

# The times they are a-changin'

How political attitudes change with energy prices. Evidence from Germany.

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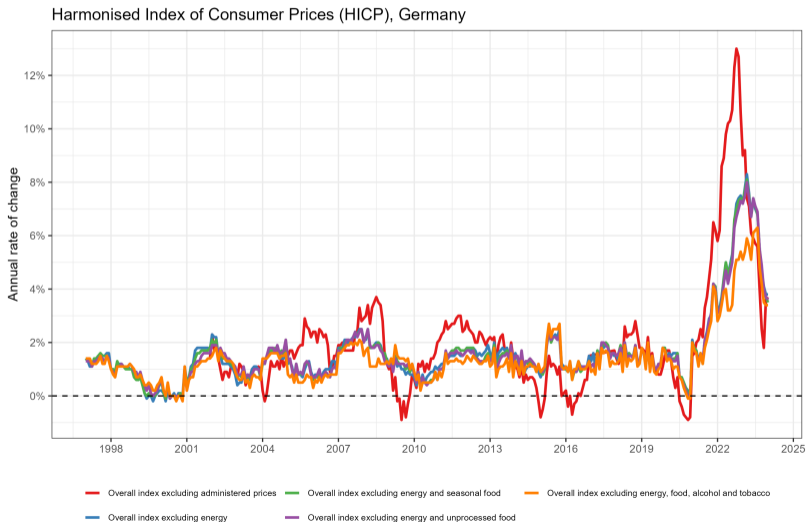
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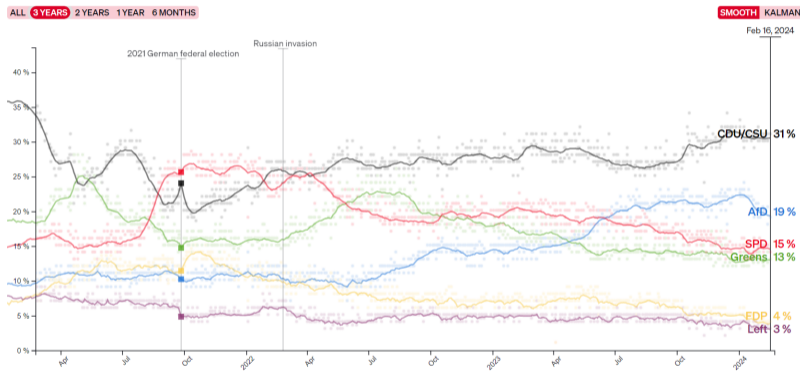
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# The Russian invasion catapulted the cost of living to the top of the agenda



# In Germany: Support for populist parties on the rise

## Germany — National parliament voting intention

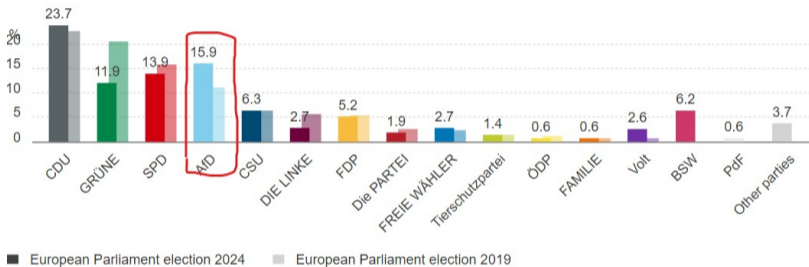


Source: Politico

# Confirmed at recent EU elections

## Votes

European Parliament election 2024, Germany  
Provisional result



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Source: Bundeswahlleiterin

► Details Policy

# Législatives 2024 : pourquoi le rejet de l'écologie est-il un moteur du vote pour le Rassemblement national ?

« Questions de campagne ». Après avoir longtemps délaissé les questions environnementales, le parti d'extrême droite a fait de la dénonciation d'une supposée « écologie punitive » sa nouvelle arme électorale.

Par Matthieu Goar

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## Energy Crisis Empowers Europe's Populists Harnessing Anger

Across the continent, parties on the far right and left are making political capital from the economic impact of the war in Ukraine.

▶ Related literature

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# Europe's energy woes fuel leaders' populist fears

Officials are warily eyeing simmering protests as inflation, war and an energy crisis converge.

## Related literature

- ▶ Rise of populist parties in Europe and the US (Kriesi et al., 2006; Rovny and Whitefield, 2019; König et al., 2017; De Vries and Hobolt, 2020; Wheatley and Mendez, 2021; Hall et al., 2023; Fetzer, 2019)
- ▶ Populism and economic hardship (Colantone and Stanig, 2018; Autor et al., 2020; Rodrik, 2021)
- ▶ Political attitudes and public policies (Egli et al., 2022; Bez et al., 2023; Colantone et al., 2024)

# What is the effect of the energy crisis on political attitudes and support for the AfD?

Panel data with 4 survey waves, from Jan 2023 to Feb 2024 (N = 8335) that includes:

- ▶ Self-reported data on electricity and heating bills
- ▶ Attitudes toward liberal democracy
- ▶ Xenophobic attitudes
- ▶ Attitudes toward redistribution
- ▶ Attitudes toward climate policies
- ▶ Attitudes toward the Russia-Ukraine war
- ▶ Political affiliation

We measure the effect of rising energy costs on political attitudes using an event-study design: actual-versus-status-quo (AVSQ) à la De Chaisemartin et al. (2022); De Chaisemartin and d'Haultfoeuille (2024). [▶ D-i-D estimator](#)

# Some descriptive statistics

Variable	Wave 1	Wave 2	Wave 3	Wave 4
<b>Socio-demographics</b>				
Age	50.575 (14.123)	50.944 (14.138)	51.295 (14.102)	51.541 (14.142)
Female	0.500 (0.500)	0.502 (0.500)	0.502 (0.500)	0.501 (0.500)
Net monthly income	7.448 (2.570)	6.914 (3.498)	7.000 (3.435)	7.098 (3.457)
Dwelling owner	0.448 (0.498)	0.451 (0.498)	0.451 (0.498)	0.452 (0.498)
Live in eastern Germany	0.166 (0.372)	0.166 (0.372)	0.166 (0.372)	0.163 (0.369)
<b>Electricity and heating</b>				
Gas primary heating source	0.571 (0.496)	0.564 (0.496)	0.579 (0.494)	0.589 (0.493)
Electricity instalment payments	107.577 (98.630)	112.438 (106.315)	115.235 (106.933)	118.065 (110.401)
Heating instalment payments	122.544 (129.524)	112.013 (132.747)	109.443 (132.900)	114.935 (126.753)
Electricity from renewables	0.211 (0.408)	0.164 (0.371)	0.159 (0.366)	0.175 (0.380)
<b>Expectations</b>				
Expect increase in electricity bill	0.608 (0.489)	0.392 (0.489)	0.367 (0.482)	0.388 (0.487)
Expect increase in heating bill	0.591 (0.492)	0.416 (0.493)	0.408 (0.492)	0.400 (0.490)
<b>Energy behaviour</b>				
Invest in efficient appliances	0.167 (0.373)	0.127 (0.334)	0.160 (0.367)	0.130 (0.337)
Invest in efficient heating	0.078 (0.269)	0.066 (0.249)	0.078 (0.268)	0.053 (0.223)
Reduced car use	0.266 (0.442)	0.214 (0.410)	0.240 (0.427)	0.239 (0.427)
Reduced temperature	0.535 (0.499)	0.458 (0.498)	0.479 (0.500)	0.446 (0.497)
Improved insulation	0.086 (0.280)	0.059 (0.236)	0.069 (0.254)	0.073 (0.260)
Electricity savings	0.460 (0.499)	0.380 (0.486)	0.429 (0.495)	0.380 (0.486)
<b>Attitudes</b>				
Trust Government	0.307 (0.462)	0.264 (0.441)	0.244 (0.430)	0.215 (0.411)
Climate change primarily human-induced	0.553 (0.497)	0.540 (0.499)	0.531 (0.499)	0.535 (0.499)
AfD voter	0.118 (0.323)	0.137 (0.344)	0.183 (0.387)	0.163 (0.370)
Survey is politically neutral	0.806 (0.396)	0.787 (0.410)	0.801 (0.399)	0.813 (0.390)



# Treatment

- ▶ German households receive electricity and heating bills once a year to settle the consumption of the previous year (i.e., bills received in 2023 cover the 2022 consumption).
  - ▶ Utilities can adjust installment payments  $\Rightarrow$  increase in energy costs
  - ▶ **Staggered treatment**: not all households receive their bills at the same time (most in January, and April)
- ▶ Many potential treatments in our design: **increase in electricity costs (binary)**, relative change in electricity costs (continuous), increase in heating costs...

# Identification: Exogeneous price shocks?

- ▶ Pure supply shock, linked to termination of contracts with Gazprom.
- ▶ Increase in consumption price linked to suppliers idiosyncrasies and likely exogenous from the household's perspective
  - ▶ Relatively high liberalisation of the energy market, with local competition
  - ▶ Not all suppliers have the same *exposure to Gazprom* ⇒ Uniper as an extreme case
- ▶ We control for expectations of increased costs
- ▶ The identification assumptions are likely to hold (Parallel trends, No anticipation)

▶ Parallel trends

▶ Exogeneity

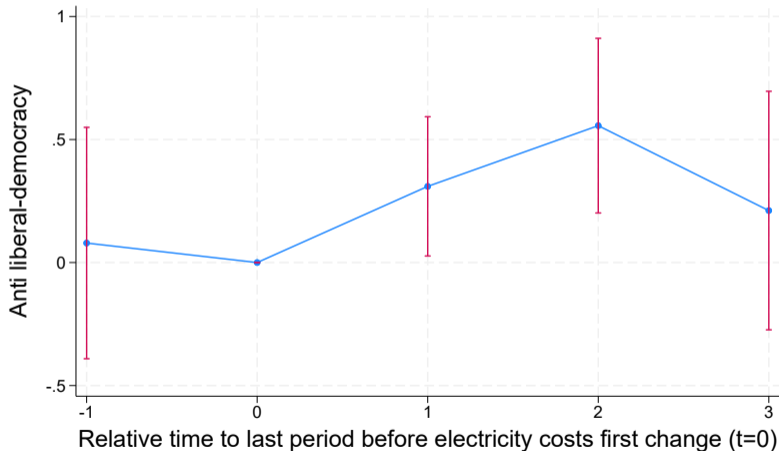
▶ No anticipation

▶ Issues Identification

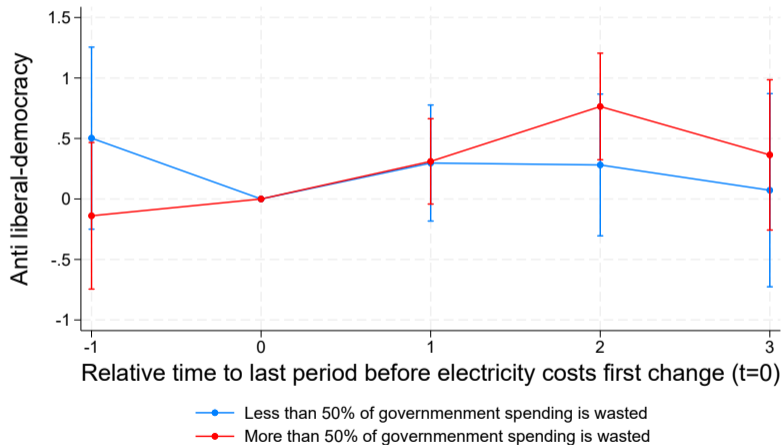
## Identification: Main issues

- ▶ "Pure control group" is made of people who do not report a cost increase between Jan 2023 and Feb 2024
  - ▶ These people could have been treated before we start collecting the data
  - ▶ Likely underestimation of the treatment effect
- ▶ Data quality and measurement errors
  - ▶ Restrict the sample to people who declare being responsible for the bills in their household.
  - ▶ Using a binary treatment alleviates some concerns regarding the reporting quality of respondents.
  - ▶ Correct for over-reporting: Some people report increases in costs every 4 months  $\Rightarrow$  highly unlikely
  - ▶ Under-reporting is likely to lead to underestimating the treatment effect

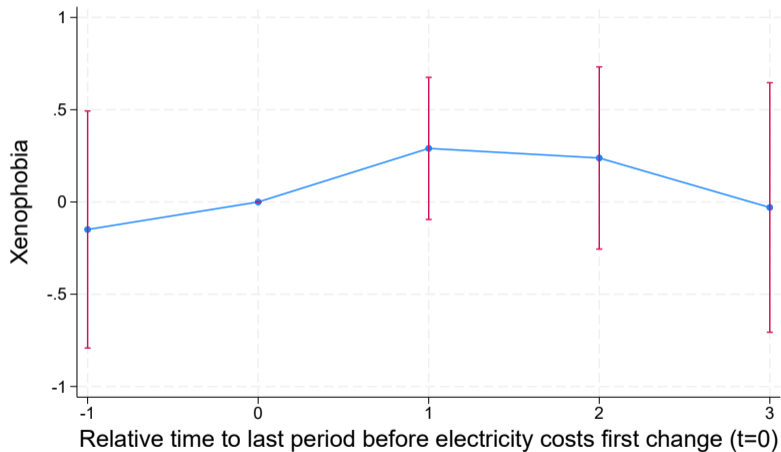
## Results: Increased installment payments for electricity led to lower (attitudinal) support for liberal democracy ...



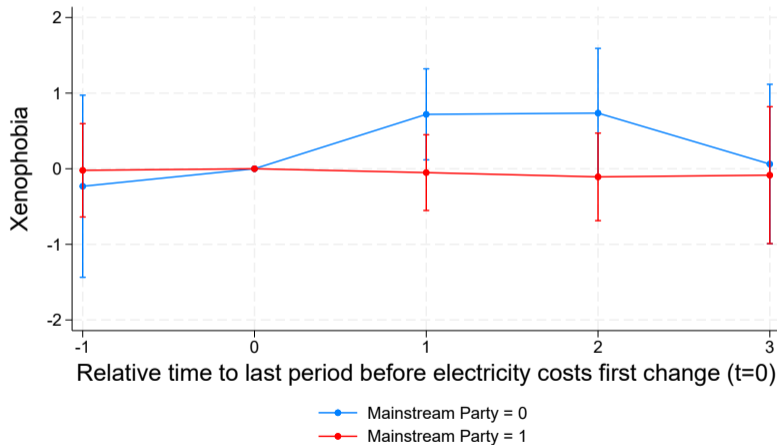
... especially among those who think that the bulk of tax revenue is wasted,



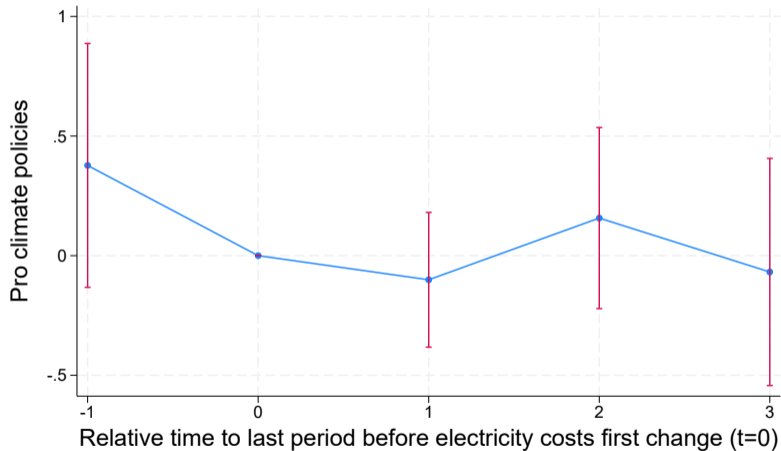
## No clear aggregate results on xenophobia ...



... but increase in xenophobic attitudes among people who do *not* support mainstream parties

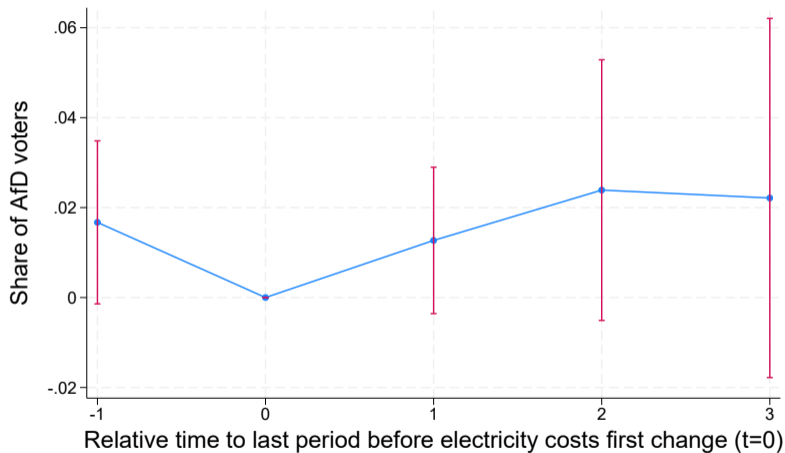


## No effect on the other attitudes...

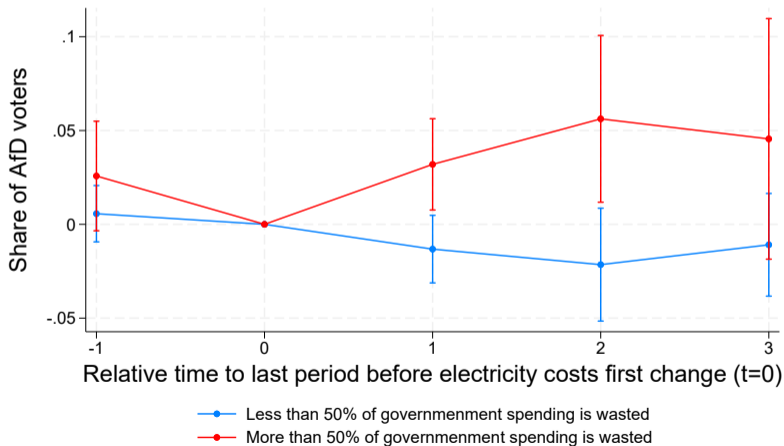




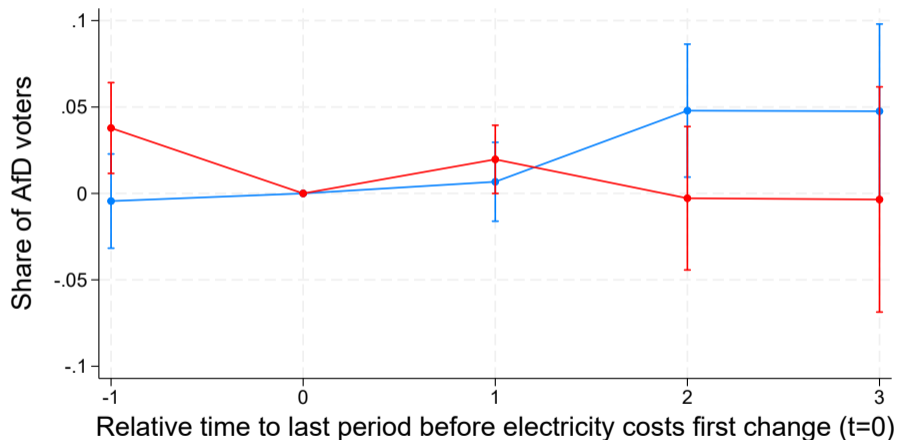
## Slight aggregate increase in AfD support...



... but an increase in electricity cost led to a 5 pp increase in AfD support among people who think the government wastes more than half of its tax revenue



Similarly, people who declare not having received energy-bill relief funds from the government are more likely to support the AfD



- Energy relief from the government is not salient
- Energy relief from the government is salient

# Key empirical takeaways

- ▶ Energy price shocks can increase anti-liberal and xenophobic attitudes. No effects on the other indices.
- ▶ People who think they do not benefit from government spending are more likely to support the AfD after having experienced an increase in energy costs.
- ▶ Hints at substantial indirect costs of failing to roll out salient compensation swiftly (*and communicating it broadly*)

# Next steps: Why do people switch the AfD after receiving an increase in electricity bill?

- 1 People usually vote for a party if the party agenda fits their beliefs (bliss point) and/or if the party is considered competent (valence)
  - ▶ Model the price increase as a shock on valence, which relatively increases the perceived competence of the AfD  $\Rightarrow$  pushes people with beliefs relatively aligned with the AfD to support them.
- 2 Political parties do not only push policies but also ontological conflicts (different explanations of how societies work). Parties gain votes when their predictions fit what eventually happens ("I told you so" effect).
  - ▶ Large energy shocks and inflation may make it seem like the populist ontology is correct.

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## Some context on the German policy response to the energy crisis

- ▶ 150+ Bn€ in earmarked funding to relieve firms and households (4+ % of GDP)
- ▶ Nationalisation of energy company Uniper
- ▶ Lump-sum payments of a few hundred euros in December 2022
- ▶ Energy price brake in 2023-2024: price cap on 80% of previous year's energy consumption
- ▶ Strong response but confusing communication by the government
- ▶ Partial shield for increased prices

▶ Back

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▶ Back



# Link between treatment intensity and control variables

	Variation in instalment payments (%)
Expects an increase in electricity bills (lag)	-0.0672*** (0.0175)
<b>Socio-demographics</b>	
Female	0.0075 (0.0176)
East Germany	-0.0091 (0.0251)
Region	0.0028 (0.0021)
Age	0.0010 (0.0006)
Net monthly income of household	0.0006 (0.0028)
<b>Electricity and heating</b>	
Electricity from renewable sources	.00179 (0.0234)
Surface area of the dwelling	-0.0002 (0.0002)
<b>Energy behaviour</b>	
Reported change in energy consumption	-0.0122 (0.0081)
Reduce temperature	-0.0047 (0.0118)
Electricity savings	0.0159 (0.0135)
Invest in efficient appliances	-0.0159 (0.0099)
Invest in improved insulation	-0.0287** (0.0145)
Invest in efficient heating	0.0233* (0.0141)
Reduced car use	-0.0206** (0.0087)
Constant	0.1409** (0.0660)
R-squared	0.02

Robust standard errors in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

# D-i-D estimator in De Chaisemartin and d'Haultfoeuille (2024)

We estimate the "actual-versus-status-quo" effect of the treatment (De Chaisemartin and d'Haultfoeuille, 2024)

- ▶ Accounts for heterogeneous and dynamic effects. Treatments with fixed effects are biased when these effects exist (Callaway and Sant'Anna, 2021; De Chaisemartin et al., 2022)
- ▶ Handles staggered treatments, both binary and continuous

Parameter of interest (estimand) is  $E(Y_{g,F_g-1+l} - Y_{g,F_g-1+l}(D_{g,1}, \dots, D_{g,1}))$ . Estimator is:

$$DID_{g,l} = Y_{g,F_g-1+l} - Y_{g,F_g-1} - \frac{1}{N_{ref}^g} \sum (Y_{g',F_g-1+l} - Y_{g',F_g-1}) \quad (1)$$

▶ Back

## Pre-test of parallel trends: Anti-liberal-democracy index

	(1)	(2)
	Pre: $Y_2 - Y_1$	Post: $Y_3 - Y_2$
Treatment group	-0.293 (0.375)	-0.461* (0.248)
Constant	-0.441*** (0.113)	0.378* (0.223)
R- squared	0.001	0.006
Observations	530	603

Robust standard errors in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Pre-test of no anticipation: Anti-liberal-democracy index

	(1)	(2)
	$Y$ at $t = 1$	$Y$ at $t = 2$
Treated at $t + 1$	0.635 (0.516)	-0.030 (0.353)
Constant	-0.076 (0.155)	0.503 (0.317)
R- squared	0.003	0.000
Observations	542	615

Robust standard errors in parentheses.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

# Within-respondent results: Correlation between AfD support and indices

Dependent Variables: Model:	Pro redistribution (1) OLS	Pro climate (2) OLS	Xenophobia (3) OLS	Support for Russia (4) OLS	Anti democracy (5) OLS
<i>Variables</i>					
AfD dummy	-0.066 (0.256)	-0.536*** (0.147)	0.863*** (0.229)	1.076*** (0.204)	0.133 (0.155)
Respondent FE	x	x	x	x	x
Adequate healthcare	x	x	x	x	x
Trust public broadcast	x	x	x	x	x
Perceived gov't waste	x	x	x	x	x
<i>Fit statistics</i>					
Observations	8,006	8,037	8,104	8,056	8,123
R <sup>2</sup>	0.725	0.898	0.909	0.909	0.843

Clustered (Respondent FE) standard-errors in parentheses

Signif. Codes: \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

▶ Back

## Our favoured interpretation

- ▶ Increases in the cost of living, especially energy prices, lead people who believe the government to be wasteful to turn to the AfD (causal evidence from our event study).
- ▶ People joining the AfD for “protest” reasons are likely to move their political preferences in the direction of those defended by the AfD, in particular with respect to Russia/Ukraine and climate-related topics (correlations in within-individual changes, and motivated by Callander and Carbajal, 2022)
- ▶ Because these people change part of their political preferences after joining the AfD, it makes them more likely to remain AfD voters, even if their living conditions subsequently improve (Callander and Carbajal, 2022)

▶ Back