

Economic hardship weakens European support for hard power, but not humanitarian aid to Ukraine

Author One^{a,c,1}, Author Two^{b,1,2}, and Author Three^a

This manuscript was compiled on September 15, 2025

The durability of European backing for Ukraine depends on how citizens weigh economic worries against security and humanitarian commitments. We examine how economic concerns, triggered by energy price shocks, shape European attitudes toward military, financial, and humanitarian support for Ukraine. Using survey data from 33 European countries (N = 75,000), we exploit variation in energy prices on unusually cold days to instrument for economic concerns. We find that heightened worries about the cost of living reduce support for military aid, financial aid to Ukraine and sanctions against Russia. This effect is stronger in countries where Russia is not viewed as an immediate threat. By contrast, support for accepting Ukrainian refugees remains unaffected, indicating that economic pressure weakens backing for hard power policies without eroding humanitarian solidarity. These results highlight a vulnerability in the European coalition: compassion for Ukraine endures, but sustained unity around military and economic assistance may falter when economic concerns rise, particularly in regions distant from the front line of Russian aggression.

Ukraine War | Public opinion | Energy prices | Military aid | Humanitarian aid

Russia’s invasion of Ukraine has upended the European security order, forcing European leaders to confront hard questions about how to safeguard security on the continent.

In the early weeks of the war, Europe responded with remarkable unity. The European Peace Facility was rapidly mobilized to fund weapons for Ukraine, harsh sanctions were imposed on Russia, and a partial embargo on Russian energy was enacted. These swift moves align with theories that external threats catalyze integration (1), yet the durability of this consensus remains in question. U.S. President Trump has signaled his desire to reduce support for Ukraine and this has made European contributions even more essential. European governments have pledged increased defense spending and long-term support for Ukraine, but sustaining this commitment while the war continues, has proven politically and economically challenging (2).

European public opinion has largely supported Ukraine, but this support is not uniform. Surveys find that a majority of Europeans support defense cooperation between Ukraine and Europe (3–5). However, one-third of European political parties oppose core aspects of support for Ukraine, including military aid, refugee reception, and sanctions that raise energy costs (6). Moreover, among the general public support for pro-Ukraine policies has declined since the beginning of the war (Figure 2).

These political developments suggest that the post-invasion consensus may be more fragile than it appears. While the war heightened perceived threats and fostered elite rhetoric in favor of unity (7), it has not overridden domestic cleavages. Analysts caution that mounting economic strains, especially inflation and budgetary pressures, are gradually eroding Western publics’ willingness to sustain Ukraine’s war effort against Russia (8–10).

To understand how economic concerns shape public support for different aspects of the European response to the war, we examine attitudes toward a broad set of policies ranging from military and financial assistance to humanitarian aid and refugee reception. Using an instrumental variables strategy to address concerns about reverse causality and omitted variable bias, we find that heightened economic concern reduces support for what we term *hard power policies*: maintaining sanctions on Russia and providing military or financial aid to Ukraine. In contrast, economic concern does not diminish support for humanitarian aid or for welcoming Ukrainian refugees. These findings suggest that economic hardship selectively erodes support for Europe’s military and coercive response to the war, while leaving humanitarian solidarity largely intact.

Significance Statement

Sustaining European unity in support of Ukraine is central to deterring Russian aggression. Yet political pledges for long-term military and economic aid are vulnerable to shifts in public opinion. Where Russian threats are immediate, sustaining public support is relatively straightforward, but farther away from the conflict electorates prove more sensitive to rising economic costs. We employ individual-level data from three waves of surveys conducted in 33 European countries (N=75,000) to understand the relationship between Europeans’ economic concerns and their support for Ukraine. Using an instrumental variable strategy, we find that economic concerns triggered by energy prices undermine public support for military aid, financial aid, and sanctions against Russia. Crucially, willingness to provide humanitarian assistance for refugees remains strong, even among economically burdened citizens. These findings highlight that while compassion for Ukraine endures, economic pressures may fracture support for hard power measures, particularly in countries less directly threatened by Russia. Our findings indicate that economic pressures may fracture European unity in responding to the war, not through diminished humanitarian solidarity, but through declining support for hard power measures.

125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186

Author affiliations: ^aAffiliation One; ^bAffiliation Two;
^cAffiliation Three

Please provide details of author contributions here.

Please declare any competing interests here.

¹A.O.(Author One) contributed equally to this work
with A.T. (Author Two) (remove if not applicable).

²To whom correspondence should be addressed. E-
mail: author.twoemail.com

187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248

Our study builds on and extends existing research on how conflict shapes public opinion and geopolitics in Europe. Prior experimental work shows that priming Europeans to think about economic problems does not reduce their support for hosting Ukrainian refugees (11). However, support for refugees is just one dimension of the European response and hard power policies are arguably more consequential for defending Ukraine's sovereignty and deterring Russian aggression. By broadening the scope of analysis, we show that economic concerns significantly reduce public support for these coercive measures. Our findings also complement recent studies on Europe's ability to resist Russian energy coercion (12, 13). While those studies focus on state behavior and reach differing conclusions, we adopt a micro-level perspective to examine how economic pressures shape citizen preferences.

Results

To identify the causal effect of economic concern on foreign policy attitudes, we estimate a series of two-stage least squares (2SLS) regressions using an instrumental variable (IV) strategy.

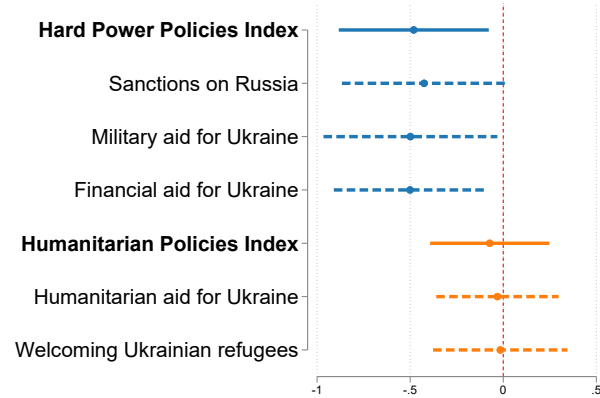
Our instrument combines information on recent local cold weather, measured by Heating Degree Days (HDD), with household energy inflation at the country-month level. Specifically, it is the interaction between the average HDD in the respondent's region during the seven days before the interview and the corresponding energy inflation. HDD is a standard metric that quantifies heating demand by measuring the extent to which temperatures fall below a baseline (18 degrees) at which households typically begin heating their homes. Both HDD and its cooling equivalent are widely used for modeling energy demand (e.g. 14). We do not find that temperature-induced demand for cooling affected economic concerns, which is not surprising as air conditioners are relatively uncommon household appliances in Europe despite increasing heatwaves (15–17).

This interaction of short-term weather fluctuations and macroeconomic price shocks generates plausibly exogenous variation in the salience of energy-related economic hardship. On colder days, energy costs are salient regardless of inflation, whereas on milder days, economic concern rises primarily when inflation is high. This conditional salience mechanism supports the validity of the exclusion restriction. The first-stage F-statistic exceeds 22 in our regressions, indicating a strong instrument. We also report p-values robust to weak instruments.

Importantly, in all models we include the constituent terms (*HDD* and *Energy Inflation*) along with our instrument. Including *HDD* by itself controls for direct temperature effects on mood, comfort, and seasonal attitudes. Including *Energy Inflation* accounts for its direct economic effects. Region fixed effects further account for time-invariant differences in heating infrastructure, mitigating concerns that *HDD* is confounded by regional variation in heating technology or energy dependence. As a result, our instrument is based solely on the interaction between short-term weather fluctuations and monthly energy inflation.

The endogenous regressor is perceived national economic conditions, and the outcomes are support for Ukraine-related policies, summarized in indices capturing hard power and humanitarian dimensions (Figure 1). All models include

Fig. 1. IV Estimate of *Economic Concern* on Support for Various Policies



Notes: This figure presents the IV estimates (and 95% CI) of *Economic Concern* on support for various policies. Each line represents a separate regression, with the policy listed on the y-axis as the dependent variable. Support is measured on a 4-point scale from “totally disagree” to “totally agree.” The instrument is the interaction term $HDD \times Energy\ Inflation$. All regressions include controls for region fixed effects, survey fixed effects, respondent characteristics, *HDD*, and *Energy Inflation*. Full regression results are reported in SI Table 4.

individual-level covariates, region and survey fixed effects, and separate controls for *HDD* and energy inflation. Robustness checks are listed at the end of this section. More details on data sources and model specifications are presented in the “Materials and Methods” section.

Main IV estimates. Figure 1 shows the IV estimates of *Economic Concern* on seven distinct outcomes. Two of these outcomes, the *Hard Power Policies Index* and the *Humanitarian Policies Index*, are composite measures, indicated by solid lines. The remaining five outcomes are the individual components that constitute these indices, shown with dashed lines. Full regression results are reported in the Supplementary Information (SI) Table 4.

The *Hard Power Policies Index* combines attitudes toward three forms of coercive support for the Ukrainian war effort: imposing sanctions on Russia, providing military aid, and offering financial aid. Across all four outcomes, we find sizable and statistically significant negative effects. A one-unit increase in *Economic Concern*, roughly equivalent to 1.2 standard deviations (SD), reduces support for the *Hard Power Policies Index* by 0.48 points on a 4-point scale. This effect corresponds to approximately 0.6 SD in the outcome variable. The estimated effects are -0.43 for sanctions (0.45 SD), -0.5 for military aid (0.5 SD), and -0.5 for financial aid (0.55 SD).

In contrast, the *Humanitarian Policies Index*, comprising support for humanitarian aid to Ukraine and for welcoming Ukrainian refugees shows no statistically significant relationship with *Economic Concern*. The estimated coefficient for the index is -0.006 , a substantively and statistically negligible effect. The estimates for the individual components

are similarly insignificant: -0.03 for humanitarian aid and -0.01 for welcoming Ukrainian refugees, both equivalent to approximately 0.01 SD.

To formally assess whether the effect of *Economic Concern* differs between the *Hard Power Policies Index* and the *Humanitarian Policies Index*, we conducted a Wald test comparing the respective IV estimates. The test indicates a statistically significant difference at the 7% level. It is important to note that IV estimation typically produces larger confidence intervals due to the additional uncertainty introduced by instrumenting. Taken together, the magnitude of the estimated difference and the Wald test provide compelling evidence that economic concerns influence attitudes toward hard power and humanitarian policies in distinct ways.

We have conducted several analyses to confirm the validity of our IV strategy, and therefore, our findings. Our instrument is statistically strong, with first-stage F-statistics well above conventional thresholds, indicating that economic concern is reliably predicted by the instrument (see Table 2). To address any lingering concerns about instrument weakness, we also conduct analyses robust to weak instruments using the Anderson–Rubin method. These confirm that the effect of economic concerns on humanitarian policies remains statistically insignificant across specifications. These are provided in SI Table 4.

Although the null effect on humanitarian policies could be due to social desirability bias, we have reasons to think that this is not the case. First, this null effect is replicated in experimental research (11). Using list experiments designed to reduce participants' concern about expressing unpopular views, researchers still find that economic priming does not reduce support for hosting Ukrainian refugees. Second, support for Ukrainian refugees and humanitarian aid have declined over time (SI Figure 5). If social desirability bias were a dominant factor, we would expect support to remain uniformly high or stable. These empirical patterns suggest that people are expressing their genuine preferences.

We conduct several robustness checks including alternative endogenous variables, weather measures, instruments, and various specifications. These are reported in SI Tables 5 and 6. Results remain robust when using *personal job insecurity* rather than national economic perceptions as our measure of economic concerns, suggesting our findings reflect genuine economic salience rather than interpretation of national conditions that could be altered by media consumption patterns or partisan attachment. We replace *HDD* with a linear *Temperature* variable; measure it only on the day of the interview; measure it as deviation from its five-year average; winsorize it at the 90th percentile to reduce the influence of outliers. We exclude *Ideology* from the model because it could be affected by the instrument and therefore create post-treatment bias. We also run our analysis with survey weights, which reduces instrument strength. Nonetheless, our main result remains unchanged: economic concerns have a greater negative impact on support for hard power policies than for humanitarian policies.

We conduct placebo tests where we re-estimate our models using support for the EU's common trade policy and for free movement of EU citizens as outcomes (SI Table 7). These attitudes capture general views about European integration but are substantively unrelated to the Ukraine conflict,

making them suitable “placebo” variables: if our instrument were spuriously shifting broad EU orientations rather than Ukraine-specific hard-power preferences, we would expect to see effects here as well. We find no such effects, supporting the validity of our identification strategy.

Lastly, we assess the robustness of our findings by employing an alternative instrumental variable that captures regional exposure to energy price fluctuations. Specifically, we construct an instrument by interacting pre-war regional natural gas demand—as a share of total energy demand in 2019—with changes in the energy prices after the war began. The underlying rationale is that regions more reliant on natural gas were disproportionately affected by subsequent energy price shocks, thereby experiencing heightened economic concern. This alternative specification yields results consistent with our main findings. Further details and results are provided in the SI.

Together, these results suggest that economic concerns do not broadly undermine European solidarity with Ukraine but selectively dampen support for more coercive and financially demanding foreign policy tools. While humanitarian commitments appear insulated from economic pressures, public support for hard power measures is more contingent on the perceived state of the economy.

Heterogeneity among respondents. Do all Europeans respond similarly when economic concerns become more salient, or does the relationship between economic concern and support for Ukraine vary across different groups? To explore this, we replicate our main analysis across ten subgroups, dividing respondents by gender, age, political ideology, education (college degree or not), and perceived national threat from Russia.

Importantly, instrument strength varies across subgroups. While the instrument is strong in most subgroups, it is weak among women, individuals under 50, and in countries where the perceived threat from Russia is low. We therefore report Anderson–Rubin (AR) p-values which are robust to weak instruments alongside the first-stage F-statistics. This allows for a more cautious interpretation of subgroup results when instrument strength is limited.

The upper panel of Table 1 presents IV estimates for the *Hard Power Policies Index*. The results reveal considerable heterogeneity. The estimated effect of *Economic Concern* is especially strong among younger respondents, those with left-leaning political views, individuals without a college degree, and respondents in countries where the perceived threat from Russia is lower. In contrast, the effect is smaller and statistically insignificant among older, right-leaning, college-educated respondents, and those in countries that perceive a high threat from Russia.

Further tests (reported in SI Table 8) suggest that differences between college-educated and non-college educated individuals is statistically significant ($p=0.04$) while those between countries perceiving a high or low threat from Russia barely miss the 10% cutoff ($p=0.13$). These patterns suggest that individuals in more precarious economic positions, proxied by lack of a college degree, and those geographically more distant from the Russian threat are more responsive to the economic costs of war.

The lower panel of Table 1 shows the estimates for the *Humanitarian Policies Index*. Across all ten subgroups, the

Table 1. The Impact of *Economic Concern* on Support for Hard Power Policies and Humanitarian Policies Across Subgroups

| DV: <i>Hard Power Policies Index</i> | | | | | | | | | | |
|--------------------------------------|----------------------|-------------------|---------------------|-------------------|---------------------|-------------------|----------------------|------------------------|--------------------|-------------------|
| Gender: | | Age: | | Political views: | | College degree: | | Perceived Rus. threat: | | |
| Male | Female | Below 50 | Above 50 | Left | Right | No | Yes | Low | High | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | |
| Economic concern | -0.419*** (0.162) | -0.645 (0.509) | -0.765** (0.379) | -0.258 (0.210) | -0.666** (0.293) | -0.157 (0.273) | -0.845*** (0.307) | -0.020 (0.243) | -1.540* (0.885) | -0.158 (0.222) |
| Controls + Region FE + Survey FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| N | 35777 | 36862 | 35183 | 37456 | 42581 | 30058 | 42802 | 29837 | 42431 | 23711 |
| KP F-stat in 1 st stage | 34.7 | 4.5 | 7.3 | 25.9 | 14.5 | 12.1 | 12.9 | 19.6 | 4.0 | 30.7 |
| Weak IV-robust p-value | 0.02 | 0.20 | 0.05 | 0.23 | 0.02 | 0.59 | 0.004 | 0.93 | 0.003 | 0.49 |

| DV: <i>Humanitarian Policies Index</i> | | | | | | | | | | |
|--|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------------|-------------------|------------------|
| Gender: | | Age: | | Political views: | | College degree: | | Perceived Rus. threat: | | |
| Male | Female | Below 50 | Above 50 | Left | Right | No | Yes | Low | High | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | |
| Economic concern | -0.082 (0.129) | 0.244 (0.403) | -0.083 (0.314) | 0.123 (0.163) | -0.105 (0.217) | 0.223 (0.252) | -0.074 (0.240) | 0.083 (0.173) | -0.665 (0.565) | 0.252 (0.185) |
| Controls + Region FE + Survey FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| N | 36802 | 38681 | 36493 | 38990 | 44475 | 31008 | 44727 | 30756 | 44251 | 24450 |
| KP F-stat in 1 st stage | 35.2 | 5.7 | 7.9 | 26.8 | 14.6 | 13.9 | 12.7 | 21.5 | 3.9 | 30.9 |
| Weak IV-robust p-value | 0.53 | 0.51 | 0.79 | 0.44 | 0.63 | 0.32 | 0.76 | 0.62 | 0.13 | 0.13 |

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust s.e. clustered by region-date are in parentheses. This table shows the IV estimate of *Economic Concerns* on two indices (*Hard Power Policies* and *Humanitarian Policies*) across subgroups. The first-stage relationship is reported in Table 2. “Controls” are the following participant characteristics: age, gender, education level, ideology, social class.

coefficients are small and statistically insignificant, and the AR p-values confirm that we cannot reject the null hypothesis in any case.

These findings reinforce our main conclusion: while economic concerns reduce support for military and coercive measures, they do not erode support for humanitarian aid or refugee protection regardless of demographic or political characteristics.

Discussion

Russia’s invasion of Ukraine has triggered the biggest foreign policy shift in Europe since the Cold War, uniting governments across the continent in support of Ukraine. Yet as the war drags on, the durability of this consensus is increasingly tested by domestic economic strain and shifting political dynamics. A key concern is whether rising economic costs, driven in part by energy inflation, are eroding European public support for Ukraine. Understanding how economic hardship affects European public opinion is thus critical for assessing not only the future of the pro-Ukraine coalition, but also the political feasibility of a European defense strategy in a context where U.S. military support may decline.

To identify the causal effect of economic concern on public support for Ukraine, we use an instrumental variable strategy that interacts temperature induced demands for heating (HDD) at the time of interview with energy inflation at the country-month level. We document strong first-stage relationships and argue that the exclusion restriction

is credible, because our instrument is the interaction of two variables that are weakly correlated and one of which (temperature) is random. Therefore, given our broad set of controls including survey and region fixed effects, the instrument is plausibly unrelated to political attitudes except through its effect on economic concern.

Our findings suggest that economic pressure selectively undermines support for the coercive elements of Europe’s Ukraine policy (such as military aid, financial assistance, and sanctions) while leaving humanitarian commitments largely intact. This asymmetry indicates that the political sustainability of Europe’s “hard power” response is contingent on economic conditions, particularly in countries that do not perceive a direct threat from Russia. As economic concerns mount, the risk of diverging policy preferences across countries grows, threatening the coherence of the pro-Ukraine coalition. If Europeans become less willing to bear the costs of deterrence, maintaining a united and credible front in support of Ukraine will become increasingly difficult.

More broadly, this study improves our understanding of how economic conditions shape public support for foreign policy. By distinguishing between hard power and humanitarian responses, we provide a more nuanced account of how citizens evaluate the costs and moral imperatives of international engagement. Our findings challenge perspectives that expect public support for foreign policy to be uniformly shaped by security considerations.

While our identification strategy leverages Europe’s unique dependence on Russian pipeline gas during 2022-23, the

underlying mechanism, economic anxieties eroding public support for coercive foreign policy tools, should travel to other advanced democracies and to later stages of the conflict. Outside Europe, similar economic shocks may arise from food price spikes; within Europe after mid-2023, generous energy subsidies muted household price variation, likely weakening the first stage. Replicating our design with alternative shocks will clarify under what conditions the linkage between domestic economy and foreign policy persists.

Materials and Methods

Our analysis combines three data sources: (1) survey data on Europeans' personal characteristics as well as attitudes toward the war and the economy, (2) weather data on average temperatures in a region on the date of interview, and (3) price data on national energy prices over time. Summary statistics for all variables are in SI Table 3.

Survey Data We use individual-level survey data from the Eurobarometer (EB) to analyze Europeans' personal characteristics and attitudes on various issues. We identified three EB surveys conducted between June 2022 and June 2023 that include questions relevant to our study and for which we have the necessary temperature data. These surveys cover 35 countries and include approximately 100,243 respondents. However, we exclude Turkey due to its exceptionally high inflation and Great Britain due to missing inflation data, leaving us with 33 countries.* Additionally, not all questions appear in every survey, resulting in a final sample of about 75,000 respondents.

For each respondent, we have data on political attitudes, perceptions of the economy, and personal characteristics, including age, gender, education level, social class, and left-right ideological self-placement. We provide a detailed description of the political and economic perception measures below.

Eurobarometer also records the date and location of each interview, enabling us to match respondents to local temperature data at the time of the survey. Location data is typically available at the NUTS-2 level.

Temperature Data We obtain weather data from the Copernicus Climate Change Service ERA5-Land dataset.[†] Using this source, we record the average temperature at the exact time and location of each interview. We use these average temperatures to calculate the Heating Degree Days (HDD) and Cooling Degree Days (CDD). These measures are frequently used to build models of heating and cooling energy demand (e.g. 14). The formulas are:

$$\text{HDD} = \begin{cases} 0, & \text{if } T_{\text{avg}} > 15^\circ\text{C} \\ 18^\circ\text{C} - T_{\text{avg}}, & \text{if } T_{\text{avg}} \leq 15^\circ\text{C} \end{cases}$$

$$\text{CDD} = \begin{cases} 0, & \text{if } T_{\text{avg}} > 24^\circ\text{C} \\ 21^\circ\text{C} - T_{\text{avg}}, & \text{if } T_{\text{avg}} \leq 24^\circ\text{C} \end{cases}$$

The energy demand for cooling is low in most European countries, although it may well rise. According to Eurostat, in 2022 cooling was more than 10% of total household energy

demand only in Cyprus and Malta. In most other countries, including Southern European countries like Italy, Spain, and Portugal, it was less than 1% of energy demand. It is therefore not surprising that including CDD weakened the instrument considerably.

Our results are consistent whether we measure HDD as the average over the previous seven days or on the interview date alone. We prefer the seven-day average because it smooths out idiosyncratic shocks and is more likely to influence attitudes and behavior relevant to our research. We refer to this variable as *HDD*. Additionally, we obtain similar results if we calculate deviations from the five-year average for the same location and day of the year or we winsorize *HDD* (at the 90th percentile) to reduce the influence of outliers.

Inflation Data We obtain household energy price data from Eurostat, the European Union's statistical office.[‡] Specifically, we use the energy subcomponent of the Harmonized Index of Consumer Prices (HICP), which focuses on monitoring changes in the prices of energy-related goods and services purchased by households—such as electricity, gas, and other fuels. These changes take into account taxes and subsidies, thereby capturing the actual prices paid by end users. It is designed to capture shifts in household energy prices over time. These data are available at the country-month level, meaning energy inflation varies across countries and over time. We refer to this variable as *Energy Inflation*.

Dependent Variables We focus on the set of questions asked in multiple surveys and therefore provide sufficient variation to produce a strong instrument. These questions appear in Eurobarometer surveys EB 97.5 (June–July 2022), EB 98.2 (January–February 2023), and EB 99.4 (May–June 2023).

These questions concern the EU's response to Russia's invasion of Ukraine. Respondents were asked the following question, followed by a list of EU policies:

The EU has taken a series of actions in response to Russia's invasion of Ukraine. To what extent do you agree or disagree with each of these actions?

- *Imposing economic sanctions on Russian government, companies and individuals*
- *Financing supply and delivery of military equipment to Ukraine*
- *Providing financial support to Ukraine*
- *Providing humanitarian support to the people affected by the war*
- *Welcoming in the EU people fleeing the war*

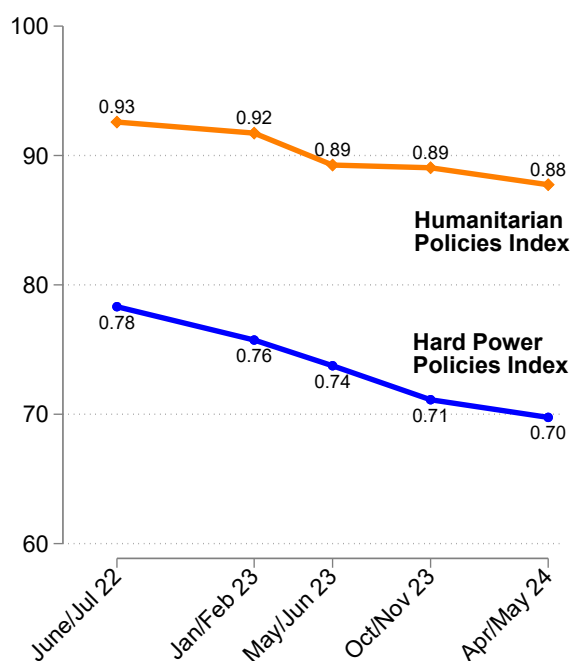
For all these questions, respondents indicated whether they *totally agree, tend to agree, tend to disagree, or totally disagree*.

These five questions fall into two distinct categories, both thematically and statistically. The first three (support for sanctions on Russia, military aid, and financial aid to Ukraine) focus on helping Ukraine resist Russia and sustain its economy. The other two (support for humanitarian aid and welcoming Ukrainian refugees) center on assisting Ukrainian civilians

* Energy inflation ranged from 380–500% in Turkey and 100–230% in other countries in our dataset. Including Turkey in the analysis makes our instrument and findings stronger.

[†] <https://cds.climate.copernicus.eu/datasets>

[‡] <https://ec.europa.eu/eurostat/web/main/data>



Notes: The *Humanitarian Policies Index* (orange line) averages support for humanitarian aid and welcoming Ukrainian refugees. The *Hard Power Policies Index* (blue line) averages support for sanctions on Russia, military aid, and financial aid to Ukraine. For this graph, each component variable was recoded from a 4-point ordinal scale (“totally disagree” to “totally agree”) into a binary indicator, with “tend to agree” or “totally agree” coded as 1. Data come from the Eurobarometer surveys.

Fig. 2. Public Support for Ukraine-related Policies over Time

affected by the war. A principal component analysis (PCA) confirms this division, revealing two components that align with these themes (SI Table 9). Unexplained variances are low, indicating good model fit.

Based on this pattern, we construct two indices: *Hard Power Policies*, averaging support for sanctions, military aid, and financial aid; and *Humanitarian Policies*, averaging support for humanitarian aid and Ukrainian refugees.

Figure 2 shows trends in these questions over time. To facilitate interpretation, we combine the “tend to agree” and “totally agree” responses into a single “agree” category. Each point on the graph represents the average percentage of Eurobarometer respondents who agree with the policies grouped within each index. Support for hard power policies has consistently been lower than support for humanitarian policies. Although support for both types of policies has declined over time, the decline is more pronounced for hard power policies.

Endogenous Variable: Economic Concerns We measure Europeans’ perceptions of the economy using the following survey question:

How would you judge the current situation of the national economy?

Respondents choose from four options ranging from *very good* to *very bad*, without a neutral category.[§] We refer to this variable as *Economic Concerns*.

Although this variable is intended to measure perceived economic hardship, it is better understood as capturing the *salience* of economic hardship. Survey responses often reflect the most immediately accessible considerations rather than deeply reasoned judgments (18). This distinction strengthens the validity of our instrument.

This question captures perceptions of the national economy rather than personal financial situations. Personal economic circumstances change slowly and perceptions of one’s personal economic well-being are more stable than perceptions of the national economy (19). Short-term temperature fluctuations, even amid high inflation, are unlikely to significantly alter a person’s financial situation. However, a cold day can make rising energy costs more salient either by prompting someone to turn up the heat or endure the cold to save money. Thus, our instrument is more likely to reflect the salience of economic concerns rather than objective economic hardship.

Consistent with this argument, our instrument correlates more strongly with national economic perceptions than with personal financial assessments of survey participants. However, we obtain similar results if we repeat our analysis replacing perceptions of national economy with perceptions of one’s personal job security (SI Tables 5 and 6).

Our Instrument. We use the instrumental variable approach to deal with reverse causation (between foreign policy attitudes and economic perceptions) and omitted variable bias (e.g. partisanship effects). We construct our instrument by multiplying *HDD* (average over previous 7 days) with *Energy Inflation*.

The rationale behind our instrument is that cold-weather spikes should augment people’s concerns about the economy, especially when energy prices are already elevated. In such periods, cold weather strains energy supply and raises costs for businesses. Even if consumer prices do not immediately reflect these changes, citizens are familiar with national headlines on inflation and government responses like emergency subsidies or industry support. Therefore, the interaction of daily HDD and energy prices should heighten economic concerns.

A valid instrument must satisfy two conditions. First, it must be strongly correlated with the endogenous variable in a theoretically meaningful way. We provide empirical evidence below showing that our instrument meets this criterion and has the expected sign. Second, it must affect the outcome variables (attitudes) only through the endogenous variable (*Economic Concern*). To ensure this exclusion restriction holds, we control for factors that could create alternative pathways between the instrument and political attitudes.

Specifically, we control for *HDD* and *Energy Inflation* separately to rule out the possibility that our instrument is driven by their independent effects. Higher energy inflation could reflect broader economic conditions rather than household energy concerns, while extremely cold days could influence attitudes through other means, for example affecting overall happiness. We also include region fixed effects, which account for time-invariant factors such as wealth, culture, and historical ties to Russia, and survey fixed

[§]We recoded the original responses so that higher values indicate greater economic concern.

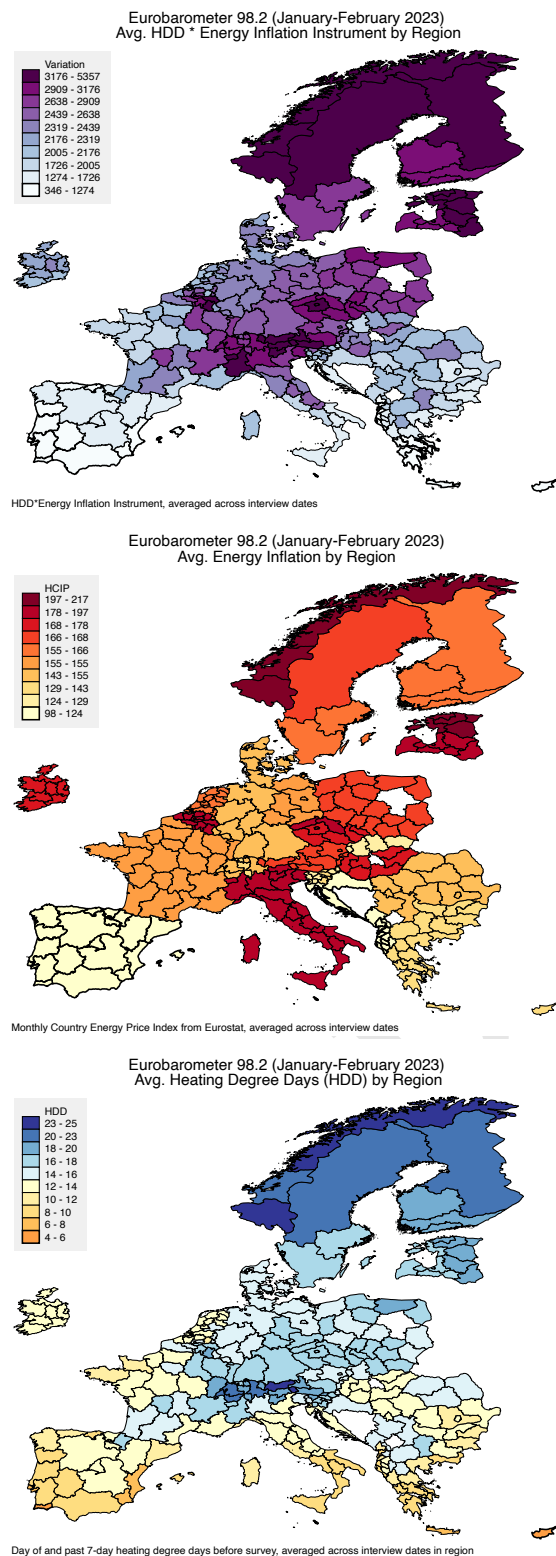


Fig. 3. Geographic Variation in Our Instrument and Its Components During Eurobarometer 98.2 (January–February 2023)

effects, which control for events affecting all respondents, such as military developments in Ukraine. With these controls in place, our instrument isolates variation arising solely from the interaction of daily temperature fluctuations and national energy price changes.

We control for respondent characteristics to obtain more precise estimates even though they are not systematically related to our instrument. Since the instrument varies at the region-date level, we cluster standard errors at this level to ensure robust inference.

To give a sense of the geographical variation in our instrument, Figure 3 illustrates our instrumental variable and its components (*Energy Inflation* and *HDD*) during the Eurobarometer 98.2 survey period (January–February 2022). The bottom map shows regional variation in 7-day temperature averages, capturing short-term weather shocks. The middle map displays regional averages of monthly energy price inflation, reflecting energy costs across Europe during the survey. The top map plots the interaction term, our instrument.

Although in this period the instrument generally takes lower values in southern Europe, there is significant variation across the continent. For instance, in the north, the Netherlands takes low values of the instrument, mainly due to warm weather. In the Balkans, although the instrument has higher values for Romania, it remains low in other countries such as Greece. We also see significant within-country variation in countries like France and Italy.

This spatial heterogeneity strengthens the credibility of the instrument, as it reflects plausibly exogenous variation in climate and macroeconomic shocks affecting citizens' attention to energy prices but are unlikely to be correlated with unobserved regional preferences or political attitudes.

First Stage Estimates and Instrument Strength. We examine the relationship between our instrument and *Economic Concerns* to ensure that the instrument is sufficiently strong. Table 2 shows that our instrument has a positive and statistically significant effect on *Economic Concerns*. Additionally, *Energy Inflation* is positively and significantly correlated with *Economic Concerns*, while *HDD* has a negative but insignificant estimate, indicating no correlation when energy inflation is held at its mean.

Our instrument is sufficiently strong. The effective F-statistic is 21, well above the threshold of 16, which is necessary to keep bias below 10% (20).

To verify that our instrument relates to *Economic Concerns* as expected, we visualize this relationship in Figure 4. The figure shows the predicted level of *Economic Concerns* based on changes in energy consumption for heating and the rate of energy price inflation.

Figure 4 shows that during warmer periods, when heating needs are low (left side of the graph), people experiencing low inflation (blue line) worry less about the economy than those facing high inflation (red line). However, when heating needs are high (right side of the graph), economic concerns rise for everyone, regardless of inflation. In other words, heating degree days reduce economic worries only when inflation is low. This pattern is consistent with a model where people worry about the economy if either energy prices or consumption is high, but worry less when both are low.

These analyses suggest that we have a suitable instrument for *Economic Concern*.

Table 2. First Stage Relationship Between Our Instrument and Economic Concerns

| Outcome: | Hard power policies index (1) | Humanitarian policies index (2) |
|----------------------------------|-------------------------------------|---------------------------------------|
| HDD * Energy inflation | -0.003*** (0.001) | -0.003*** (0.001) |
| HDD | 0.002 (0.002) | 0.002 (0.002) |
| Energy inflation | 0.072*** (0.008) | 0.072*** (0.008) |
| Controls + Region FE + Survey FE | ✓ | ✓ |
| N | 72639 | 75483 |
| R ² | 0.26 | 0.26 |
| Effective (KP) F-stat | 23.2 | 24.4 |
| Cragg-Donald F-stat | 56.03 | 59.3 |

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust s.e. clustered by region-date are in parentheses. This table presents the first-stage relationship between the endogenous variable *Economic Concerns* and the instrument $HDD \times Energy\ Inflation$. Models 1 and 2 use as outcome variables indices of hard power and humanitarian policies, respectively. The KP critical F-stat for 10% bias is 16.38. “Controls” include participant age, gender, education, ideology, and social class.

Data Archival. All data and code required for replication will be made publicly available in the Harvard Dataverse upon publication.

| | | |
|------|---|------|
| 1117 | | 1179 |
| 1118 | | 1180 |
| 1119 | | 1181 |
| 1120 | 1. RD Kelemen, KR McNamara, State-building and the european union: Markets, war, and europe's uneven political development. <i>Comp. Polit. Stud.</i> 55 , 963–991 (2022). | 1182 |
| 1121 | 2. P Genschel, Bellicist integration? the war in ukraine, the european union and core state powers. <i>J. Eur. Public Policy</i> 29 , 1885–1900 (2022). | 1183 |
| 1122 | 3. C Thomson, M Mader, F Münchow, J Reifler, H Schoen, European public opinion: united in supporting ukraine, divided on the future of nato. <i>Int. Aff.</i> 99 , 2485–2500 (2023). | 1184 |
| 1123 | 4. C Wang, AD Moise, A unified autonomous europe? public opinion of the eu's foreign and security policy. <i>J. Eur. Public Policy</i> pp. 1–20 (2023). | 1185 |
| 1124 | 5. M Mader, Increased support for collective defence in times of threat: European public opinion before and after russia's invasion of ukraine. <i>Policy Stud.</i> pp. 1–21 (2024). | 1186 |
| 1125 | 6. L Hooghe, et al., The russian threat and the consolidation of the west: How populism and eu-skepticism shape party support for ukraine. <i>Eur. Union Polit.</i> 25 , 3 (2024). | 1187 |
| 1126 | 7. CE De Vries, Don't mention the war! second world war remembrance and support for european cooperation. <i>JCMS: J. Common Mark. Stud.</i> 58 , 138–154 (2020). | 1188 |
| 1127 | 8. Barron's, Inflation is fracturing the west's support for ukraine. what comes next. <i>Barron's</i> (2022) Accessed May 29, 2025. | 1189 |
| 1128 | 9. Western help for ukraine is likely to diminish next year. <i>The Econ.</i> (2023) Accessed May 29, 2025. | 1190 |
| 1129 | 10. H Foy, Why eu capitals are still arguing over more military aid to ukraine. <i>Financial Times</i> (2025) Accessed May 29, 2025. | 1191 |
| 1130 | 11. W Halm, DJ Hopkins, K Krakowski, N Sambanis, Economic strain does not reduce support for ukrainian refugees in poland and germany. <i>Available at SSRN 4585580</i> (2023). | 1192 |
| 1131 | 12. CM Stoezel Chadwick, AG Long, Foreign policy alignment and russia's energy weapon. <i>Foreign Policy Analysis</i> 19 , orac042 (2023). | 1193 |
| 1132 | 13. A Kennard, European reliance on russian gas imports has null effects on unga vote alignment. Working paper (2025). | 1194 |
| 1133 | 14. I Staffell, S Pfenninger, N Johnson, A global model of hourly space heating and cooling demand at multiple spatial scales. <i>Nat. Energy</i> 8 , 1328–1344 (2023). | 1195 |
| 1134 | 15. C Crownhart, The legacy of europe's heat waves will be more air conditioning. that's a problem. (2022) Accessed: 2025-08-24. | 1196 |
| 1135 | 16. International Energy Agency, Share of population living in a hot climate, 2022, and penetration of air conditioners, 2000–2022 (https://www.iea.org/data-and-statistics/charts/share-of-population-living-in-a-hot-climate-2022-and-penetration-of-air-conditioners-2000-2022) (2023) Accessed: 2025-08-06. | 1197 |
| 1136 | 17. J Burn-Murdoch, Britain and europe need to get serious about air conditioning. <i>Financial Times</i> (2025) Opinion Data Points. | 1198 |
| 1137 | 18. J Zaller, <i>The nature and origins of mass opinion</i> . (Cambridge university press), (1992). | 1199 |
| 1138 | 19. Pew Research Center, Economic discontent deepens as inflation concerns rise (2008) Accessed: 2025-05-30. | 1200 |
| 1139 | 20. JLM Olea, C Pflueger, A robust test for weak instruments. <i>J. Bus. & Econ. Stat.</i> 31 , 358–369 (2013). | 1201 |
| 1140 | | 1202 |
| 1141 | | 1203 |
| 1142 | | 1204 |
| 1143 | | 1205 |
| 1144 | | 1206 |
| 1145 | | 1207 |
| 1146 | | 1208 |
| 1147 | | 1209 |
| 1148 | | 1210 |
| 1149 | | 1211 |
| 1150 | | 1212 |
| 1151 | | 1213 |
| 1152 | | 1214 |
| 1153 | | 1215 |
| 1154 | | 1216 |
| 1155 | | 1217 |
| 1156 | | 1218 |
| 1157 | | 1219 |
| 1158 | | 1220 |
| 1159 | | 1221 |
| 1160 | | 1222 |
| 1161 | | 1223 |
| 1162 | | 1224 |
| 1163 | | 1225 |
| 1164 | | 1226 |
| 1165 | | 1227 |
| 1166 | | 1228 |
| 1167 | | 1229 |
| 1168 | | 1230 |
| 1169 | | 1231 |
| 1170 | | 1232 |
| 1171 | | 1233 |
| 1172 | | 1234 |
| 1173 | | 1235 |
| 1174 | | 1236 |
| 1175 | | 1237 |
| 1176 | | 1238 |
| 1177 | | 1239 |
| 1178 | | 1240 |

Table 3. Summary Statistics

| | Mean | SD | Min. | Max. |
|------------------------------------|-------|------|-------|------|
| Hard power policies index | 3.1 | 0.85 | 1 | 4 |
| Humanitarian policies index | 3.5 | 0.66 | 1 | 4 |
| Sanctions on Russia | 3.2 | 0.97 | 1 | 4 |
| Military aid for Ukraine | 2.9 | 1.04 | 1 | 4 |
| Financial aid for Ukraine | 3.2 | 0.90 | 1 | 4 |
| Humanitarian aid for Ukraine | 3.5 | 0.70 | 1 | 4 |
| Welcoming Ukrainian refugees | 3.4 | 0.75 | 1 | 4 |
| Economic concern | 2.6 | 0.8 | 1 | 4 |
| HDD (Heating degree days) | 5.8 | 7.3 | 0 | 27.9 |
| Energy inflation (standardized) | 0.1 | 1.1 | -2.2 | 3.5 |
| Instrument: HDD * Energy inflation | 2.2 | 11.0 | -26.7 | 78.7 |
| Age | 50.8 | 17.7 | 15 | 99 |
| Female | 0.5 | 0.5 | 0 | 1 |
| Ideology | 5.3 | 2.1 | 1 | 10 |
| Years of education: | | | | |
| No full-time education | 0.006 | 0.08 | 0 | 1 |
| Up to 15 years | 0.097 | 0.29 | 0 | 1 |
| 16-19 years | 0.419 | 0.49 | 0 | 1 |
| 20+ years | 0.411 | 0.49 | 0 | 1 |
| Still studying | 0.067 | 0.25 | 0 | 1 |
| Social class: | | | | |
| Working class | 0.21 | 0.41 | 0 | 1 |
| Lower middle class | 0.16 | 0.37 | 0 | 1 |
| Middle class | 0.53 | 0.49 | 0 | 1 |
| Upper middle class | 0.09 | 0.29 | 0 | 1 |
| Higher class | 0.01 | 0.09 | 0 | 1 |

Sample includes the 72,639 individuals analyzed in Model 1 of Table 4.

Table 4. IV estimate of *Economic Concern* on support for various policies (Regression table for Figure 1)

| | Hard power policies index | Sanctions on Russia | Milit. aid to Ukraine | Fin. aid to Ukraine | Humanitarian policies index | Hum. aid to Ukraine | Welcoming Ukr. refugees |
|---|------------------------------|------------------------|--------------------------|------------------------|--------------------------------|------------------------|----------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Economic concern | -0.479** (0.206) | -0.425* (0.225) | -0.499** (0.238) | -0.501** (0.209) | -0.006 (0.168) | -0.031 (0.168) | -0.016 (0.184) |
| Heating degree days | 0.002 (0.002) | 0.002 (0.002) | 0.001 (0.002) | 0.003 (0.002) | -0.000 (0.001) | -0.000 (0.001) | 0.000 (0.001) |
| Energy inflation | -0.018 (0.015) | -0.007 (0.017) | -0.020 (0.018) | -0.027* (0.015) | -0.028** (0.013) | -0.022* (0.013) | -0.034** (0.014) |
| Age | 0.001*** (0.000) | 0.001*** (0.000) | 0.001* (0.000) | 0.001*** (0.000) | 0.002*** (0.000) | 0.002*** (0.000) | 0.002*** (0.000) |
| Female | 0.021 (0.014) | 0.040*** (0.015) | -0.017 (0.016) | 0.032** (0.014) | -0.001 (0.011) | -0.006 (0.011) | 0.006 (0.012) |
| Ideology | 0.003 (0.002) | 0.004 (0.003) | 0.013*** (0.003) | -0.008*** (0.002) | -0.010*** (0.002) | -0.008*** (0.002) | -0.012*** (0.002) |
| <i>Years of studying (Baseline: Up to 15 years)</i> | | | | | | | |
| 16-19 years | -0.013 (0.012) | -0.017 (0.014) | -0.010 (0.015) | -0.004 (0.013) | 0.024** (0.010) | 0.028*** (0.010) | 0.023** (0.011) |
| 20+ years | 0.034** (0.016) | 0.024 (0.019) | 0.020 (0.020) | 0.067*** (0.018) | 0.133*** (0.014) | 0.132*** (0.014) | 0.135*** (0.016) |
| Still studying | 0.040 (0.034) | -0.017 (0.039) | 0.044 (0.040) | 0.102*** (0.036) | 0.152*** (0.030) | 0.139*** (0.030) | 0.161*** (0.033) |
| No full-time education | -0.083** (0.041) | -0.104** (0.046) | -0.071 (0.048) | -0.086** (0.042) | -0.076** (0.033) | -0.076** (0.035) | -0.069* (0.037) |
| <i>Social class (Baseline: Working class)</i> | | | | | | | |
| Lower middle class | 0.003 (0.019) | -0.000 (0.021) | 0.010 (0.022) | 0.001 (0.020) | -0.020 (0.016) | -0.022 (0.016) | -0.018 (0.017) |
| Middle class | 0.035 (0.043) | 0.025 (0.047) | 0.062 (0.051) | 0.026 (0.044) | 0.027 (0.035) | 0.011 (0.036) | 0.037 (0.039) |
| Upper middle class | 0.093 (0.062) | 0.086 (0.068) | 0.123* (0.073) | 0.078 (0.064) | 0.099* (0.051) | 0.079 (0.052) | 0.111* (0.057) |
| Higher class | 0.086 (0.071) | 0.071 (0.079) | 0.110 (0.085) | 0.083 (0.073) | 0.096* (0.058) | 0.064 (0.059) | 0.120* (0.065) |
| Region FE + Survey FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| N | 72639 | 74354 | 74512 | 75187 | 75483 | 76000 | 75749 |
| 1st stage F-stat (KP) | 23.2 | 22.6 | 22.7 | 25.0 | 24.4 | 24.9 | 24.4 |
| Weak IV-robust p-value | 0.027 | 0.072 | 0.045 | 0.022 | 0.971 | 0.854 | 0.931 |

Robust s.e. clustered by region-date are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The critical F-stat value (KP) for 10% bias is 16.38.

Table 5. Robustness checks using *Hard Power Policies Index* as the outcome variable

| | Econ. Concern: <i>Job Insecurity</i> (1) | HDD: <i>Temperature</i> (2) | HDD: Interview day (3) | HDD: Diff. from 5yr avg. (4) | HDD: Winsorize (5) | Drop <i>Ideology</i> (6) | Survey weights (7) |
|---|--|-----------------------------------|------------------------------|------------------------------------|--------------------------|--------------------------------|--------------------------|
| Economic concern | -1.054* (0.565) | -0.582*** (0.222) | -0.481** (0.206) | -0.608* (0.318) | -0.551** (0.223) | -0.478** (0.207) | -2.139** (1.060) |
| HDD | 0.001 (0.002) | 0.000 (0.002) | 0.001 (0.002) | 0.000 (0.002) | 0.003 (0.002) | 0.002 (0.002) | -0.008 (0.007) |
| Energy inflation | -0.049*** (0.011) | -0.010 (0.016) | -0.017 (0.015) | -0.009 (0.022) | -0.013 (0.016) | -0.018 (0.015) | 0.093 (0.063) |
| Age | 0.001*** (0.000) | 0.001** (0.000) | 0.001*** (0.000) | 0.001* (0.000) | 0.001** (0.000) | 0.001*** (0.000) | -0.001 (0.002) |
| Female | 0.048 (0.036) | 0.027* (0.015) | 0.021 (0.014) | 0.029 (0.020) | 0.025* (0.015) | 0.020 (0.014) | 0.108 (0.068) |
| Ideology | -0.010 (0.008) | 0.002 (0.003) | 0.003 (0.002) | 0.002 (0.003) | 0.002 (0.003) | | -0.028*** (0.008) |
| <i>Years of studying (Baseline: Up to 15 years)</i> | | | | | | | |
| 16-19 years | -0.069* (0.036) | -0.013 (0.013) | -0.013 (0.012) | -0.013 (0.013) | -0.013 (0.012) | -0.013 (0.012) | -0.027 (0.046) |
| 20+ years | -0.106 (0.091) | 0.029* (0.017) | 0.034** (0.016) | 0.028 (0.020) | 0.031* (0.017) | 0.034** (0.016) | -0.116 (0.116) |
| Still studying | 0.030 (0.039) | 0.026 (0.036) | 0.040 (0.034) | 0.022 (0.048) | 0.030 (0.036) | 0.039 (0.033) | -0.219 (0.198) |
| No full-time education | -0.157** (0.069) | -0.081* (0.043) | -0.083** (0.041) | -0.081* (0.043) | -0.081* (0.042) | -0.083** (0.041) | 0.011 (0.177) |
| <i>Social class (Baseline: Working class)</i> | | | | | | | |
| Lower middle class | -0.050 (0.049) | -0.005 (0.021) | 0.003 (0.019) | -0.007 (0.027) | -0.002 (0.021) | 0.003 (0.020) | -0.117 (0.078) |
| Middle class | -0.212 (0.185) | 0.014 (0.047) | 0.035 (0.043) | 0.008 (0.066) | 0.020 (0.047) | 0.036 (0.044) | -0.299 (0.209) |
| Upper middle class | -0.298 (0.289) | 0.063 (0.067) | 0.093 (0.062) | 0.055 (0.096) | 0.072 (0.068) | 0.095 (0.063) | -0.321 (0.284) |
| Higher class | -0.414 (0.353) | 0.053 (0.076) | 0.085 (0.071) | 0.045 (0.106) | 0.063 (0.077) | 0.088 (0.072) | -0.193 (0.264) |
| Region FE + Survey FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| <i>N</i> | 62193 | 72639 | 72639 | 72639 | 72639 | 72639 | 72639 |
| 1st stage F-stat (KP) | 5.400 | 21.886 | 23.478 | 10.894 | 20.699 | 22.983 | 4.574 |
| Weak IV-robust p-value | 0.042 | 0.013 | 0.024 | 0.036 | 0.019 | 0.028 | 0.000 |

Robust s.e. clustered by region-date are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The critical F-stat value (KP) for 10% bias is 16.38.

M1 uses *Personal Job Insecurity* instead of *National Economic Perceptions* to measure economic concern. M2 replaces *HDD* with a linear *Temperature* measure. M3 measures *HDD* on the day of the interview. M4 measures *HDD* as deviation from its five-year average. M5 winsorizes *HDD* at the 90th percentile. M6 drops *Ideology* to avoid potential post-treatment bias. M7 uses survey weights.

Table 6. Robustness checks using *Humanitarian Policies Index* as the outcome variable

| | Econ. Concern: <i>Job Insecurity</i> | HDD: <i>Temperature</i> | HDD: Interview day | HDD: Diff. from 5yr avg. | HDD: Winsorize | Drop <i>Ideology</i> | Survey weights |
|---|---|----------------------------|-----------------------|-----------------------------|----------------------|-------------------------|----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Economic concern | -0.383 (0.395) | -0.152 (0.172) | -0.132 (0.164) | -0.090 (0.246) | -0.100 (0.178) | -0.078 (0.166) | -1.541* (0.822) |
| HDD | 0.000 (0.002) | 0.002 (0.001) | 0.001 (0.001) | -0.003* (0.002) | 0.001 (0.001) | 0.001 (0.001) | -0.008 (0.005) |
| Energy inflation | -0.029*** (0.007) | -0.016 (0.013) | -0.019 (0.013) | -0.022 (0.017) | -0.021 (0.013) | -0.022* (0.013) | 0.066 (0.050) |
| Age | 0.001*** (0.000) | 0.002*** (0.000) | 0.002*** (0.000) | 0.002*** (0.000) | 0.002*** (0.000) | 0.002*** (0.000) | -0.000 (0.001) |
| Female | 0.014 (0.025) | 0.007 (0.011) | 0.005 (0.011) | 0.003 (0.016) | 0.003 (0.012) | 0.004 (0.011) | 0.079 (0.052) |
| Ideology | -0.016*** (0.006) | -0.011*** (0.002) | -0.011*** (0.002) | -0.010*** (0.002) | -0.010*** (0.002) | | -0.037*** (0.006) |
| <i>Years of studying (Baseline: Up to 15 years)</i> | | | | | | | |
| 16-19 years | 0.010 (0.025) | 0.025** (0.010) | 0.025** (0.010) | 0.025** (0.010) | 0.025** (0.010) | 0.026*** (0.010) | 0.011 (0.036) |
| 20+ years | 0.083 (0.064) | 0.127*** (0.014) | 0.129*** (0.014) | 0.130*** (0.016) | 0.130*** (0.014) | 0.133*** (0.013) | 0.007 (0.091) |
| Still studying | 0.104*** (0.027) | 0.131*** (0.029) | 0.134*** (0.028) | 0.139*** (0.038) | 0.138*** (0.030) | 0.146*** (0.028) | -0.080 (0.154) |
| No full-time education | -0.097** (0.047) | -0.073** (0.034) | -0.073** (0.034) | -0.074** (0.034) | -0.073** (0.034) | -0.074** (0.034) | -0.028 (0.124) |
| <i>Social class (Baseline: Working class)</i> | | | | | | | |
| Lower middle class | -0.047 (0.034) | -0.027 (0.016) | -0.025 (0.016) | -0.022 (0.021) | -0.022 (0.017) | -0.022 (0.016) | -0.117* (0.060) |
| Middle class | -0.097 (0.129) | -0.002 (0.036) | 0.002 (0.034) | 0.011 (0.051) | 0.009 (0.037) | 0.011 (0.035) | -0.276* (0.161) |
| Upper middle class | -0.089 (0.201) | 0.058 (0.052) | 0.064 (0.050) | 0.077 (0.074) | 0.074 (0.054) | 0.075 (0.051) | -0.284 (0.219) |
| Higher class | -0.131 (0.246) | 0.049 (0.058) | 0.056 (0.056) | 0.069 (0.080) | 0.066 (0.060) | 0.066 (0.057) | -0.192 (0.205) |
| Region FE + Survey FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| <i>N</i> | 61857 | 72165 | 72165 | 72165 | 72165 | 72165 | 72165 |
| 1st stage F-stat (KP) | 5.153 | 22.375 | 23.872 | 10.869 | 21.125 | 23.473 | 4.591 |
| Weak IV-robust p-value | 0.368 | 0.393 | 0.437 | 0.713 | 0.588 | 0.649 | 0.000 |

Robust s.e. clustered by region-date are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The critical F-stat value (KP) for 10% bias is 16.38.

M1 uses *Personal Job Insecurity* instead of *National Economic Perceptions* to measure economic concern. M2 replaces *HDD* with a linear *Temperature* measure. M3 measures *HDD* on the day of the interview. M4 measures *HDD* as deviation from its five-year average. M5 winsorizes *HDD* at the 90th percentile. M6 drops *Ideology* to avoid potential post-treatment bias. M7 uses survey weights.

Table 7. Placebo tests using alternative dependent variables as the outcome variable

| Placebo DV: | <i>Support for EU common trade policy</i> | <i>Support for EU citizens' free movement</i> |
|---|---|---|
| | (1) | (2) |
| Economic concern | -0.152 (0.153) | -0.097 (0.127) |
| HDD | 0.001 (0.001) | 0.000 (0.001) |
| Energy inflation | 0.004 (0.010) | 0.000 (0.008) |
| Age | 0.000 (0.000) | -0.000 (0.000) |
| Female | 0.000 (0.009) | 0.006 (0.008) |
| Ideology | -0.005** (0.002) | -0.008*** (0.002) |
| <i>Years of studying (Baseline: Up to 15 years)</i> | | |
| 16-19 years | -0.000 (0.006) | 0.014*** (0.005) |
| 20+ years | 0.013 (0.009) | 0.038*** (0.008) |
| Still studying | 0.016 (0.023) | 0.045** (0.019) |
| No full-time education | -0.032 (0.024) | 0.011 (0.020) |
| <i>Social class (Baseline: Working class)</i> | | |
| Lower middle class | 0.002 (0.013) | -0.001 (0.010) |
| Middle class | 0.017 (0.032) | -0.005 (0.026) |
| Upper middle class | 0.033 (0.044) | 0.011 (0.037) |
| Higher class | 0.024 (0.048) | 0.004 (0.039) |
| Region FE + Survey FE | ✓ | ✓ |
| <i>N</i> | 59912 | 61482 |
| 1st stage F-stat (KP) | 9.181 | 8.274 |
| Weak IV-robust p-value | 0.306 | 0.438 |

Robust s.e. clustered by region-date are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
The critical F-stat value (KP) for 10% bias is 16.38.

1861
1862
1863
1864
1865
1866
1867
1868
1869
1870
1871
1872
1873
1874
1875
1876
1877
1878
1879
1880
1881
1882
1883
1884
1885
1886
1887
1888
1889
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922

1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984

Table 8. Differences in Coefficients and P-Values by Subgroup

| Variable | Difference in coefficients | P-value |
|--|----------------------------|---------|
| Hard Power Policies Index | | |
| Gender (Male vs female) | 0.23 | 0.67 |
| Age (Below 50 vs above 50) | -0.51 | 0.24 |
| Political views (Left vs right) | -0.51 | 0.20 |
| College degree (No vs yes) | -0.82 | 0.03 |
| Perceived Russian threat (Low vs high) | -1.38 | 0.13 |
| Humanitarian Policies Index | | |
| Gender (Male vs female) | -0.33 | 0.44 |
| Age (Below 50 vs above 50) | -0.21 | 0.56 |
| Political views (Left vs right) | -0.33 | 0.32 |
| College degree (No vs yes) | -0.16 | 0.59 |
| Perceived Russian threat (Low vs high) | -0.92 | 0.12 |

Note: This table reports the estimated differences in coefficients between subgroups for two outcome indices: *Hard Power Policies* and *Humanitarian Policies*. Reported p-values correspond to tests of equality of coefficients across subgroups pairs (e.g., male vs. female). Negative values indicate lower estimated coefficients in the first subgroup relative to the second. Estimates come from Table 1.

1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046

2047
2048
2049
2050
2051
2052
2053
2054
2055
2056
2057
2058
2059
2060
2061
2062
2063
2064
2065
2066
2067
2068
2069
2070
2071
2072
2073
2074
2075
2076
2077
2078
2079
2080
2081
2082
2083
2084
2085
2086
2087
2088
2089
2090
2091
2092
2093
2094
2095
2096
2097
2098
2099
2100
2101
2102
2103
2104
2105
2106
2107
2108

Table 9. Component Loadings from PCA

| Variable | C1 | C2 | Unexplained |
|------------------------------|-------|-------|-------------|
| Sanctions on Russia | 0.61 | -0.03 | 0.23 |
| Military aid to Ukraine | 0.65 | -0.08 | 0.17 |
| Financial aid to UKR | 0.46 | 0.20 | 0.24 |
| Humanitarian aid to UKR | -0.05 | 0.72 | 0.16 |
| Welcoming Ukrainian refugees | 0.02 | 0.66 | 0.18 |

Note: This table reports the rotated component loadings from a principal component analysis with varimax rotation, based on five (standardized) outcome variables. Component 1 captures hard power policies, while Component 2 reflects humanitarian policies. The “Unexplained” column indicates the proportion of variance in each variable not accounted for by the two components.

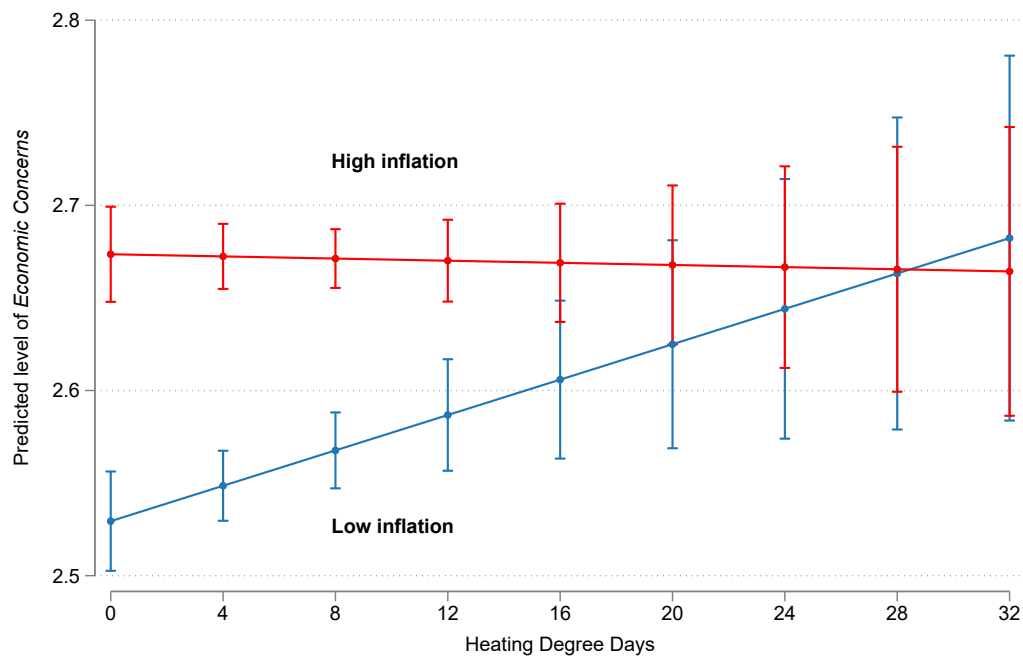
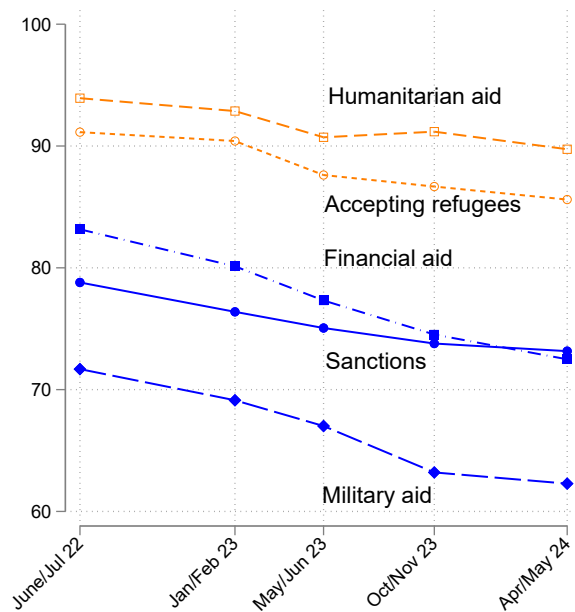


Fig. 4. The Predicted Effects of Energy Inflation and HDD on the Endogenous Variable *Economic Concerns*

Note: This figure shows the first stage relationship between our endogenous variable (*Economic Concerns*) and the components of our instrument (*HDD* and *Energy Inflation*). It plots predicted level (and 95% CI) of (*Economic Concerns*) as *HDD* varies between its minimum and maximum values, assuming *Energy Inflation* is either low (1 SD below the mean) or high (1 SD above the mean). Predictions are based on Model 1 in Table 2.



Notes: Each line shows the percentage of people agreeing or strongly agreeing with a policy. Data come from the Eurobarometer surveys.

Fig. 5. Public Support for Ukraine-related Policies over Time

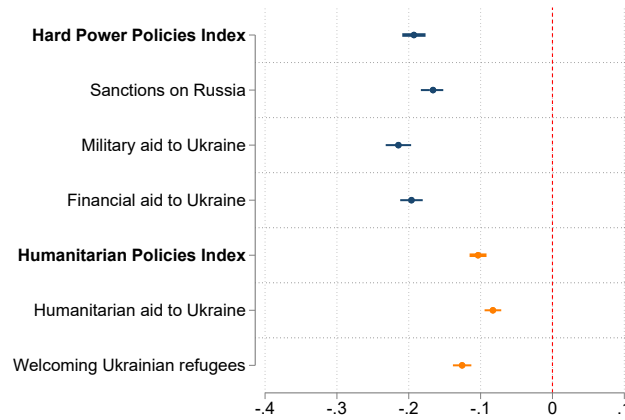


Fig. 6. OLS Estimate of Relationship Between the *Economic Concern* and Various Attitudes

Notes: This figure shows the point estimates (and 95% CI) of *Economic Concern* in OLS regressions. The outcome variable in each regression is listed on the y-axis. All regressions control for region FE, survey FE, and respondent characteristics.

OLS Regressions. Here we present the “naive” OLS estimates of the relationship between economic concerns and our outcome variables. OLS and IV estimates may differ for several reasons. Measurement error in the endogenous variable and omitted variable bias can both bias OLS estimates toward zero. Conversely, reverse causality, where support for sanctions shapes perceptions of the economy, can inflate OLS estimates. Therefore, we expect OLS estimates to be biased. Nevertheless, they serve as a useful baseline.

Figure 6 displays OLS point estimates (with 95% CI) for the effect of *Economic Concern*. The outcome variables are listed on the y-axis. All regressions include region fixed effects, survey fixed effects, and respondent characteristics.

Across all outcomes, Figure 6 shows that *Economic Concern* is negatively and significantly associated with support for pro-Ukraine policies. Respondents who perceive a weaker national economy are less likely to support sanctions against Russia, aid to Ukraine, or accepting Ukrainian refugees. As in our IV estimates, *Economic Concern* is more strongly linked to hard power policies than to humanitarian ones.

Alternative Instrument. As a robustness check, we construct an alternative, plausibly exogenous measure of local exposure to energy price fluctuations using pre-crisis energy demand data from 2019. The energy demand data come from the European Commission’s Joint Research Centre Energy Atlas[†], which provides gridded (1x1km) information on regional energy demand across the EU. We aggregate energy demand by source—natural gas, electricity, renewables, oil and petroleum, solid fuels, and heat—at the NUTS level and compute the 2019 share of natural gas out of total demand.[‡] This share serves as a plausibly exogenous pre-war proxy for a region’s vulnerability to energy price shocks. We then interact the 2019 shares of natural gas with changes in the HICP energy index (described in the main text) to construct an alternative shift-share instrument for economic concern.

We estimate the following equation using an instrumental variables approach:

$$Y_{irt} = \text{Economic Concern}_{irt} + \sigma W_i + \gamma_r + \delta_t + \varepsilon_{irt} \quad [1]$$

Where the first-stage equation is:

$$\text{Economic Concern}_{irt} = \hat{\beta} \text{Pre-War Natural Gas Demand Share}_{r,2019} \times \text{Energy Inflation}_{r,t} + \sigma \hat{W}_i + \hat{\gamma}_r + \hat{\delta}_t + \varepsilon_{irt} \quad [2]$$

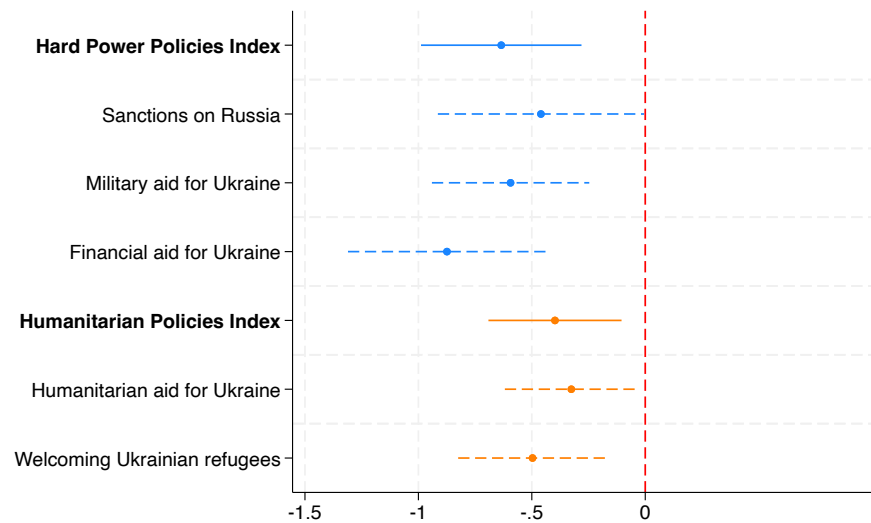
Here r indexes NUTS region, t indexes time (survey), W_i are individual covariates such as gender, education, age, ideology, and socioeconomic status. Finally, γ_r is a region (NUTS2 in most cases) fixed effect, while δ_t are survey fixed effects.

The results are shown in Figure 7 and Table 10. Similar to our main estimates, we find that economic concerns have a negative impact on support for hard power policies, and to a lesser extent for humanitarian policies.

[†] <https://energy-industry-geolab.jrc.ec.europa.eu/energy-atlas/>

[‡] Our results are robust to including electricity demand in this calculation.

Fig. 7. IV Estimate of *Economic Concern* Obtained Using the Alternative Instrument



Notes: This figure presents the IV estimates (and 95% CI) of *Economic Concern* obtained with the alternative instrument (*Pre-War Natural Gas Demand Share* \times *Energy Inflation*) on support for various policies. Each line represents a separate regression, with the policy listed on the y-axis as the dependent variable. Support is measured on a 4-point scale from “totally disagree” to “totally agree.”

Table 10. IV estimates obtained using the alternative instrument (Pre-War Natural Gas Share \times Energy Inflation)

| | (1) Hard power policies index | (2) Sanctions on Russia | (3) Milit. aid to Ukraine | (4) Fin. aid to Ukraine | (5) Humanitarian policies index | (6) Hum. aid to Ukraine | (7) Welcoming Ukr. refugees |
|------------------------------------|-------------------------------------|-------------------------------|---------------------------------|-------------------------------|---------------------------------------|-------------------------------|-----------------------------------|
| Economic concern | -0.635*** (0.180) | -0.460** (0.231) | -0.594*** (0.176) | -0.874*** (0.222) | -0.398*** (0.149) | -0.326** (0.149) | -0.497*** (0.166) |
| Controls + Region FE + Survey FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| N | 62733 | 64307 | 64362 | 65021 | 65256 | 65716 | 65490 |
| KP F-stat in 1 st stage | 30.647 | 32.591 | 30.523 | 28.253 | 30.176 | 29.276 | 30.783 |
| Weak IV-robust p-value | 0.001 | 0.044 | 0.002 | 0.000 | 0.011 | 0.034 | 0.004 |

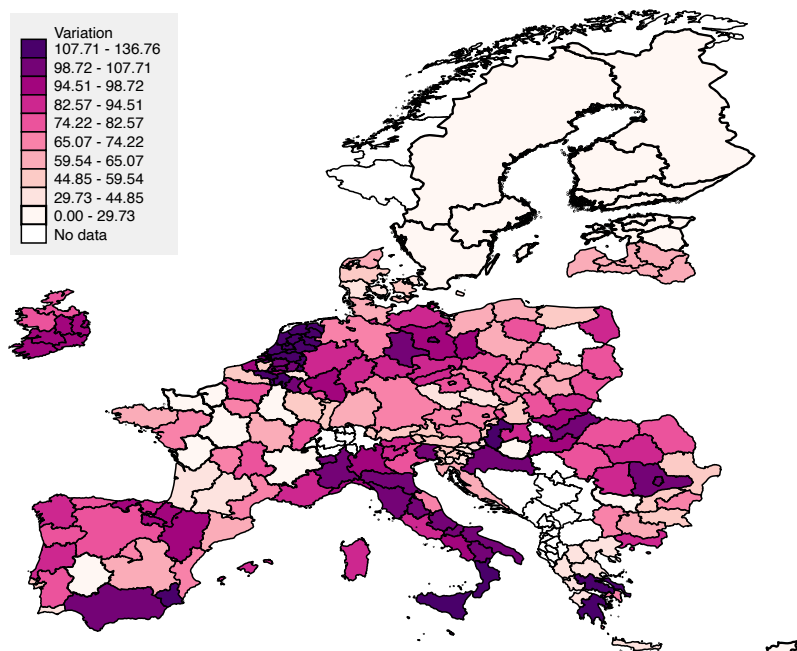
Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Robust s.e. clustered by region are in parentheses. This table shows the IV estimate of Economic Concerns on outcomes of interest. The first-stage relationship is reported in Table 11. “Controls” are the following participant characteristics: age, gender, education, ideology, and social class.

Table 11. First stage estimates of *Economic Concern* and Our Alternative Instrument

| | (1) Economic concern: Hard Power Index Model | (2) Economic concern: Humanitarian Index Model |
|--|--|--|
| Share Pre-War Natural Gas * Energy Inflation | 0.00892*** (0.00162) | 0.00885*** (0.00161) |
| Controls + Region FE + Survey FE | ✓ | ✓ |
| N | 62733 | 65256 |
| Effective (KP) F-stat | 30.534 | 30.069 |
| Cragg-Donald F-stat | 103.836 | 105.84 |

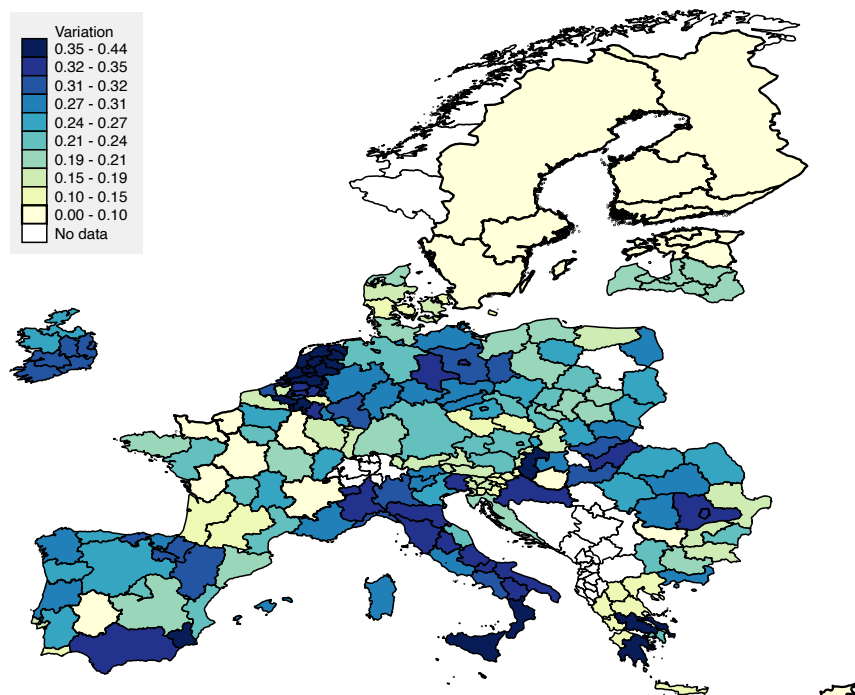
Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Robust s.e. clustered by region are in parentheses. This table presents the first-stage relationship between the endogenous variable *Economic Concerns* and the instrument *Pre-war Natural Gas Share* \times *Energy Inflation* for the samples in the Hard Power Index Model (1) and in the Humanitarian Power Index Model (2). The KP critical F-stat for 10% bias is 16.38. “Controls” include participant age, gender, education, ideology, and social class.

Eurobarometer 98.2 (January-February 2023)
Avg. Pre-War Natural Gas Demand * Energy Inflation Instrument by Region



Pre-War (2019) Natural Gas Demand * Energy Inflation, averaged across interview dates

Avg. Pre-War Natural Gas Demand



Pre-War (2019) Natural Gas Demand

Fig. 8. Geographic Variation in Our Alternative Instrument and Its Component (*Pre-War Natural Gas Demand*) During Eurobarometer 98.2 (January–February 2023)