

# Terror headlines and voting

98

WORKING PAPER

MARCH 2022

Armine Ghazaryan

Corrado Giulietti

Jackie Wahba

## **ABSTRACT**

This paper studies the impact of media on support for right-wing populism. We collect data on headlines about ISIS and terrorism in the context of the Syrian crisis from major national news sources in England for the period 2013 to 2019. Based on these, we develop the Terror News Index, which measures the relative frequency of daily news on terror, and match it with individual panel data from Understanding Society. We estimate fixed-effects model of the probability of supporting UKIP – the major right-wing populist party in England at the time – as a function of the Terror News Index and find that an interquartile increase of TNI results in a 3.6% higher probability of supporting UKIP. The estimated effect is particularly large among UK-born older people, the unemployed and individuals with relatively low levels of education.

## **KEYWORDS**

Right-wing populism; political preferences; Syrian crisis; refugees.

## **EDITORIAL NOTE**

Armine Ghazaryan is Research Associate at the Department of Economics, University of Sheffield.

Professor Corrado Giuliatti is Professor Economics in the Department of Economics at the University of Southampton where he is also member of the ESRC Centre for Population Change.

Professor Jackline Wahba is Professor of Economics in the Department of Economics at the University of Southampton where she is also member of the ESRC Centre for Population Change.

Corresponding author: Corrado Giuliatti [C.Giuliatti@soton.ac.uk](mailto:C.Giuliatti@soton.ac.uk)

## ACKNOWLEDGEMENTS

This work is funded by the ESRC, grant ES/K007394/1. The UKHLS (Understanding Society) Survey is conducted by the Institute for Social and Economic Research, University of Essex. Access to the datasets is provided by the UK Economic and Social Data Service.

- © Armine Ghazaryan, Corrado Giuliatti, Jackie Wahba all rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

### ESRC Centre for Population Change

The ESRC Centre for Population Change (CPC) is a joint initiative between the Universities of Southampton, St Andrews and Stirling, in partnership with the Office for National Statistics (ONS) and the National Records of Scotland (NRS). The Centre is funded by the Economic and Social Research Council (ESRC) grant numbers RES-625-28-0001, ES/K007394/1 and ES/R009139/1.

This working paper series publishes independent research, not always funded through the Centre. The views and opinions expressed by authors do not necessarily reflect those of the CPC, ESRC, ONS or NRS.

The ESRC Centre for Population Change Working Paper Series is edited by Teresa McGowan; [t.mcgowan@southampton.ac.uk](mailto:t.mcgowan@southampton.ac.uk)

[Website](#) | [Email](#) | [Twitter](#) | [Facebook](#) | [Mendeley](#)

# TERROR HEADLINES AND VOTING

## TABLE OF CONTENTS

<b>1. INTRODUCTION .....</b>	<b>1</b>
<b>2. DATA AND METHODOLOGY .....</b>	<b>2</b>
<b>3. RESULTS .....</b>	<b>6</b>
<b>4. CONCLUSIONS .....</b>	<b>9</b>
<b>6. APPENDIX.....</b>	<b>12</b>

## 1. INTRODUCTION

The recent war in Syria has had widespread effects, including the triggering of one of the most significant refugee crises in Europe. The influx of refugees has led to growing public concerns and anti-immigrant sentiment (Hangartner et al., 2019), and has contributed to a rise of support for far-right and right-wing populist parties in several European countries. For example, Dustmann et al. (2019) and Steinmayr (2021) find evidence that exposure to refugees, measured by the share of refugees in a locality, increases the voting shares for far-right parties<sup>1</sup>

In this paper, we examine a new channel through which the refugee crisis leads to growing support for right-wing populism: the exposure to terror news. Specifically, we investigate how news coverage of ISIS and terror in the context of the Syrian crisis has impacted political support for the UK Independence Party (UKIP) – the main right-wing populist party in England.

We focus on the period 2013 to 2019, a time when UKIP witnessed first a rapid and substantial surge in consensus and then a progressive decline. In 2014, UKIP started gaining importance thanks to some success in local elections but especially by winning a conspicuous amount of seats in the European Parliament Elections. In the 2015 general election – at the peak of its political success – UKIP obtained 12.6% of the total votes. The popularity and support for UKIP continued until mid-2016, when the UK voted for leaving the European Union. After then, UKIP went into a period of progressive decline, marked by frequent changes in leadership.

Drawing online information from three outlets spanning the political spectrum in England (BBC, the Guardian and the Daily Mail), we develop a measure – the Terror News Index (TNI) – that provides information on the relative frequency of daily news on ISIS and terrorism in the context of the Syrian crisis. We focus on these type of news because refugees and terrorism are

---

<sup>1</sup> There is growing literature on the effects of immigration on voting, see for example Becker and Fetzer (2016) for the UK, Edo et al. (2019) for France and Halla et al. (2017) for Austria. See Becker and Ferrara (2019) for a review of the impacts of refugees on political and economic outcomes.

often correlated issues in the minds of the public<sup>2</sup>. At the same time, the Syrian civil war has been the salient event in terms of the refugee crisis.

We then merge this index with individual level panel data from Understanding Society, the UK Household Longitudinal Study. These data allow us to model the choice of supporting UKIP as a function of TNI using a fixed effect model, with the impact of terror news on political support being identified through within-individual variation of TNI. Our baseline result shows that an interquartile increase of TNI results in a 3.6% higher probability of supporting UKIP. However, the estimated effect varies substantially across groups, and is particularly large among UK-born older people, the unemployed and individuals with relatively low levels of education.

Our paper contributes to different literature strands. First, we contribute to studies on the role of media on public opinions and attitudes (e.g., Gentzkow and Shapiro 2004, and Facchini et al. 2017) and voting behaviour (e.g., Gerber et al. 2009, DellaVigna and Kaplan 2007, Cantarella et al. 2020, and Murphy and Devine 2020). Our study also relates to papers examining the link between media reporting of crimes, immigration and the effect on voting behavior (e.g., Keita et al. 2021, and Couttenier et al. 2019).

## **2. DATA AND METHODOLOGY**

Our analyses focuses on England in the period 2013-2019. The data used in our analysis comes from two sources, the Internet Archive and Understanding Society. We obtained information on the outcome of interest – individuals’ political support for UKIP – from Understanding Society, a nationally representative longitudinal survey. Our sample covers Waves 5, 6, 7, 9 and 10.<sup>3</sup> We construct the variable for UKIP political support based on the questions “which political party closest to” and “party would vote for tomorrow”. We define a binary variable equal to 1 if individuals reply UKIP to either of the two questions.<sup>4</sup> We also define binary indicators for

---

<sup>2</sup> For example, a Pew Research Center survey found that in eight out of the ten European nations surveyed, the majority of respondents believe that the inflow of refugees increases the likelihood of terrorism in their country (PEW, 2016).

<sup>3</sup> Questions on political preferences are not collected in Wave 8, which is thus excluded from the analysis.

<sup>4</sup> Our definition of UKIP political support is in line with that of Fetzer (2019), although in their case they also include the “other” parties besides UKIP. We test the robustness of our results to the definition of Fetzer (2019) in Table A2 of Appendix A.

political support to other parties, which we use in robustness tests. We then gather additional characteristics from the survey that are used as control variables in the analyses. Table 1 shows the summary statistics of our sample, by political support. Characteristics of UKIP supporters are quite different from individuals supporting other parties, especially in terms of gender, ethnicity and education.

We gather data on news on terror through the snapshots of the news pages available through the Internet Archive (<https://web.archive.org>). To obtain data that encompass a representative readership in England – both in terms of size and political spectrum – we scrape all daily online headlines and lead paragraphs of the main news pages of the BBC, the Guardian and the Daily Mail websites. Across the three sources, we code as terror news the articles concerning ISIS and terrorism that are related to the Syrian crisis. We do so by selecting the headlines and lead paragraphs that mention the keywords “Syria(n)” or “refugee”, and “IS(IS)”, “ISIL”, “Islamic State” or “terror” in the headlines. We then define our key variable – the Terror News Index (TNI) – as the proportion of the daily number of terror news to the total daily number of news.<sup>5</sup> For days when there are no news on terror across the three outlets, TNI is equal to 0.

---

<sup>5</sup> The news are summed across the three sources of data.

	UKIP	Conservative	Labour	Lib. Dem.	Other	No Party	All
Female (D)	0.44 (0.50)	0.52 (0.50)	0.56 (0.50)	0.57 (0.50)	0.57 (0.49)	0.59 (0.49)	0.55 (0.50)
Age	54.70 (16.87)	55.12 (17.46)	47.24 (17.55)	52.46 (17.42)	44.30 (16.59)	44.21 (16.98)	49.70 (17.88)
Born in the UK (D)	0.96 (0.21)	0.90 (0.30)	0.75 (0.43)	0.88 (0.32)	0.88 (0.33)	0.85 (0.36)	0.84 (0.37)
Ethnicity: White (D)	0.98 (0.15)	0.92 (0.28)	0.66 (0.48)	0.92 (0.28)	0.87 (0.34)	0.82 (0.39)	0.81 (0.40)
Married (D)	0.71 (0.45)	0.73 (0.44)	0.63 (0.48)	0.70 (0.46)	0.59 (0.49)	0.59 (0.49)	0.66 (0.47)
Number of Children	0.37 (0.81)	0.38 (0.80)	0.57 (1.00)	0.43 (0.83)	0.43 (0.86)	0.58 (0.98)	0.49 (0.92)
Educ: University Degree (D)	0.21 (0.41)	0.42 (0.49)	0.42 (0.49)	0.59 (0.49)	0.48 (0.50)	0.26 (0.44)	0.40 (0.49)
Educ: A-level (D)	0.23 (0.42)	0.20 (0.40)	0.20 (0.40)	0.16 (0.37)	0.22 (0.41)	0.24 (0.43)	0.21 (0.41)
Educ: GCSE or Other Qualifications (D)	0.41 (0.49)	0.29 (0.45)	0.24 (0.43)	0.18 (0.38)	0.24 (0.43)	0.36 (0.48)	0.28 (0.45)
Educ: No or Missing Qualifications (D)	0.15 (0.36)	0.10 (0.29)	0.13 (0.34)	0.06 (0.25)	0.06 (0.23)	0.15 (0.36)	0.12 (0.32)
Unemployed (D)	0.04 (0.20)	0.02 (0.12)	0.05 (0.22)	0.02 (0.15)	0.06 (0.24)	0.07 (0.25)	0.04 (0.20)
Monthly Income (log £)	6.94 (1.40)	7.20 (1.46)	6.83 (1.81)	7.19 (1.52)	6.79 (1.87)	6.69 (1.82)	6.94 (1.69)
Live in Rural Areas (D)	0.24 (0.43)	0.28 (0.45)	0.12 (0.32)	0.26 (0.44)	0.21 (0.41)	0.16 (0.36)	0.19 (0.40)
Avg. Number of Waves	3.41	3.56	3.28	3.53	3.37	2.97	3.34
Number of Observations	6,408	31,304	38,746	7,296	5,784	17,286	106,824

**Table 1:** Summary Statistics - Individual Characteristics, 2013–2019

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15>.

**Notes:** (D) indicates dummy variables. Standard deviations are in parentheses.

Married (D) is a binary variable that takes a value of one if the individual is married/civil partner or living as couple, and zero otherwise.

Foreign-born (D) is a binary variable that takes a value of one if the individual is not born in the UK, and is zero otherwise.

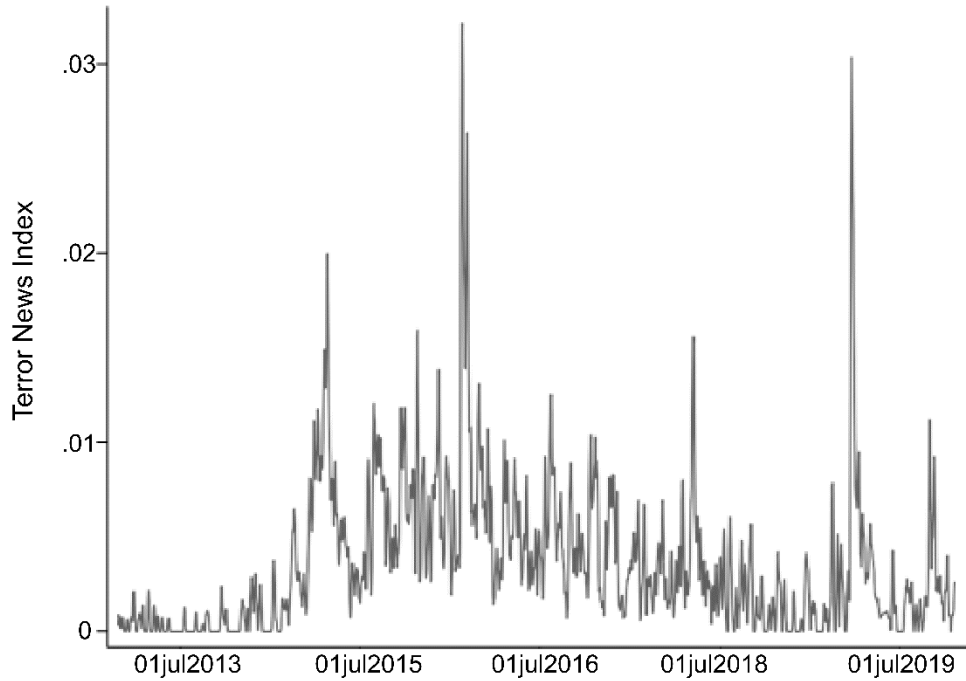
Educ: Degree (D): university or higher degree or other higher degree; Educ: A-level (D): A-level or similar; Educ: GCSE or Other Qualifications (D): GCSE or similar qualifications.

Monthly Income (log £) is the individual monthly income expressed in logs.

Avg. Number of Waves is the average number of waves respondents appear in the sample.

Figure 1 shows the evolution of TNI for the period of interest. The value of the index rises around the end of 2014, at a time the Islamic State group was at the height of its expansion, having occupied large parts of Syria and Iraq. The TNI declines after 2016, experiencing some peak value at the end of October 2019, around the death of the Islamic State group's leader al-Baghdadi, which marks the fall of ISIS.





**Figure 1:** Terror News Index

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15>.

**Notes:** The figure represents a locally weighted regression of the Terror News Index (TNI) over the time period covered by the sample (bandwidth 0.005). TNI is defined as the daily number of headlines about the Syrian crisis that mention ISIS/terror over the daily number of headlines. TNI is equal to 0 for days with no terror news.

We then merge the microdata with the news on terror by matching the date of TNI with the interview date of Understanding Society. In our framework, we assume that individuals’ preferences are influenced by the latest news, which we define as the news of the previous day. In other words, if an individual is interviewed, say, on a Tuesday, the relevant TNI for that individual would be that of Monday.

We estimate the effect of the Terror News Index on UKIP political support using the following fixed-effects linear probability model:

$$\text{UKIP}_{it} = \alpha + \beta \text{TNI}_t + \gamma \mathbf{X}_{it} + \delta \mathbf{Z}_t + a_i + \varepsilon_{it} \quad (1)$$

UKIP<sub>it</sub> is a binary variable equal to one if the respondent would vote for, or feels closest to, UKIP and equal to zero otherwise and TNI<sub>t</sub> is the Terror News Index at time *t*. *X*<sub>it</sub> contains time-varying individual characteristics such as marital status, number of children, unemployment and income; it also contains interaction terms between the year dummies and time-invariant characteristics such as gender, age and education, plus interaction terms between the year dummies and the UK Government Office Region of residence dummies. *Z*<sub>t</sub> contains time controls, including a linear time trend, year fixed effects, month fixed effects and day-of-the-week fixed effects. It also includes the UK Daily Economic Policy Uncertainty (EPU) Index developed by Baker et al. (2016).<sup>6</sup> Crucial to our identification strategy is *a*<sub>*i*</sub>, capturing the individual unobserved effect. We estimate Equation (1) using fixed effects, meaning that we identify the effect of interest leveraging within-individual variation in UKIP political support and in the daily value of TNI, thereby purging out any time-invariant unobservable factors correlated with the choice of supporting UKIP.

### 3. RESULTS

Table 2 shows baseline estimates of the regression model in Equation (1). The specification in column (1) is an OLS bivariate regression with no control variables. Column (2) includes individual and year fixed effects, while in column (3) we also add the remaining time controls contained in *Z*<sub>*t*</sub>. We then add the individual characteristics *X*<sub>it</sub>: in column (4) we only add time-varying controls; in column (5) we also add time-invariant controls interacted with year fixed effects. Column (5) is our preferred specification, which we will use throughout the remaining analyses. Finally, in column (6) we estimate the specification in column (5) on a balanced sample, specifically the subset of individuals who appear continuously in waves 5 to 9.<sup>7</sup> For ease of comparing estimates across the various specifications, we also include the standardized coefficient of TNI in square brackets.

The OLS estimate of TNI is positive and statistically significant. This is purely a correlation and might be affected by unobservable individual/time confounding factors. When we estimate with

---

<sup>6</sup> The UK Daily EPU Index is constructed using articles from a range of UK newspapers that contain three groups of terms: economic or economy, uncertain or uncertainty, and spending, deficit, regulation, budget, tax, policy, or Bank of England. The aim of including this variable is to control for daily events that might be correlated to terror news and could potentially affect political preferences.

<sup>7</sup> The number of observations in Wave 10 is only 5,259, hence including this wave will make the balanced sample too small.

fixed effects in columns (2) to (5), the estimate of TNI is smaller (by nearly 50% in terms of standardized size), but still positive and statistically significant. The coefficient 0.325 in column (5) can be interpreted as follows: an interquartile increase of TNI (corresponding to a change between 0 and 0.0066) would result in a 3.6% increase of the probability of supporting UKIP (from 0.0587 to 0.0608). The estimate for the balanced sample in column (6) is similar to that of the preferred specification.

Results in Table 2 refer to the representative individual in the sample; however, there are substantial differences depending on individuals' characteristics. Figure 2 shows the results of our heterogeneity analysis, where we estimate our preferred specification on subgroups defined on selected individual characteristics. For example, the estimated effect for individuals aged above 65 and born in the UK is 0.887, more than double the baseline. For this subgroup, an interquartile increase of TNI would make the probability of supporting UKIP going from 0.0892 to 0.0951 % – a 6.6% increase. The estimated effect is particularly large (1.962) on the subgroup of low educated unemployed males, albeit the estimate is significant at 10% level, most likely due to the small sample size of this subgroup.

	(1)	(2)	(3)	(4)	(5)	(6)
Terror News Index	.574***	.311**	.331** *	.329***	.325***	.365**
	(.124)	(.124)	(.126)	(.126)	(.126)	(.168)
	[.014]	[.008]	[.008]	[.008]	[.008]	[.009]
Married (D)				.011**	.005	-.004
				(.005)	(.005)	(.007)
Number of Children				-.000	-.002	-.002
				(.002)	(.002)	(.003)
Unemployed (D)				.012**	.011**	.013*
				(.005)	(.005)	(.007)
Monthly Income (log £)				.001*	.000	.001
				(.001)	(.001)	(.001)
Live in Rural Areas (D)				-.000	-.003	.004
				(.008)	(.008)	(.010)
Individual and Year		✓	✓	✓	✓	✓
F.E. Additional Time			✓	✓	✓	✓
Controls					✓	✓
Additional Individual and Regional						✓
Controls						
Balanced Sample						
N. Obs.	106,824	106,824	106,824	106,824	106,824	52,084
N. Individ.		38,776	38,776	38,776	38,776	13,021
R <sup>2</sup>	.00	.02	.02	.02	.03	.03

**Table 2:** Effect of the Terror News Index on UKIP support

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15>.

**Notes:** Standard errors are clustered at the individual level. Standardized estimates are presented in square brackets. The dependent variable is a binary variable equal to 1 if an individual supports or would vote for UKIP, and equal to 0 if they support or would vote for other parties or would not vote for any party (see text for detail).

Terror News Index is the daily number of headlines about the Syrian crisis that mention ISIS/terror over the daily number of headlines. The Index refers to the day before individuals are interviewed.

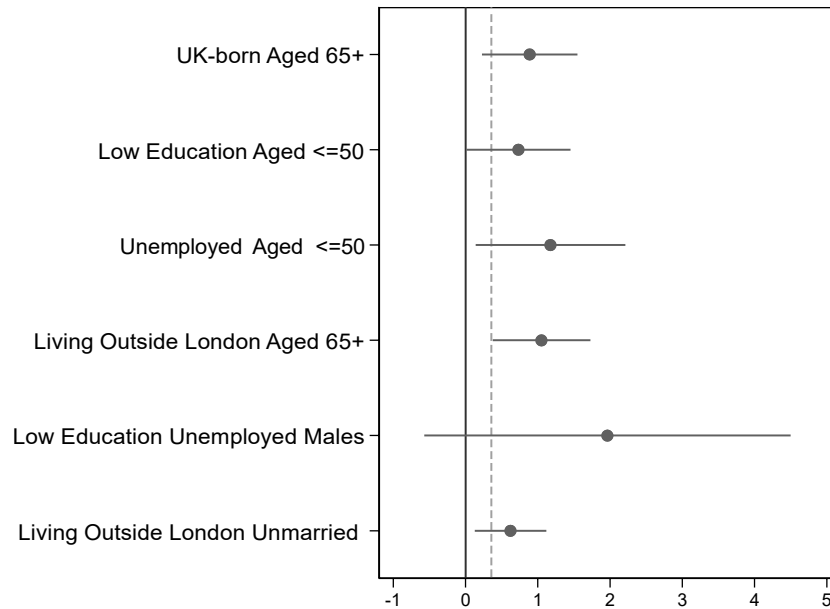
Column (1) is a bivariate least squares regression. Columns (2)-(5) are fixed effect regressions including individual and year fixed effects.

Column (4) includes only the subsample individuals who appear in all waves 5, 6, 7 and 9.

Additional Time Controls includes a linear time trend, indicators for month and day of the week, and the Economic Policy Uncertainty Index.

Additional Individual and Regional include: gender × year fixed effects; age × year fixed effects; education × year and region × year fixed effects.

p < 0.10.; \*\* p < 0.05.; \*\*\* p < 0.01.



**Figure 2:** Heterogeneity Analysis

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15>.

**Notes:** The figure shows the point estimates and 95% confidence intervals of the regression column (5) of Table 2 different subsamples.

The dashed line represents the point estimate from column (5) of Table 2.

Low Education includes individuals with GCSE or other qualifications and individuals with no or missing qualifications. Unemployed includes individuals who report being unemployed at least once in the sampled period.

Appendix A contains additional results that provide further support to our benchmark findings. Table A1 provides results from modelling the probability of supporting other parties; Table A2 and Table A3 provide results of specifications using alternative definitions of TNI and UKIP political support, respectively; Table A3 explores the sensitivity to the timing of the news, testing for potential role of leads and lags of TNI; Figure A1 presents the results of a randomization inference exercise; Table 1 provides descriptive evidence on how political intentions map into actual voting. Appendix B includes a description about the derivation of the sample and the construction of the variables.

#### 4. CONCLUSIONS

Our paper sheds light on the role of media in influencing public opinions and voting behavior. Previous evidence based on PEW (2016) shows that the public associate terrorism with Syrian

refugees. Dustmann et al. (2019) and Steinmayr (2021) show that voters' anti-immigrant attitudes are driven by the physical presence of refugees . Our study provides novel suggestive evidence that news themselves can increase support for right-wing populism. One avenue for further research would be the study of the potential mechanisms through which news influence political support, including news' tone and bias, and trust in media.

## REFERENCES

- Baker, S.R., Bloom, N., & Davis, S.J.** (2016) Measuring economic policy uncertainty, *Quarterly Journal of Economics*, 131 (4), 1593–1636.
- Becker, S.O., & Ferrara, A.** (2019) Consequences of forced migration: A survey of recent findings, *Labour Economics*, 59, 1–16.
- Becker, S.O., & Fetzer, T.** (2016) Does Migration Cause Extreme Voting, *Competitive Advantage in the Global Economy* (CAGE Online Working Paper Series 306).
- Cantarella, M., Fraccaroli, N., & Volpe, R.** (2020) Does fake news affect voting behaviour? *CEIS Research Papers*, no. 493, CEIS Centre for economic and international studies
- Couttenier, M., Hatte, S., Thoenig, M., & Vlachos, S.** (2019) The logic of fear-populism and media coverage of immigrant crimes, *CEPR Discussion Paper* No. DP13496.
- DellaVigna, S., & Kaplan, E.** (2007) The Fox News effect: Media bias and voting, *The Quarterly Journal of Economics*, 122 (3), 1187–1234.
- Dustmann, C., Vasiljeva, K., & Damm, A. P.** (2019) Refugee Migration and Electoral Outcomes, *The Review of Economic Studies*, 86, 2035–2091.
- Edo, A., Giesing, Y., Oztunc, J., & Poutvaara, P.** (2019) Immigration and electoral support for the far-left and the far-right, *European Economic Review*, 115, 99–143.
- Facchini, G., Mayda, A.M., & Puglisi, R.** (2017) Illegal immigration and media exposure: evidence on individual attitudes, *IZA Journal of Development and Migration*, 7.
- Fetzer, T.** (2019) Did austerity cause Brexit?, *American Economic Review*, 109 (11), 3849–86.
- Gentzkow, M.A., & Shapiro, J.M.** (2004) Media, education and anti-Americanism in the Muslim world, *Journal of Economic Perspectives*, 18 (3), 117–133.
- Gerber, A.S., Karlan, D., & Bergan, D.** (2009) Does the media matter? A field experiment measuring the effect of newspapers on voting behavior and political opinions, *American Economic Journal: Applied Economics*, 1 (2), 35–52.
- Halla, M., Wagner, A.F., & Zweimuller, J.** (2017) Immigration and Voting for the Far Right, *Journal of the European Economic Association*, 15 (6), 1341–1385.
- Hangartner, D., Dinas E., Marbach, M., Matakos K., & Xefteris, D.** (2019) Does exposure to the refugee crisis make natives more hostile? *American Political Science Review*, 113 (2), 442–455.
- Keita, S., Renault, T., & Valette, J.** (2021) The Usual Suspects: Offender Origin, Media Reporting and Natives' Attitudes Towards Immigration, *Documents de travail du Centre d'économie de la Sorbonne*.
- Murphy, J., & Devine, D.** (2020) Does media coverage drive public support for UKIP or does public support for UKIP drive media coverage? *British Journal of Political Science*, 50 (3), 893–910.
- PEW** (2016) Europeans Fear Wave of Refugees Will Mean More Terrorism, Fewer Jobs, *Pew Research Center*.
- Steinmayr, A.** (2021) Contact versus Exposure: Refugee Presence and Voting for the Far Right, *Review of Economics and Statistics*, 103 (2), 310–327.

## 6. APPENDIX

### Appendix A

	UKIP	Conservative	Labour	Lib. Dem.	Other	No Party
Terror News Index	.325*** (.126) [.008]	.384** (.179) [.005]	-.375* (.197) [-.005]	.141 (.124) [.003]	-.107 (.128) [-.003]	-.397** (.181) [-.006]
N. Obs.	106,824	106,824	106,824	106,824	106,824	106,824
N. Indiv.	38,776	38,776	38,776	38,776	38,776	38,776
R <sup>2</sup>	.03	.03	.01	.02	.02	.02

**Table A1:** Effect of the Terror News Index on Party Support

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15>.

**Notes:** Standard errors are clustered at the individual level. Standardized estimates are presented in square brackets.

The dependent variable is a binary variable equal to 1 if an individual supports or would vote for UKIP, and equal to 0 if they support or would vote for other parties or would not vote for any party (see text for detail).

Terror News Index is the daily number of headlines about the Syrian crisis that mention ISIS/terror over the daily number of headlines. The Index refers to the day before individuals are interviewed.

All regressions include the controls of column (5) of Table 2.

\*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

In Table A1, we model the probability of supporting any political party by estimating linear probability models along the lines of Equation (1), using our preferred specification in column (5) of Table 2. There are two key results: first, an increase in the exposure to terror news increase supports also for the Conservative party, although the size of impact, as measured by the standardized coefficient, is somewhat smaller. Second, the increased political support for UKIP and the Conservative comes at the expenses of individuals withdrawing their support to the Labour party, but also draws consensus from individuals who did not express a preference for any political party.



	(1)	(2)	(3)	(4)	(5)	(6)
Terror News Index – No Extreme Values	.366**					
	(.150)					
	[.008]					
Terror News Index		.404***				
		(.138)				
		[.010]				
Salient Events (D)		-.001				
		(.002)				
		[-.002]				
Terror News Index × Salient Events (D)		-.337				
		(.300)				
Terror News Index – All Terror News			.140***			
			(.038)			
			[.012]			
Terror News Index – N. Terror News				.005***	.005***	
				(.001)	(.001)	
				[.013]	[.014]	
N. Headlines					.017***	
					(.005)	
					[.012]	
Terror News Index – Binary Variable						.006***
						(.002)
						[.013]
N. Obs.	105,813	106,824	106,824	106,824	106,824	106,824
N. Indiv.	38,729	38,776	38,776	38,776	38,776	38,776
R <sup>2</sup>	.03	.03	.03	.03	.03	.03

**Table A2:** Robustness: Alternative definitions of TNI

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15> and The Global Terrorism Database (GTD)

**Notes:** Standard errors are clustered at the individual level. Standardized estimates are presented in square brackets.

The dependent variable is a binary variable equal to 1 if an individual supports or would vote for UKIP, and equal to 0 if they support or would vote for other parties or would not vote for any party (see text for detail).

Terror News Index is the daily number of headlines about the Syrian crisis that mention ISIS/terror over the daily number of headlines. The Index refers to the day before individuals are interviewed.

All regressions include the controls of column (5) of Table 2.

Column (1): Terror News Index – No Extreme Values is the Terror News Index in column(5) of Table 2, excluding the top1% of the values of the index.

Column (2): Salient Events is the number of terror events linked to ISIS that took place in Syria as reported from the Global Terrorism Database (GTD).

Column (3): Terror News Index – All news is the lagged daily number of headlines about all ISIS/terror (not just related to the Syrian crisis) over the daily number of headlines.

Columns (4) and (5): Terror News Index – N. Terror News is the lagged (log) daily number of headlines about the Syrian crisis that mention ISIS/terror (i.e., the numerator of TNI). Column (4) also includes All Headlines, which is the lagged (log) daily number of all headlines (i.e., the denominator of TNI).

Column (6): Terror News Index – Binary Variable is a binary variable equal to 1 for positive values of TNI, and 0 otherwise. \*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

In Table A2, we provide results of regression analyses using alternative definitions of TNI. In column (1) we exclude extreme values of TNI, specifically the top 1%.<sup>8</sup> This test aims at understanding whether our results are driven by unusually large values of TNI. The estimates suggest that this is not the case. On a similar vein, in column (2) we explore the importance of salient events related to ISIS/terror. To do so, we access data from the GTD – Global Terrorism Database (<https://www.start.umd.edu/gtd/>) which covers information on terrorists attacks for nearly all countries in the world. Using the GTD, we define a dummy variable “Salient Events” equals to one if at least one terror attack perpetrated by ISIS took place in Syria on a date covered by our sample and 0 otherwise. We then interact this dummy variable with the TNI. The rationale of this test is the following: the TNI covers all news pertaining to ISIS/terror in the context of Syria or the Syrian refugee crisis. As a result, there could be media coverage on terror even on days when there is no actual terror attack or other event taking place in Syria.<sup>9</sup> If the impact of TNI on UKIP support was driven solely by the media coverage of terror attacks, one would expect the interaction between TNI and the Salient Events dummy to be statistically significant. The results in column (2) suggest otherwise. Moreover, the main effect of the Salient Events is also insignificant. This suggests that our estimated effect is driven by media representation of the terror-related events, rather than the events themselves.

In column (3), we extend the definition of terror news (i.e., the numerator of TNI) to all headlines that are related to ISIS/terror but within any context, and not just restricted to the Syrian crisis. The estimate is positive and statistically significant, with a standardized size effect that is slightly larger than the baseline estimates. In columns (4) and (5), we use the log number of terror news as key explanatory variable. The difference between the two specifications is that in column (4) we also include the log number of all headlines (i.e., the denominator of TNI) as explanatory variable. The estimate of terror news is statistically significant in both specifications. From the results in column (4) it transpires that also all headlines are positively related to UKIP support; importantly, however, the coefficient on terror news is very similar across the two specifications, suggesting that the impact of “all news” is not what is driving the impact of the terror news. In column (6) we use a binary definition for the TNI, namely a dummy variable equal to 1 for days when there is at least one terror news and 0 otherwise. The estimate is consistent with our baseline analysis. It also provides an immediate interpretation of the impact of terror news: the probability of supporting UKIP increases by 0.6 percentage points in days when there are terror news, when compared to days when there are no such news.

---

<sup>8</sup> Excluding the top 5% of TNI produces a coefficient estimate of 0.703 with a standard error of 0.209, N=101,416.

<sup>9</sup> This can be readily observed in our data, since news on terror appear in about 49% of the dates in our sample, while there are terror attacks in only 19% of the dates.

	Closest To	Vote Tomorrow	Including Other	Until Brexit
Terror News Index	.316** (.125) [.008]	.282 (.279) [.006]	.211* (.124) [.005]	.443** (.172) [.011]
N. Obs.	63,747	46,086	184,136	70,233
N. Indiv.	26,601	24,999	48,110	33,688
R <sup>2</sup>	.02	.04	.03	.01

**Table A3:** Robustness: Alternative Definitions of UKIP Support

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15>.

**Notes:** Standard errors are clustered at the individual level. Standardized estimates are presented in square brackets.

Vote Tomorrow: The dependent variable is a binary variable equal to 1 if an individual replies UKIP to the question 'Party which would vote for tomorrow' and 0 otherwise.

Closest To: The dependent variable is a binary variable equal to 1 if an individual replies UKIP to the question 'Which political party closest to' and 0 otherwise.

Including Other: The dependent variable is a binary variable equal to 1 if an individual supports or would vote for UKIP or for 'Other' party as defined in Fetzer (2019) and 0 otherwise. The sample is extended to include also observations from wave 1 to 3.

Until Brexit: The regression model of column (5) of Table 2 is performed on the subset of data that precede 23 June 2016.

Terror News Index is the daily number of headlines about the Syrian crisis that mention ISIS/terror over the daily number of headlines. The Index refers to the day before individuals are interviewed.

All regressions include the controls of column (5) of Table 2.

\*  $p < 0.10$ .; \*\*  $p < 0.05$ .; \*\*\*  $p < 0.01$ .

In Table A3, we provide results of analyses using alternative definitions of UKIP support. In columns (1) and (2) we construct separate binary variables using the answers to the questions “which political party closest to” and “party would vote for tomorrow”, respectively. The results are broadly consistent with the baseline definition of UKIP support, albeit results for the “party would vote for tomorrow” are not statistically significant. In column (3) the outcome is the probability of supporting UKIP or “Other” parties, i.e., a definition of right-wing support along the lines of Fetzer (2019). This allows us to include also observations from wave 1 to 3, when UKIP was not coded as a separate choice but conflated into the “Other” category. Results show that the effect is still positive, albeit the coefficient is smaller and only significant at the 10%. When restricting our analysis to the period 2013 to mid-2016, i.e., when the UK voted for leaving the EU, the impact of terror news is larger than the baseline.

	(1)	(2)	(3)	(4)	(5)	(6)
Terror News Index	.173 (.150) [.004]	.135 (.152) [.003]	.137 (.153) [.003]	.359** (.143) [.009]	.329** (.145) [.008]	.305** (.146) [.008]
Terror News Index t-1	.291* (.153) [.007]	.172 (.166) [.004]	.175 (.167) [.004]			
Terror News Index t-2		.276* (.157) [.007]	.285* (.169) [.007]			
Terror News Index t-3			-.020 (.156) [-.000]			
Terror News Index t+1				-.071 (.146) [-.002]	-.134 (.161) [-.003]	-.158 (.161) [-.004]
Terror News Index t+2					.157 (.150) [.004]	.090 (.161) [.002]
Terror News Index t+3						.183 (.147) [.004]
N. Obs.	106,824	106,824	106,824	106,807	106,797	106,779
N. Individ.	38,776	38,776	38,776	38,775	38,774	38,773
R <sup>2</sup>	.03	.03	.03	.03	.03	.03

**Table A4:** Lags and Leads of TNI

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15> and The Global Terrorism Database (GTD)

**Notes:** Standard errors are clustered at the individual level. Standardized estimates are presented in square brackets.

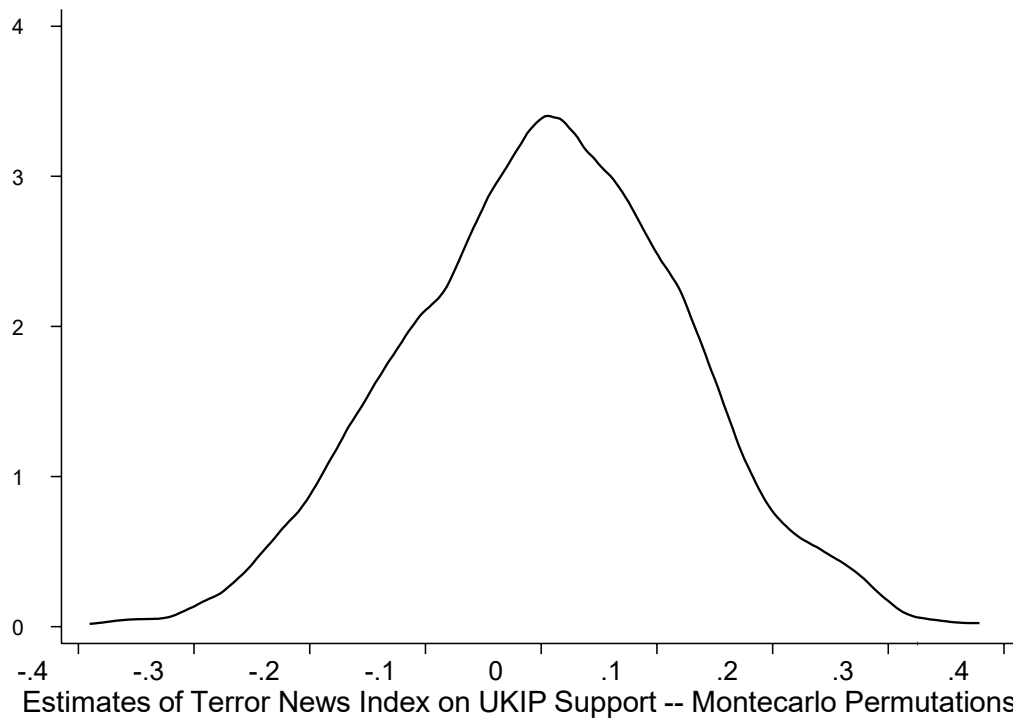
The dependent variable is a binary variable equal to 1 if an individual supports or would vote for UKIP, and equal to 0 if they support or would vote for other parties or would not vote for any party (see text for detail).

Terror News Index is the daily number of headlines about the Syrian crisis that mention ISIS/terror over the daily number of headlines. The Index refers to the day before individuals are interviewed.

All regressions include the controls of column (5) of Table 2.

\*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

In Table A4, we explore the time impact of TNI. First, we test whether there is a time delay in the news effect (recall that TNI is already measured on the day before the interview). In columns (1), (2) and (3) we add, respectively, one, two and three lags of TNI. For all three specifications, we reject the null hypothesis that the contemporaneous and lagged TNI are jointly equal to 0. Having said that, results suggest that TNI might have a delayed effect, with the second lag having the largest coefficient. Next, we perform a falsification test. One would not expect the terror news that are in the “future” to impact today’s political preferences. To test this, in columns (4), (5) and (6) where we add, respectively, one, two and three leads of TNI. The results show that none of the lead coefficients are statistically significant.



**Figure A1:** The Effect of Terror News Index – Randomization Inference

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15>.

**Notes:** The density represents coefficient estimates of the regression of column (5) of Table 2 based on 1,000 permutations of the values of the Terror News Index. The vertical line corresponds to the estimate from column (5) of Table 2.

Figure A1 provides the results of randomization inference where we simulate the regression results of our baseline specification in col (5) of Table 2 performing 1,000 random permutations of TNI. Under the null hypothesis of no effect, the random “assignments” of the terror newswill inform us about how unusual our estimates are with respect to a reference distribution under our null hypothesis. Figure A1 shows the kernel density of the coefficient estimates of TNI of these 1,000 simulations. In only 5 of these 1,000 regressions the estimate of TNI is –in absolute value – larger than our baseline results. Under the null hypothesis that TNI has a non-zero impact on UKIP support, these results suggests a p-value of  $6/1000=0.006$ .

<i>Intended Vote</i>	<i>Actual Vote</i>					
	UKIP	Conservative	Labour	Lib. Dem.	Other	No Party
UKIP	45.22	25.14	10.38	2.73	2.32	14.21
Conservative	3.32	80.74	3.78	2.35	0.71	9.11
Labour	2.15	6.79	68.57	4.68	3.50	14.30
Lib. Dem.	1.72	17.93	15.69	48.79	6.21	9.66
Other	6.01	12.01	26.50	10.25	23.32	21.91
No Party	3.81	14.86	13.00	3.99	3.16	61.19

**Table A5:** Intended vs Actual Vote

**Source:** Understanding Society: Waves 5/6/7/9/10. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-15>.

**Notes:** The table shows the cross-tabulation of actual vote and intended vote, as percentage of the latter. The actual vote is based on the 2015 general election. The intended vote includes the latest expression of the intention preceding the general election of 2015. The sample size is 8,749.

Our analysis measures UKIP support based on the questions “which political party closest to” and “party would vote for tomorrow”, which we refer to as voting intentions. One of the reasons for using intentions instead of actual vote is that one can measure political preferences in each wave, while there are much less data on voting, since elections take place only every few years. It is still interesting, though, to explore how much intentions map into actual vote, and this is what we do in Table A5. Intentions are measured in the last wave before the general election of 2015, while actual vote correspond to answers to the question “party voted for in last general election” and is measured in the earliest wave between 7 May 2015 and 8 June 2017 (i.e., in between the last two general elections). We focus on the 2015 general election as this was the time when UKIP had his largest electoral success. The table reports relative frequencies by row, namely, it shows the parties that were voted in 2015 for a given intention expressed before election. The tabulations show that 45% of UKIP supporters followed their intention of voting UKIP in the 2015 general election. The probability of “sticking” with their intentions is lower than that shown by supporters of the two major parties (Conservative and Labour), but not dissimilar to that of the Liberal Democrats.

## Appendix B: Data description and variable construction

### UKIP Support

The dependent variable of political support for UKIP is constructed from two variables of Understanding Society, *vote3* and *vote4*. In *vote3* respondents are asked “If there were to be a general election tomorrow, which political party do you think you would be most likely to support?”, while in *vote4* respondents are asked to specify “Which political party is closest to”. The binary variable for political support for UKIP takes the value of one if respondents choose UKIP as a response to either question. The variables *vote3* and *vote4* are not asked in wave 8 of Understanding Society, hence this is excluded from our study. Furthermore, UKIP appears as a separate category in the study only from wave 5, therefore our main analysis excludes waves 1 to 4.

### Terror News Index

The main explanatory variable is constructed by web scraping of all online daily headlines and lead paragraphs of the main news pages of the BBC, the Guardian and the Daily Mail websites for the period 2013-2019. We access the archives of the news pages by making use of snapshots of the news pages through the Internet Archive (<https://web.archive.org>). From the daily articles, pooled from the three sources, we select headlines that have the following two sets of terms in the headline or the lead paragraph: “Syria(n)” or “refugee”, and “IS(IS)”, “ISIL”, “Islamic State” or “terror”, which we refer to as terror news. We then sum the number of terror news for each day. The Terror News Index is defined as the proportion of the daily number of terror news relative to the total daily number of all news.

### Other Variables from Understanding Society

- Female (D) is derived from the variable *sex\_dv*
- Age is derived from the variable *age\_dv*
- Born in the UK (D) is derived from the variable *it\_bornuk\_dv* and is a dummy variable equal to one for the category “Born in the UK” and zero otherwise
- Married (D) is derived from the variable *it\_marstat\_dv* and is a dummy variable equal to one for the categories “Married/Civil partner” and “Living as couple” and zero otherwise
- N. Children is derived from the variable *nchunder16*
- Educ: Degree (D) is derived from the variable *hiqual\_dv* and is a dummy variable equal to one for the categories “Degree” and “Other higher degree” and zero otherwise
- Educ: A-level (D) is derived from the variable *hiqual\_dv* and is a dummy variable equal to one for the category “A-Level etc” and zero otherwise
- Educ: GCSE or Other Qualifications (D) is derived from the variable *hiqual\_dv* and is a dummy

variable equal to one for the categories "GCSE etc" and "Other qualification" and zero otherwise

- Educ: No or Missing Qualifications (D) is derived from the variable *hiqual\_dv* and is a dummy variable equal to one for the categories "No qualification", "missing" and "inapplicable" and zero otherwise
- "Unemployed" is derived from the variable *jbstat* and is a dummy variable equal to one for the category "Unemployed" and zero otherwise
- "Monthly Income (log £)" is derived from the variable *fmngrs\_dv*
- The regional dummies are obtained from the variable *gor\_dv*

### **UK Economic Policy Uncertainty Index**

The UK Economic Policy Uncertainty Index is obtained from:

[https://www.policyuncertainty.com/uk\\_monthly.html](https://www.policyuncertainty.com/uk_monthly.html). See Baker et al. (2016) for more details.





## ESRC Centre for Population Change

Building 58  
Faculty of Social Sciences  
University of Southampton  
SO17 1BJ

Tel: +44(0)2380592579  
Email: [cpc@southampton.ac.uk](mailto:cpc@southampton.ac.uk)

To subscribe to the CPC newsletter and keep up-to-date with research activity, news and events, please register online:  
[www.cpc.ac.uk/news/newsletter](http://www.cpc.ac.uk/news/newsletter)

For our latest research updates you can also follow CPC on Twitter and Facebook:

 @CPCpopulation  
 /CPCpopulation