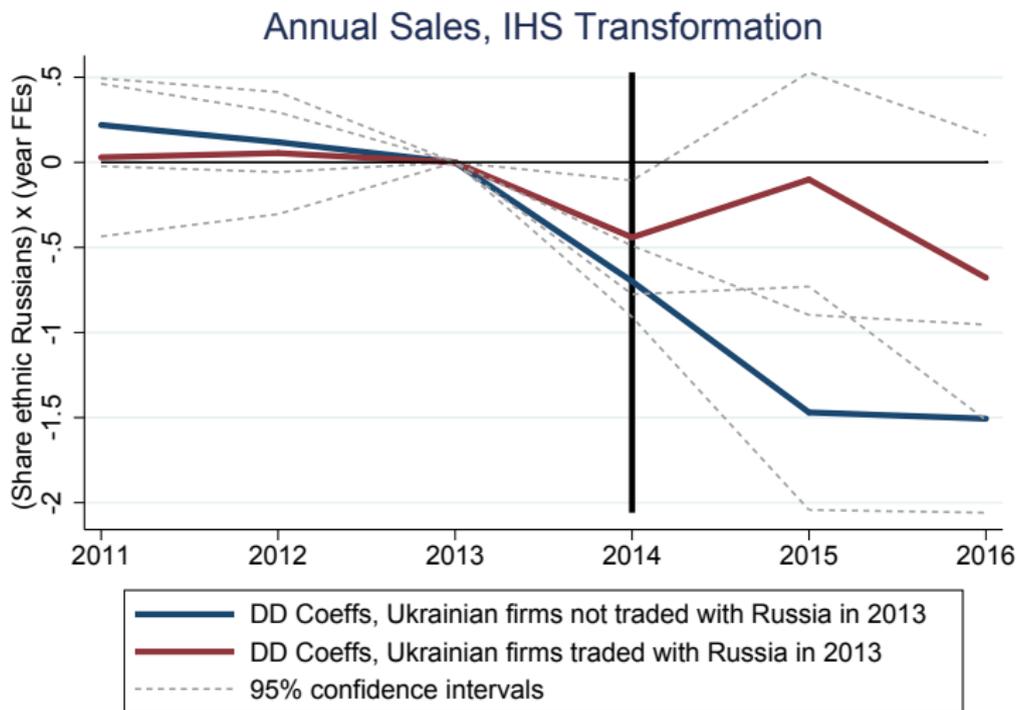
# Implications: Ukrainian Firms Suffer



DETAILS

DDD TABLE

# Implications: Ukrainian Firms Suffer



DETAILS

DDD TABLE

# Alternative Explanations

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- Distance to Russia?
  - Flexible controls for distance to the Russian border **RESULTS**
- Differences in the products traded?
  - Product-firm specification with 4 digit product-post FEs **RESULTS**
- Locality-specific economic shocks (e.g., refugees)?
  - Multi-country specification with county-post FEs **RESULTS** **GRAPH**

# Conclusion

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- First to document that conflict reduces trade even in non-combat areas through the destruction of inter-group social capital
  - Firms in less Russian areas decreased trade with Russia by larger %
  - The effect is long-lasting and economically significant
- Mechanisms include decline in trust and rise in local nationalism
- Negative consequences for Ukrainian firms' sales, profits, and productivity despite diversion of trade to other countries
- **Ongoing work:** Use data on railway shipments within Ukraine to study propagation of the conflict shock and re-adjustment of production network

**Thank you!**