

# Sanctions' Impact on Elections: The Russian Case

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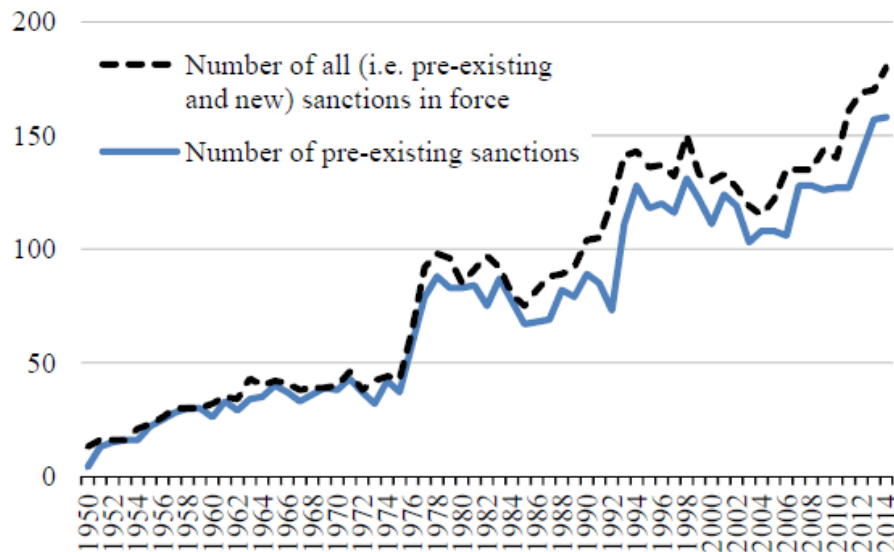
with Julian Hinz (U Bielefeld), Michele Valsecchi (NES)

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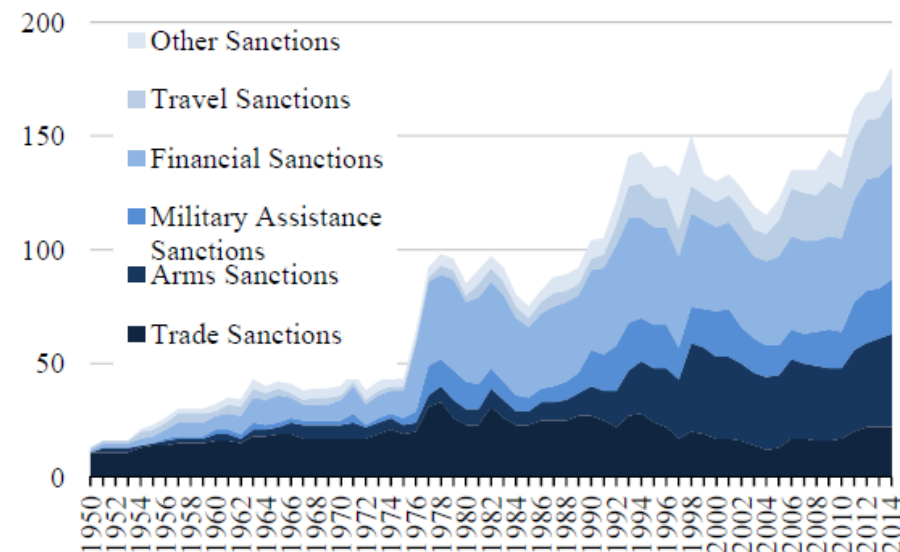
# Motivation

- Use of sanctions has steadily increased over time

(a) New vs. Existing Cases



(b) Frequency by Type



SOURCE: Felbermayr et al. (2019)

- Economic consequences are well understood...
- ➔ ... but quantitative evidence on political impacts is scarce ...
- ➔ ... although sanctions are means to achieving political goals

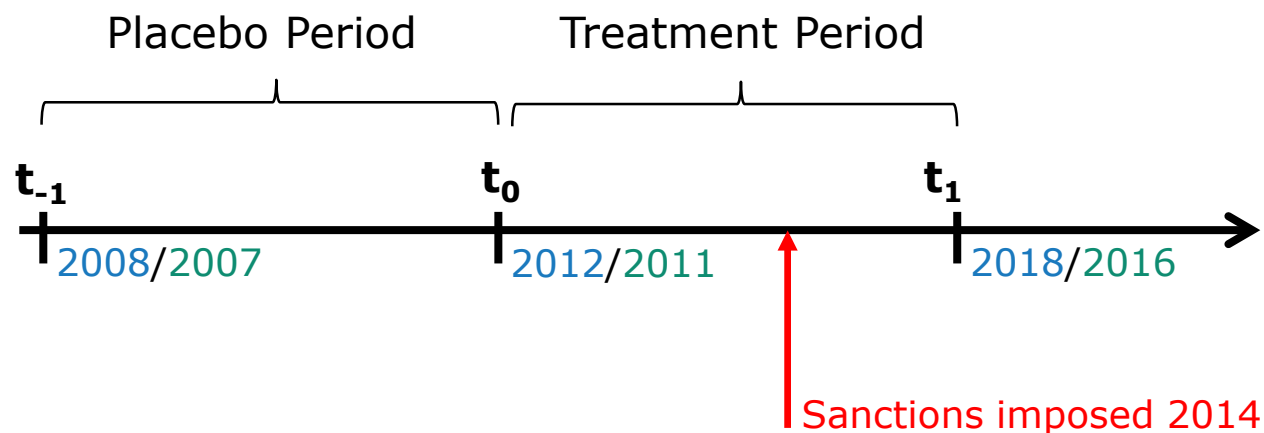
# Our Focus: 2014 Sanctions on Russia

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- Imposed on the Russian economy amid the “Crimean Crisis” by 37 major economies
  - Step 1: Travel bans, asset freezes for selected individuals
  - Step 2: Extended to cover more individuals and entities, including financial institutions
  - Step 3:
    - Embargo on trade with Crimea
    - Export bans for military goods, dual-use-goods, selected mining equipment
    - Ban on business with major Russian financial institutions, restricted access to international financial markets for Russian firms
- Retaliation: Import ban on agricultural goods and foodstuff
  - Focus on sanctions’ impact on Russian exports

# Assessing government support

- Data on **presidential** elections and on **duma** elections from the Russian Election Commission (izbirkom.ru)
  - Observed on precinct-level, aggregated on rayon-level (~district)
  - Regime support: vote share received by Putin/Medvedev/United Russia
  - Opposition support: Various party groups



- Do sanctions increase/decrease government support?
- Polarization in political support?

# A Word on Russian Data



- Rich data, but statistical irregularities in election results
  - With regional heterogeneity

Календарь выборов (1.12.2019 - 31.5.2020)															
2019					2020										
Декабрь					Январь			Февраль			Март			Апрель	
1	8	15	22	29	19	26	2	9	16	1	15	22	29	5	12

- Would bias our results only if election fraud increased with sanction exposure

→ No indication for that

	A	B	C	D	E
1	<b>1. Площадь территории Российской Федерации</b>				
2	<b>по субъектам Российской Федерации на 1 января 2017 года</b>				
3					
4		Площадь территории	Удельный вес территории субъекта в общей территории (%):		Ранг территории
5	Таблица 1.	, тыс. кв. км <sup>3</sup>	России	федерального округа	отношению к
6					всех субъектов России
7					
8	<b>Российская Федерация</b>	<b>17125,2</b>	<b>100,0</b>		
9	<b>Центральный федеральный округ</b>	<b>650,2</b>	<b>3,8</b>	<b>100,0</b>	<b>6</b>
10	Белгородская область	27,1	0,2	4,2	67
11	Брянская область	34,9	0,2	5,4	62
12	Владимирская область	29,1	0,2	4,5	66
13	Воронежская область	52,2	0,3	8,0	51
14	Ивановская область	21,4	0,1	3,3	74
15	Калужская область	29,8	0,2	4,6	65
16	Костромская область	60,2	0,4	9,3	47
17	Курская область	30,0	0,2	4,6	64

# Assessing Sanction Effects

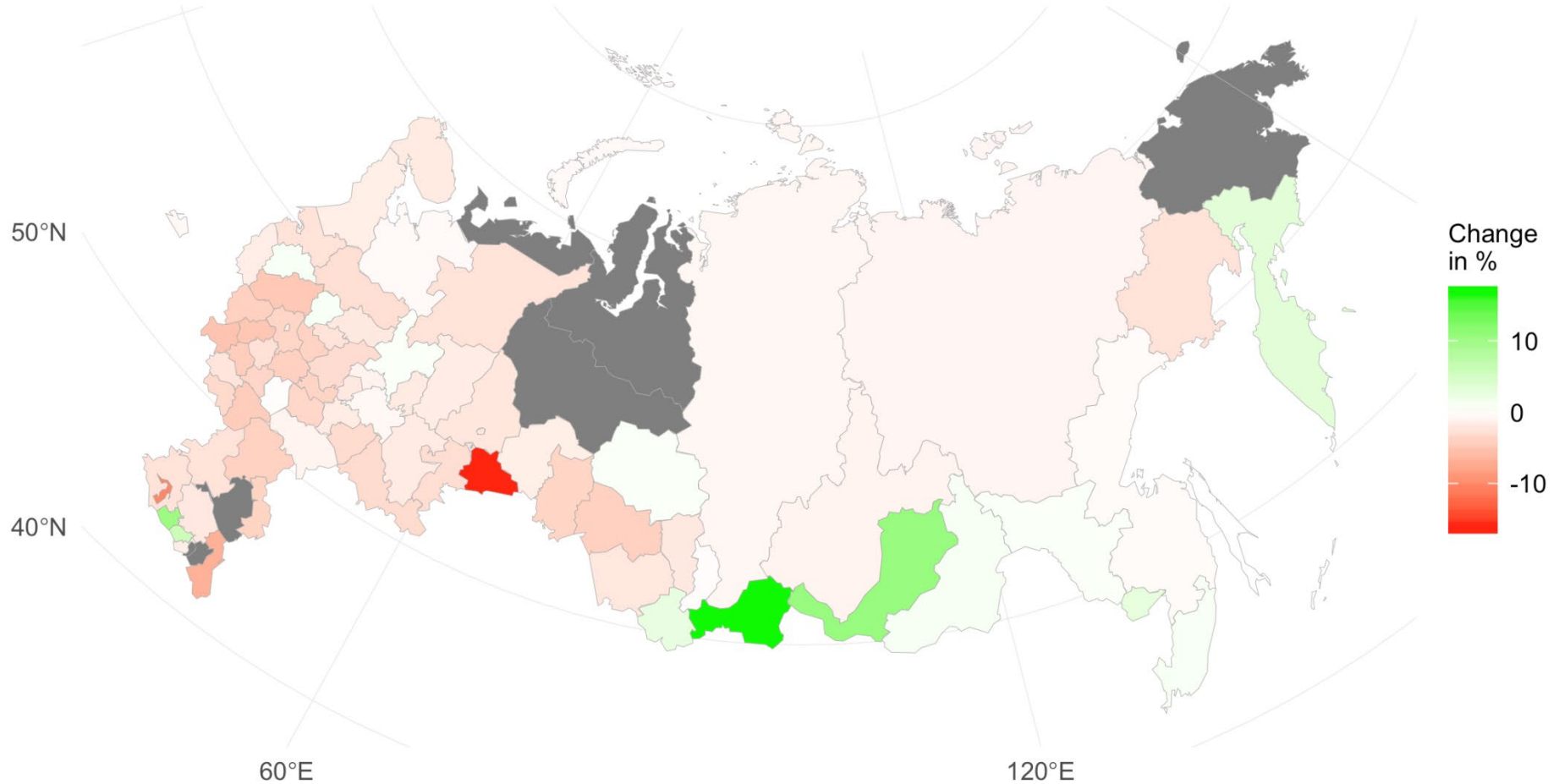
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- Exploit regional variation in DiD-Model:

$$\Delta y_{irt} = \alpha + \beta_1 \text{sanction\_exposure}_{rt} + \Delta X'_{irt} \beta_2 + \varepsilon_{irt}$$

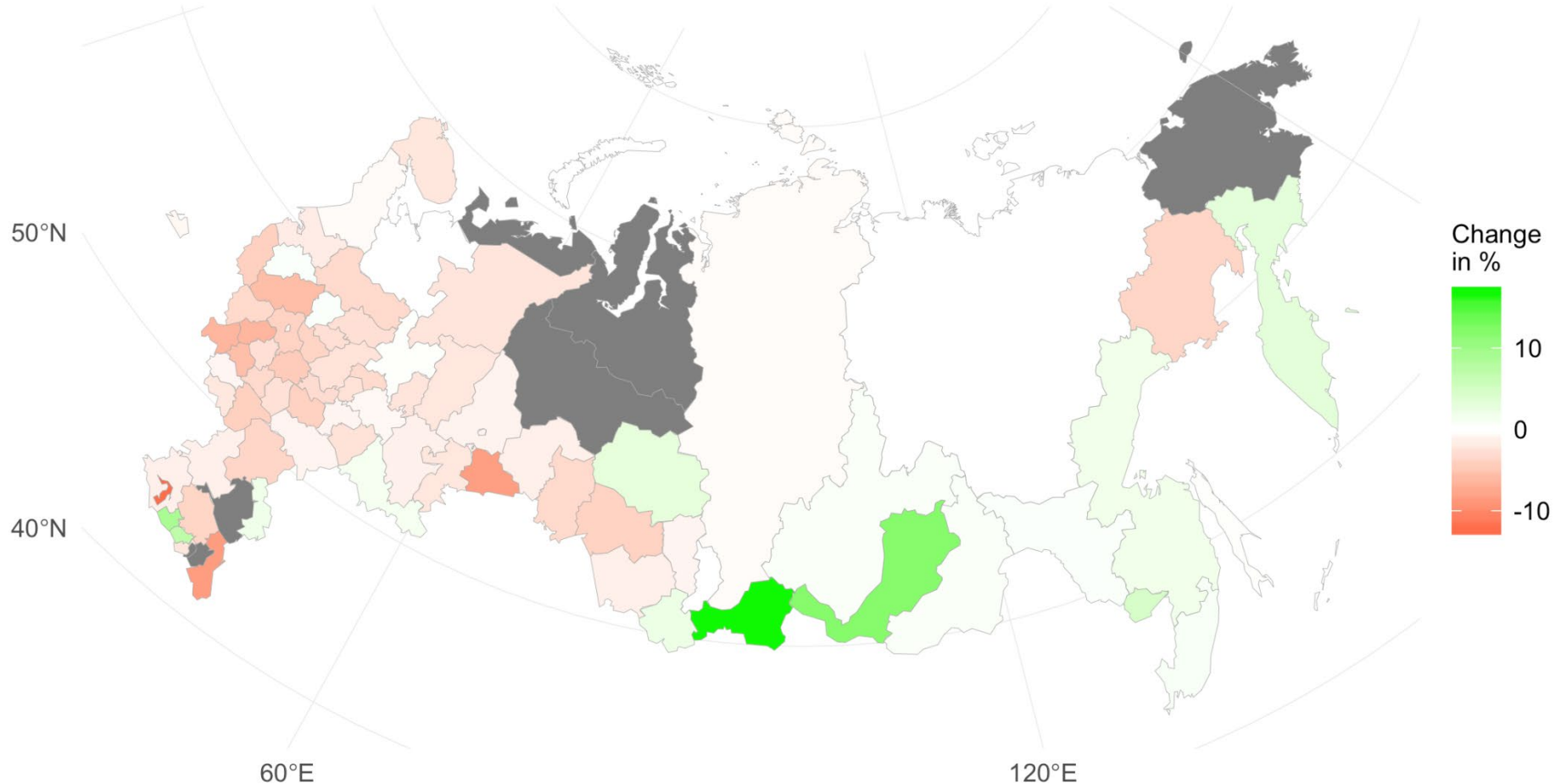
- $y$  = parties'/candidates' vote shares ( $i \sim$  district)
  - $t$  = treatment period (2018/16-2012/11) or placebo period
  - $X'_{irt}$  = regional-level controls
  - $\text{sanction\_exposure}_{rt}$  on subject-level ( $r \sim$  state)
- Challenge 1: *sanction\_exposure* is not observable
    - Solution: use trade loss as proxy
  - Challenge 2: observed trade loss is endogenous
    - Solution: Derive counterfactual trade flows from structural gravity model
    - Use trade losses **caused by sanctions** only

# Observed $\Delta$ Imports



- Regional variation is endogenous
- Solve econometrically

# Observed $\Delta$ Exports



- Variation over time is partially endogenous
- Solve structurally (to extract exogenous variation)



# Assessing counterfactual trade flows

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- Structural Gravity Model à la Head and Mayer (2014):

$$X_{odt} = \frac{Y_{ot}}{\Omega_{ot}} \cdot \frac{X_{dt}}{\Phi_{dt}} \cdot \phi_{odt}$$

- $o, d$ : 75 Russian regions + ROW (incl. 37 sanctioning countries)
- $t$ : pre-sanction vs. post-sanction
- Counterfactual: What if  $\phi_{odt}$  had not changed?
  - hold pre-sanction  $\phi_{odt}$  constant
  - Account for changes in  $\Omega_{ot}, \Phi_{dt}, Y_{ot}, X_{dt}$  caused by changes in  $\phi_{odt}$
  - Derive counterfactual post-sanction  $X_{odt}$  net of sanction effects

# Step 1: Partial Equilibrium Counterfactual

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- Use PPML on *untreated* observations (data from 2012-13)

$$X_{odt} = \exp(\Psi_{ot} + \Theta_{dt} + \phi_{od}) + \varepsilon_{odt}$$

And derive pre-sanction bilateral FE  $\hat{\phi}'_{od}$

- Use PPML on treated observations (data from 2014-15) to derive origin-time ( $\hat{\Psi}_{ot}$ ) and destination-time ( $\hat{\Theta}_{dt}$ ) FE
- Condition on  $\hat{\phi}'_{od}$  to get partial-equilibrium (PE) counterfactual quantities
  - $\hat{X}_{odt}^{PE} = \exp(\hat{\Psi}_{ot} + \hat{\Theta}_{dt} + \hat{\phi}'_{od})$

## Step 2: Conditional GE-Counterfactual

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- Update multi-lateral resistance terms with PE-estimates as in Dekle et al. (2007) and Anderson et al. (2018)

- $$\widehat{\Omega}_{ot}^{CGE} = \sum_{l \in d} \frac{\widehat{X}_{lt}^{PE}}{\widehat{\Phi}_{lt}^{CGE}} \widehat{\Phi}'_{odt}$$

- $$\widehat{\Phi}_{dt}^{CGE} = \sum_{l \in d} \frac{\widehat{Y}_{lt}^{PE}}{\widehat{\Omega}_{lt}^{CGE}} \widehat{\Phi}'_{odt}$$

- This gives conditional general-equilibrium (CGE) counterfactual trade-flows

- $$\widehat{X}_{odt}^{CGE} = \frac{\widehat{Y}_{ot}^{PE}}{\widehat{\Omega}_{ot}^{CGE}} \cdot \frac{\widehat{X}_{dt}^{PE}}{\widehat{\Phi}_{dt}^{CGE}} \cdot \widehat{\Phi}'_{od}$$

## Step 3: Full GE-counterfactuals

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- Adjust production and expenditures following Anderson et al. (2018) with  $\sigma = 5$

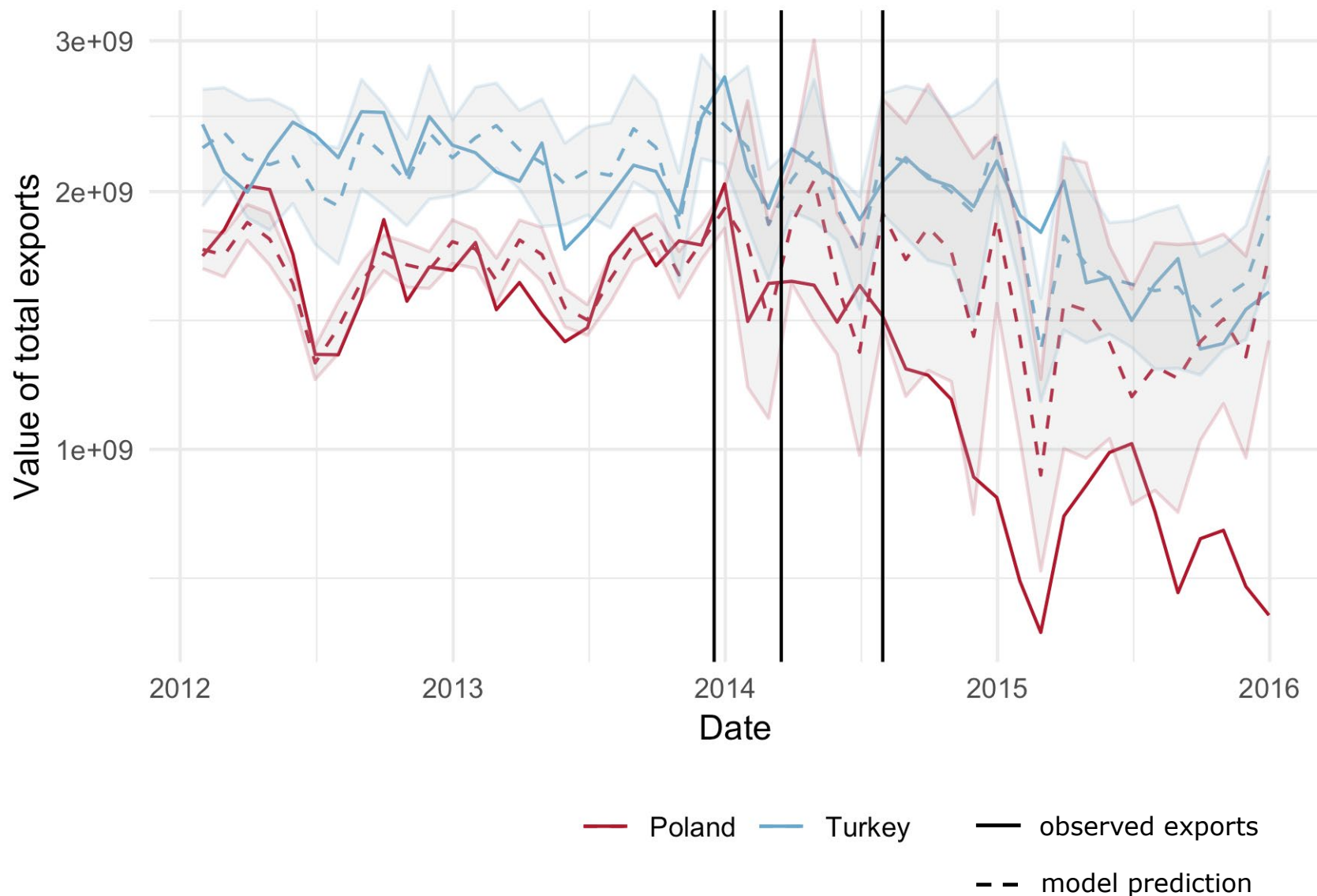
- $$\hat{Y}_{ot}^{GE} = \hat{Y}_{ot}^{PE} \left( \frac{\hat{\Psi}_{ot}^{GE}}{\hat{\Psi}_{ot}} \right)^{\frac{1}{1-\sigma}}$$

- $$\hat{X}_{dt}^{GE} = \hat{X}_{dt}^{PE} \left( \frac{\hat{\Theta}_{dt}^{GE}}{\hat{\Theta}_{dt}} \right)^{\frac{1}{1-\sigma}}$$

- Solve iteratively to obtain counterfactual trade flows between all countries/regions

- $$\hat{X}_{odt}^{GE} = \frac{\hat{Y}_{ot}^{GE}}{\hat{\Omega}_{ot}^{GE}} \cdot \frac{\hat{X}_{dt}^{GE}}{\hat{\Phi}_{dt}^{GE}} \cdot \hat{\phi}'_{od}$$

# Example: Observed and counterfactual changes



# Trade losses caused by sanctions

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- *sanction\_exposure* assesses differences between observed and counterfactual trade flows for Russian regions  $r$ :

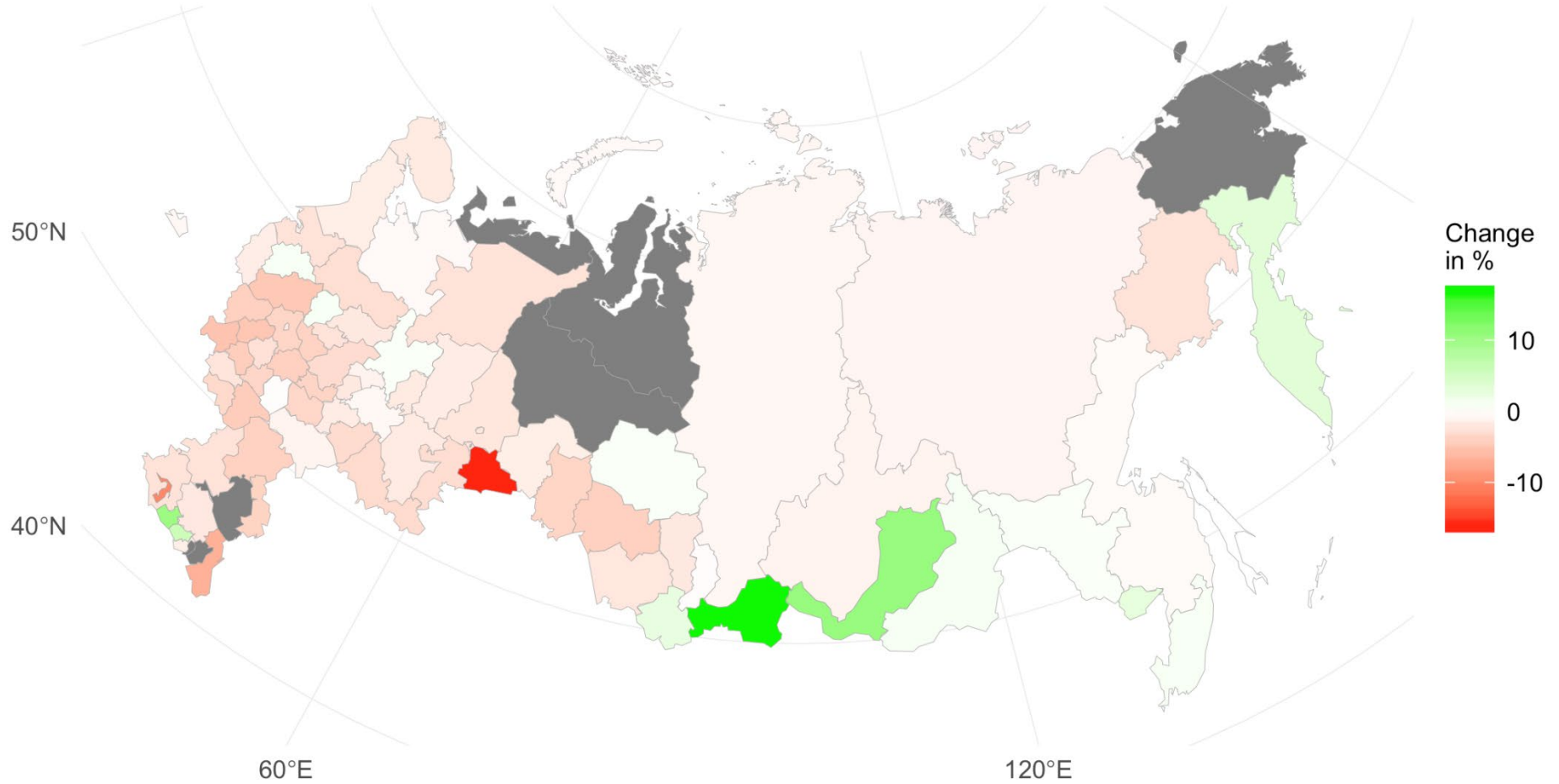
$$sanction\_exposure_{rt} = -\frac{\sum_d [X_{rdt} - \hat{X}_{rdt}^{GE}]}{\sum_d \hat{X}_{rdt}^{GE}}$$

- Allows to identify

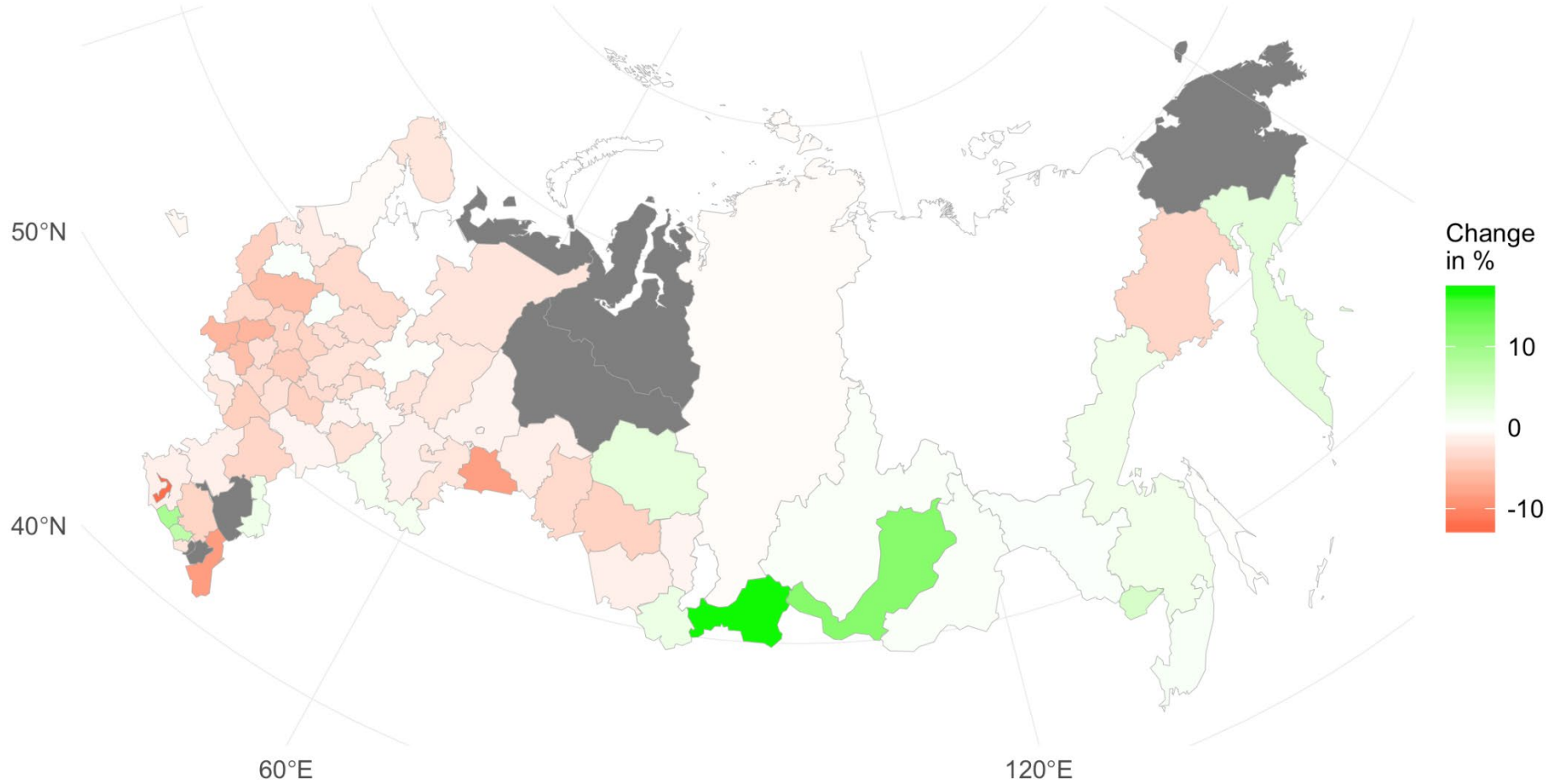
$$\Delta y_{irt} = \alpha + \beta_1 sanction\_exposure_{rt} + \Delta X'_{irt} \beta_2 + \varepsilon_{irt}$$

- Identifying variation rests on
  - Pre-existing differences in specialization w.r.t. production
  - Pre-existing differences in specialization w.r.t. trading partners
  - Pre-existing differences in propensity to substitute trading partners
  - Pre-existing differences cancel out (FD or FE)

# *sanction\_exposure* (Imports)



# sanction\_exposure (Exports)





# Sanction Effect (Exports)

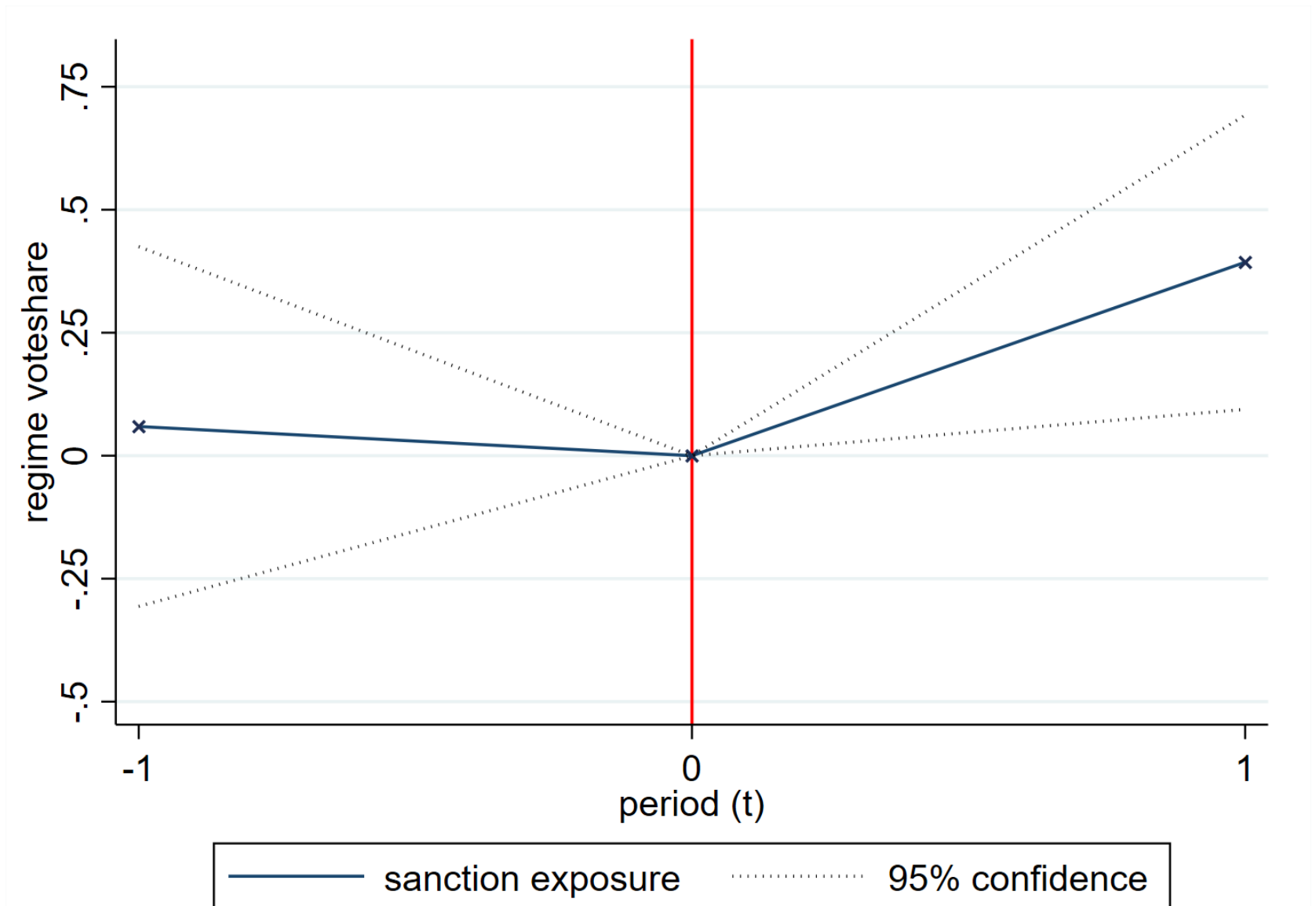
	(1)	(2)	(3)	(4)	(5)
	b sanction exposure				
Δ regime	0.576** (0.229)	0.565** (0.214)	0.575*** (0.170)	<b>0.486***</b> <b>(0.103)</b>	5.070*** (1.074)
Δ loyal	-0.032 (0.098)	-0.047 (0.081)	-0.031 (0.071)	<b>-0.005</b> <b>(0.040)</b>	-0.108 (0.798)
Δ nationalist	-0.110* (0.065)	-0.081 (0.063)	-0.076 (0.062)	<b>-0.078</b> <b>(0.054)</b>	-1.906 (1.316)
Δ communist	-0.396*** (0.139)	-0.399*** (0.136)	-0.406*** (0.129)	<b>-0.330***</b> <b>(0.072)</b>	-5.833*** (1.279)
Δ liberal	-0.010 (0.047)	-0.012 (0.040)	-0.032 (0.029)	<b>0.006</b> <b>(0.011)</b>	0.186 (0.372)
Δ other	-0.028 (0.025)	-0.026 (0.019)	-0.030 (0.022)	<b>-0.032</b> <b>(0.022)</b>	-2.181 (1.518)
Δ turnout	0.184 (0.201)	0.145 (0.200)	0.030 (0.184)	<b>0.035</b> <b>(0.189)</b>	0.320 (1.746)
Controls	Baseline	+ labor force	+ industry	<b>+ political</b>	(4) STD.
Observations	4,396	4,396	4,396	<b>4,396</b>	4,396

Δ regime:  $1SD(0.029) * 0.486 = 0.014 / 0.066 = 0.222$

# Sanction Effect (Imports)

	(1)	(2)	(3)	(4)	(5)
	b sanction exposure				
$\Delta$ regime	0.566** (0.232)	0.551** (0.217)	0.501*** (0.186)	0.403*** (0.121)	4.204*** (1.262)
$\Delta$ loyal	-0.010 (0.118)	-0.012 (0.100)	0.020 (0.095)	0.064 (0.054)	1.291 (1.096)
$\Delta$ nationalist	-0.109 (0.074)	-0.085 (0.073)	-0.062 (0.065)	-0.071 (0.062)	-1.739 (1.501)
$\Delta$ communist	-0.393*** (0.136)	-0.400*** (0.134)	-0.381*** (0.129)	-0.304*** (0.077)	-5.376*** (1.362)
$\Delta$ liberal	-0.021 (0.049)	-0.021 (0.041)	-0.040 (0.035)	-0.005 (0.012)	-0.158 (0.392)
$\Delta$ other	-0.033 (0.030)	-0.033 (0.023)	-0.037 (0.026)	-0.041 (0.025)	-2.830 (1.742)
$\Delta$ turnout	0.154 (0.203)	0.128 (0.207)	-0.040 (0.185)	-0.048 (0.189)	-0.446 (1.749)
Controls	Baseline	+ labor force	+ industry	+ political	(4) STD.
Observations	4,396	4,396	4,396	4,396	4,396

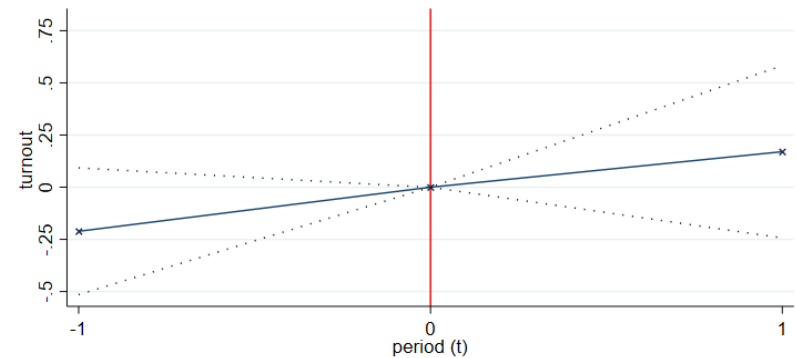
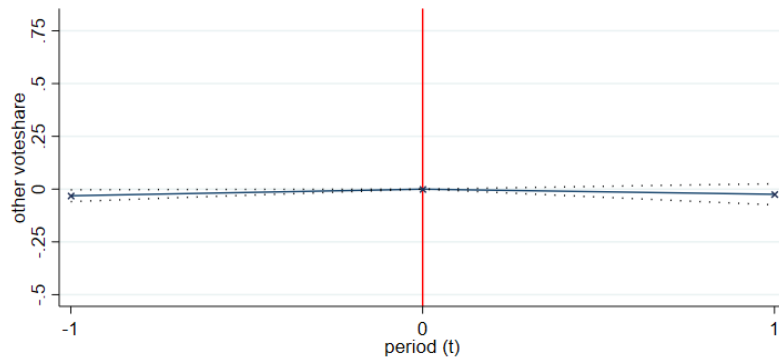
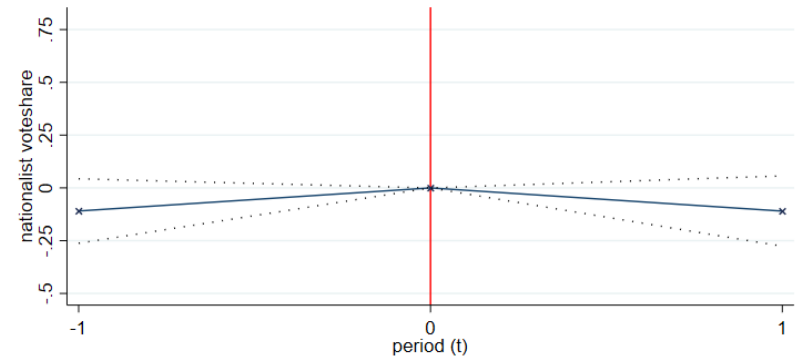
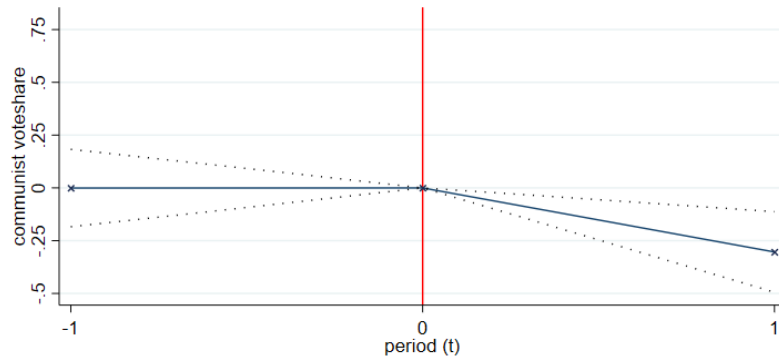
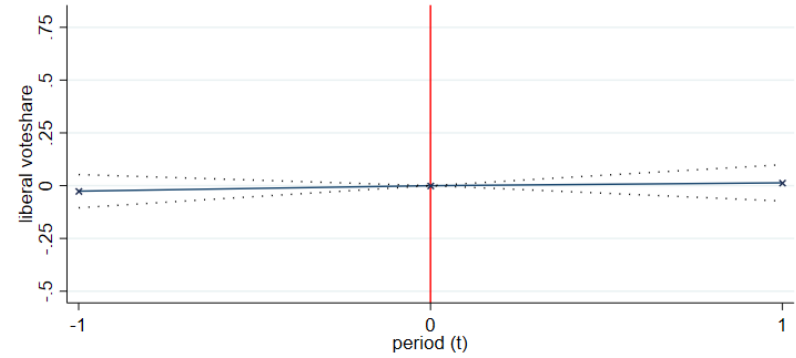
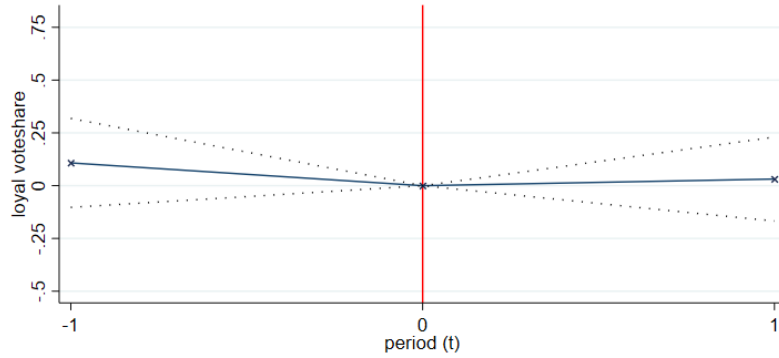
# Event Study (regime support)



## Placebo: Pre-treatment outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Pre-Treatment (Placebo)						
	$\Delta$ regime	$\Delta$ loyal	$\Delta$ nationalist	$\Delta$ communist	$\Delta$ liberal	$\Delta$ other	$\Delta$ turnout
<i>Panel A: Export losses</i>							
sanction exposure	0.019 (0.148)	-0.069 (0.079)	0.040 (0.051)	-0.029 (0.106)	0.030 (0.033)	0.006 (0.007)	0.184 (0.155)
<i>Panel B: Import losses</i>							
sanction exposure	0.121 (0.157)	-0.063 (0.087)	0.063 (0.057)	-0.090 (0.112)	0.006 (0.032)	0.009 (0.007)	0.152 (0.174)
Controls	+ political	+ political	+ political	+ political	+ political	+ political	+ political
Observations	4,396	4,396	4,396	4,396	4,396	4,396	4,396

# Event Study (opposition & turnout)



# Effect Heterogeneity I

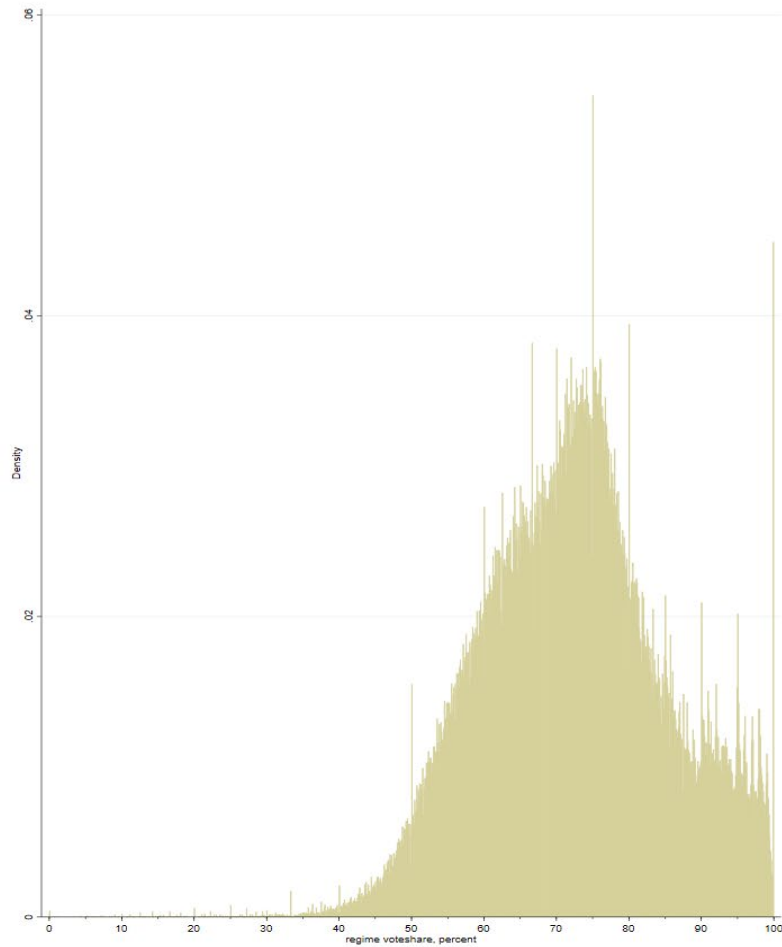
	(1) Presidential Election	(2) City	(3) Oil/Gas Region	(4) Focused on Sanctioning	(5) Benefits from sanctions
<i>Panel A: Column is „No“</i>					
sanction exposure	0.335** (0.143)	0.480*** (0.102)	0.484*** (0.132)	0.445*** (0.103)	0.529** (0.259)
Observations	2,198	4,104	3,242	2,116	3,474
<i>Panel B: Column is „Yes“</i>					
sanction exposure	0.399*** (0.104)	0.581*** (0.160)	0.866*** (0.265)	0.647*** (0.213)	0.318 (0.244)
Observations	2,198	292	1,154	2,280	922
Controls	+ political	+ political	+ political	+ political	+ political

## Effect Heterogeneity II

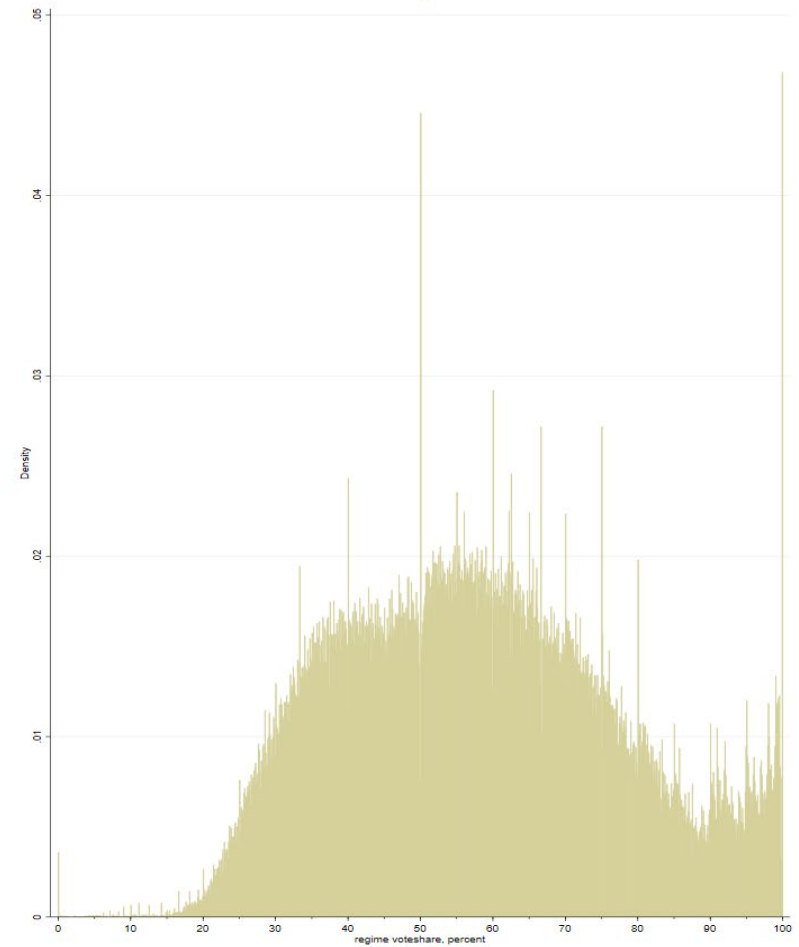
	(1) Export Heavy	(2) Focussed on Ukraine	(3) Regime Strongold	(4) Liberal Stronghold	(5) Sanctioned firms‘
<i>Panel A: Column is „No“</i>					
sanction exposure	0.456*** (0.116)	0.459** (0.212)	0.614*** (0.121)	0.331*** (0.116)	0.493*** (0.101)
Observations	2,198	2,064	2,254	2,167	3,620
<i>Panel B: Column is „Yes“</i>					
sanction exposure	0.496* (0.254)	-0.064 (0.160)	0.324*** (0.108)	0.571*** (0.134)	0.354** (0.142)
Observations	2,198	2,300	2,142	2,229	776
Controls	+ political	+ political	+ political	+ political	+ political

# Election Fraud?

Presidential Elections



Parliamentary Elections



- Example: Even numbers in regime voteshare
- Specifically at meaningful dates



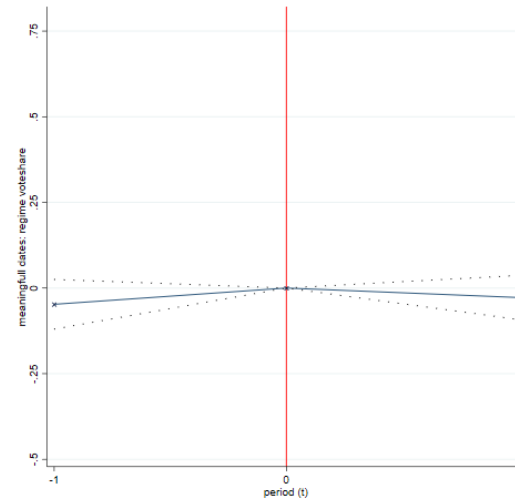
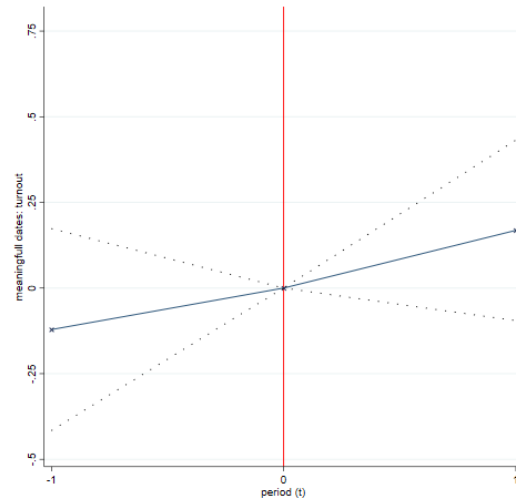
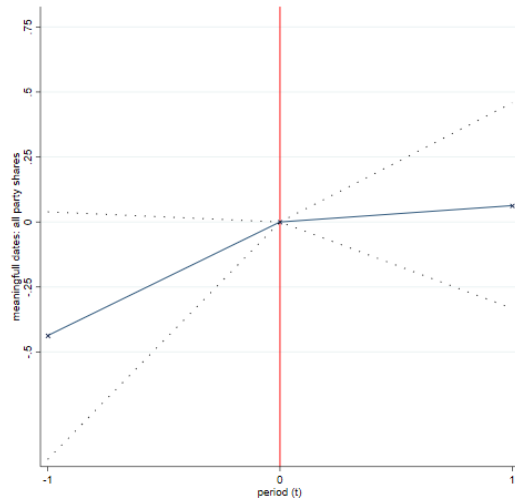
## Placebo: Statistical Irregularities

	(1)	(2)	(3)	(4)	(5)	(6)
	Statistical irregularities (Placebo)					
	All party shares		Regime shares		Turnout	
	$\Delta$ even	$\Delta$ meaning	$\Delta$ even	$\Delta$ meaning	$\Delta$ even	$\Delta$ meaning
sanction exposure	0.113 (0.166)	0.109 (0.166)	0.044 (0.043)	0.041 (0.042)	0.021 (0.047)	0.008 (0.046)
Controls	+ political	+ political	+ political	+ political	+ political	+ political
Observations	4,396	4,396	4,396	4,396	4,396	4,396

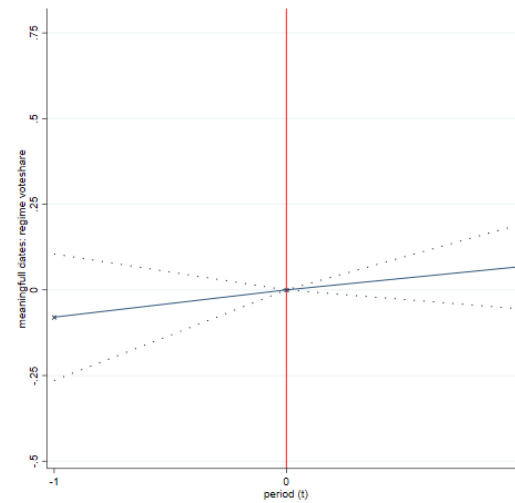
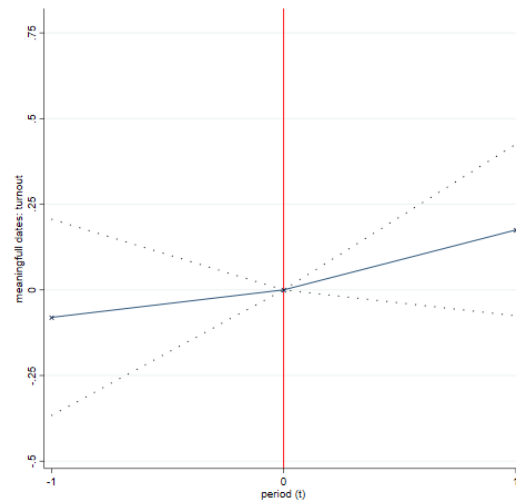
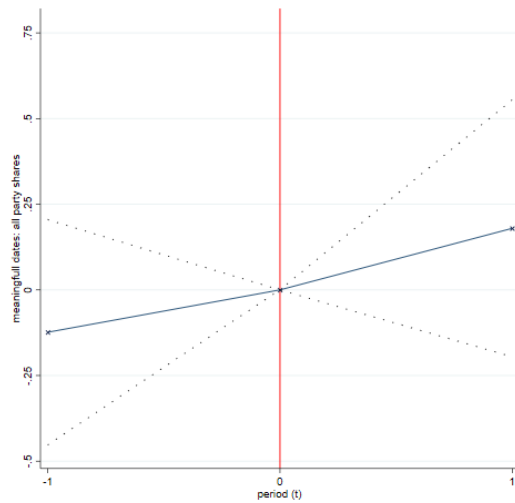
- Our empirical model accounts for time-consistent irregularities
- Observed irregularities do not increase with sanction exposure

# Event Study: Statistical Irregularities

## Presidential Elections



## Parliamentary Elections



# Conclusion

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- Economic Sanctions cause trade losses
    - Sanctions are economically effective
  - This translates into increasing support of the ruling regime
    - Sanctions backfire politically
    - ...at least in the short run
    - ...and for the comparatively mild 2014 sanctions
- How to address this “rally around the flag” effect?
- Counter propaganda?
  - In the Russian case: Stress contribution of Eastern and Southern Economies?
  - Support liberal opposition in mobilizing discontent with economic hardships caused by sanctions?
  - More directly target private consumption?

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Thank you for your attention

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# Mechanisms Through Which Sanctions (Can) Work

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- Economic Sanctions exert pressure on a foreign government to change policy by
  - restricting government's access to relevant resources (directly and indirectly)
  - Signaling: Willingness to escalate conflict
  - **decreasing government's internal support**
    - From selected individuals: smart sanctions
    - From population: economic sanctions at large
- Challenge: How to evaluate sanctions' success?
  - What is the relevant counterfactual?
    - E.g. withdrawal from Crimea, or invasion of Baltic States?
  - We assess a specific ATT that is not yet well understood.
  - However, this is only part of the story