

Minority Salience and Political Extremism

Online Appendix

Tommaso Colussi, Ingo E. Isphording and Nico Pestel*

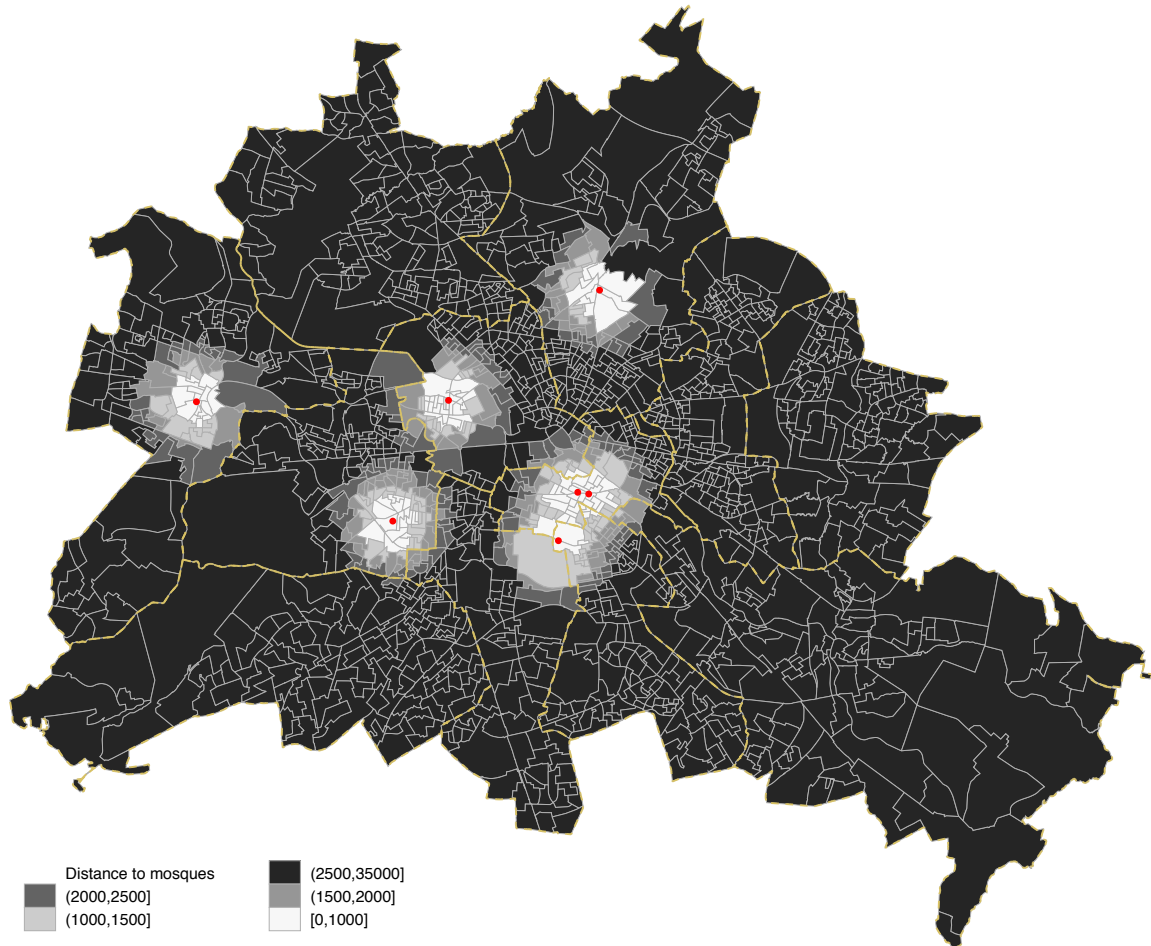
Abstract

We investigate how the salience of an ethnic minority affects the majority group's voting behavior. We use the increased salience of Muslim communities during Ramadan as a natural experiment. Exploiting exogenous variation in the distance of election dates to Ramadan over the 1980–2013 period in Germany, our findings reveal an increased polarization. Vote shares for both right- and left-wing extremist parties increase in municipalities with mosques when an election takes place shortly after Ramadan. We use survey data to provide evidence on mechanisms: Ramadan increases respondents' perceived share of the foreign-born population and emphasizes cultural dissimilarities, ultimately worsening attitudes towards Muslims.

*Colussi: Università Cattolica del Sacro Cuore, Department of Economics and Finance and IZA, Via Ludovico Necchi 5, 20123 Milan, Italy, t.colussi@hotmail.com. Isphording: Institute of Labor Economics (IZA), Schaumburg-Lippe-Str. 5–9, 53113 Bonn, Germany, isphording@iza.org. Pestel: Institute of Labor Economics (IZA), Schaumburg-Lippe-Str. 5–9, 53113 Bonn, Germany, pestel@iza.org. Acknowledgements: We would like to thank Daron Acemoglu, Alberto Alesina, Ghazala Azmat, George Borjas, Jana Cahlikova, Pierre Cahuc, Arnaud Chevalier, Giacomo De Giorgi, Ahmed Elsayed, Ben Elsner, Francesco Fasani, Nicola Gennaioli, Robert Gold, Dan Hamermesh, Stephan Heblich, Andrea Ichino, Rafael Lalive, Andreas Lichter, Andreas Madestam, Marco Manacorda, Joniada Milla, Elie Murard, Daniele Paserman, Michele Pellizzari, Barbara Petrongolo, Simone Quercia, Chris Roth, Seyhun Sakalli, Andrei Shleifer, Sebastian Sieglöck, Nadiya Ukrayinchuk, Felipe Valencia, Alessandro Vecchiato, Joachim Voth, Basit Zafar, Luigi Zingales, Ulf Zölitz, and seminar participants at NBER SI 2017-Political Economy, 73rd IIPF, Università Cattolica, OECD, Brucchi Luchino, U Girona, QMUL, Liser, U Texas-Austin, U Mannheim, XXII SOLE, VII fRDB and the 2019 Munich Workshop on Beliefs About Society and Politics. We are thankful to Georgios Tasoukis for his help with the data collection. Stephan Ermert, Marc Lipfert, Eric Lustenberger, Maximilian Mähr, and Rebecca Schreiber provided excellent research assistance. We are also very thankful to Stephan Heblich and Robert Gold who provided us with their election data.

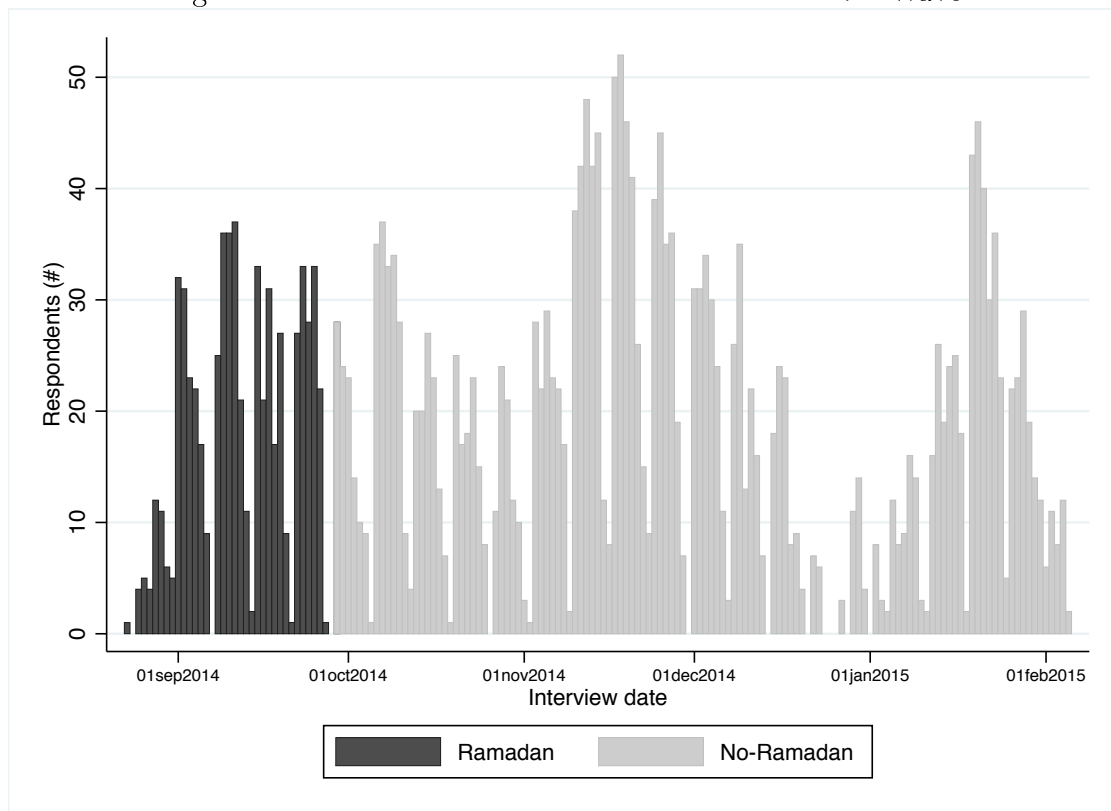
A APPENDIX TABLES AND FIGURES

Figure A.1: Mosques and electoral districts in Berlin



Notes. The figure shows the distribution of mosques (red dots) across electoral districts in Berlin in 2016. Districts are shaded according to the distance towards the closest mosque. Yellow dashed lines indicate the twelve boroughs' borders.

Figure A.2: Interview dates and Ramadan - ESS 7th Wave



Notes. The figure plots the number of respondents by date of the interview. Dark gray bars indicate dates within 90 days after the start of Ramadan.

Table A.1: Muslims' salience and Ramadan – Google and Twitter

	(1)	(2)	(3)
Panel A: Muslim-related Google searches (log)			
Mosque	0.525 (0.089)		
Ramadan	0.606 (0.011)	0.611 (0.011)	
Ramadan × Mosque	0.144 (0.019)	0.141 (0.019)	0.141 (0.019)
Controls:			
Municipality FE	N	Y	Y
Year × Month FE	N	N	Y
Observations		25,316	
Panel B: Muslim-related tweets (log)			
Mosque	0.7707 (0.1413)		
Ramadan	0.1941 (0.0193)	0.1941 (0.0193)	
Ramadan × Mosque	0.4944 (0.0804)	0.4944 (0.0804)	0.4944 (0.0805)
Controls:			
Municipality FE	N	Y	Y
Date	N	N	Y
Observations		7,128	
Panel C: Anti-Muslims tweets (log)			
Mosque	0.1730 (0.0484)		
Ramadan	0.0175 (0.0062)	0.0175 (0.0062)	
Ramadan × Mosque	0.0690 (0.0317)	0.0690 (0.0317)	0.0690 (0.0317)
Controls:			
Municipality FE	N	Y	Y
Date	N	N	Y
Observations		7,128	

Notes. Standard errors are clustered at the municipality level. Panel A reports results from a regression in which the dependent variable is monthly city-level Google searches for *Muslim*, *Ramadan*, *Mosque*, and *Islam* on city and year-by-month fixed effects for cities with (N=141) and without a mosque (N=392). The sample covers cities with a population of at least 10,000 and covers the period September 2014 to August 2018. In Panel B the dependent variable is weekly city-level tweets for *Muslim*, *Ramadan*, *Mosque*, and *Islam*. In Panel C the dependent variable is weekly city-level tweets for *Stop-Islam* and *Islamization*. The twitter sample covers the period from April 25 to August 24, 2018.

Table A.2: Established, right- and left-wing parties

Established	Right-Wing	Left-Wing
<i>CDU</i>	<i>NPD</i>	<i>DKP</i>
<i>SPD</i>	<i>REP</i>	<i>KPD</i>
<i>GRÜNE</i>	<i>DVU</i>	<i>KBW</i>
<i>FDP</i>	<i>DIE RECHTE</i>	<i>MLPD</i>
	<i>ProDEU/ProNRW</i>	<i>PSG</i>
	<i>AfD</i>	<i>OKOLI</i>
		<i>Die Linke</i>
		<i>PDS</i>
		<i>WASG</i>

Notes. Party lists include further minor fringe parties who only ran in single elections. The exclusion of these minor parties does not affect results in magnitude or significance. Abbreviations are Christian Democrats (*CDU*), Social Democrats (*SPD*), Liberal Party (*FDP*), Green Party (*GRÜNE*), National Democratic Party of Germany (*NPD*), Republicans (*REP*), German People's Union (*DVU*), Die Rechte (*DIE RECHTE*), Alternative for Germany (*AfD*) Pro Germany Citizens' Movement (*Pro-NRW*, German Communist Party (*DKP*), Communist Party of Germany (*KPD*), Kommunistischer Bund Westdeutschland (*KBW*), Marxist-Leninist Party of Germany (*MLPD*), Social Equality Party (*PSG*), Eco-Social Left (*OKOLI*) Left Party (*Die Linke*), Party of Democratic Socialism (*PDS*) Electoral Alternative for Labour and Social Justice (*WASG*).

Table A.3: Descriptive statistics

	All		with mosque		w/o mosque	
	Mean	SD	Mean	SD	Mean	SD
Population ('000)	44.39	87.62	142.15	181.63	29.28	45.45
Pop density	500.81	550.6	1207.11	792.71	391.67	404.97
Female (%)	50.96	1.06	51.42	0.93	50.89	1.06
Foreigners (%)	6.96	3.70	10.43	3.23	6.43	3.47
Employed ('000)	14.63	37.42	51.29	75.75	8.97	22.17
Eligible voters ('000)	33.16	64.57	104.77	132.34	22.10	34.57
Turnout (%)	76.32	10.56	74.71	10.86	76.57	10.49
Established parties (%)	72.18	12.12	70.27	12.6	72.48	12.01
Left-wing parties (%)	1.18	1.59	1.41	1.83	1.15	1.54
Right-wing parties (%)	0.87	0.92	1.00	0.98	0.86	0.91
Observations	7,128		954		6,174	

Notes. The table reports averages of electoral results and municipalities' characteristics at each election over the time window analyzed across NRW municipalities. The table distinguishes between municipalities that have ever had a mosque (53) and those that have not (343).

Table A.4: Balancing tests

	Eligible Voters (1)	Foreigners (2)	Employed (3)	Pop Density (4)	Female (5)
Mosque	-0.0589 (0.0189)	-0.0437 (0.0254)	-0.0861 (0.0274)	12.7077 (13.4333)	-0.1366 (0.0886)
Mosque \times Ramadan	0.0002 (0.0042)	-0.0206 (0.0133)	-0.0119 (0.0073)	-1.9048 (4.0446)	-0.0416 (0.0374)
Controls:					
Municipality \times Election type	Y	Y	Y	Y	Y
Election date	Y	Y	Y	Y	Y
Observations	7,128	7,126	7,128	7,128	7,128

Notes. *Mosque \times Ramadan* is a dummy switching on when the election date is within 3 months since the start of Ramadan and a mosque is located in the municipality. Standard errors are clustered at the municipality level. The dependent variables are the log number of eligible voters, private sector employees, foreign residents, the population density and the share of women.

Table A.5: Omnibus tests

	(1)	(2)	(3)
Panel A: Right-wing parties (%)			
Mosque	0.3069 (0.0104)		0.3054 (0.0120)
Ramadan		0.0009 (0.0069)	-0.0028 (0.0068)
Ramadan \times Mosque			0.0064 (0.0242)
Panel B: Left-wing parties (%)			
Mosque	0.4982 (0.0152)		0.4952 (0.0175)
Ramadan		0.0070 (0.0102)	0.0008 (0.0099)
Ramadan \times Mosque			0.0119 (0.0353)
Observations		7,128	

Notes. The omnibus test uses the set of controls used in Table 1 (foreigners (%), female (%), population density, the log number of private sector employees) to predict the vote share of left- and right-wing parties. The predicted values are then regressed on the explanatory variables (Mosque, Ramadan, Mosque \times Ramadan).

Table A.6: NRW Elections, foreigners and days since Ramadan

	Right-wing (%) (1)	Left-wing (%) (3)	Left-wing (%) (4)	Established (%) (5)	Turnout (%) (7)	Turnout (%) (8)
Panel A: % Foreigners						
Foreigners	-0.0098 (0.0229)	0.0057 (0.0376)	-0.0670 (0.0355)	-0.0673 (0.2264)	-0.0174 (0.2294)	-0.2196 (0.1772)
Foreigners \times Ramadan	0.0419 (0.0116)	0.0433 (0.0117)	0.0995 (0.0190)	0.1010 (0.0188)	-0.3191 (0.0633)	-0.1486 (0.0449)
Panel B: Share of Muslims in 1987						
Muslims 1987 \times Ramadan	0.0623 (0.0092)	0.0625 (0.0092)	0.1486 (0.0116)	0.1446 (0.0112)	-0.3719 (0.0678)	-0.1320 (0.0640)
Panel C: Days after Ramadan						
Mosque	0.1476 (0.0597)	0.1307 (0.0570)	0.4999 (0.1124)	0.4684 (0.1017)	-1.7301 (0.4324)	-0.8547 (0.3792)
Mosque \times Days	-0.0004 (0.0001)	-0.0004 (0.0001)	-0.0010 (0.0002)	-0.0010 (0.0002)	0.0037 (0.0006)	0.0016 (0.0005)
Panel D: Weighted Regressions						
Mosque	0.0539 (0.0739)	0.0078 (0.0538)	0.2289 (0.0755)	0.1374 (0.0851)	-0.0111 (0.4610)	0.2803 (0.4168)
Ramadan \times Mosque	0.1006 (0.0566)	0.1060 (0.0521)	0.3739 (0.0670)	0.3698 (0.0617)	-0.8887 (0.2086)	-0.2461 (0.1604)
Controls:						
Municipality \times Election Type	Y	Y	Y	Y	Y	Y
Election Date	Y	Y	Y	Y	Y	Y
Municipality characteristics	N	Y	N	Y	N	N
Observations	7,128					

Notes. Standard errors are clustered at the municipality level. Foreigners is the (standardized) share of foreigners (by citizenship) living in each municipality. Muslims 1987 is the (standardized) share of Muslims living in each county in 1987. *Days* is a variable indicating the number of days since the last Ramadan. Panel D reports regressions weighted by the number of eligible voters.

Table A.7: Sensitivity to alternative specifications

	(1)	(2)	(3)	(4)
Panel A: Right-wing parties (%)				
Ramadan	0.6542 (0.0133)	0.6369 (0.0152)		
Mosque	0.8208 (0.0539)	0.4207 (0.0834)	0.1721 (0.0461)	0.0071 (0.0420)
Ramadan \times Mosque	0.5056 (0.0523)	0.5069 (0.0594)	0.0872 (0.0425)	0.0938 (0.0419)
Panel B: Left-wing parties (%)				
Ramadan	1.1569 (0.0183)	1.1326 (0.0222)		
Mosque	2.0415 (0.0962)	1.3728 (0.1585)	0.2973 (0.0475)	0.0523 (0.0375)
Ramadan \times Mosque	1.0504 (0.1117)	1.0355 (0.1266)	0.3945 (0.0758)	0.4025 (0.0739)
Controls:				
Municipality \times Election Type	Y	Y	N	N
Election Date	N	N	Y	Y
Municipality characteristics	N	Y	N	Y
Observations			7,128	

Notes. Standard errors are clustered at the municipality level.

Table A.8: Adjusting for spatial correlation

	Without adjustment (1)	Clustered at district (2)	Conley (1999) (3)
Panel A: Right-wing parties (%)			
Ramadan \times Mosque	0.1167 (0.0385)	0.1167 (0.0440)	0.1167 (0.0464)
Panel B: Left-wing parties (%)			
Ramadan \times Mosque	0.3525 (0.0606)	0.3525 (0.0658)	0.3525 (0.0773)
Controls:			
Municipality \times Election type	Y	Y	Y
Election date	Y	Y	Y
Municipality characteristics	Y	Y	Y
Observations	7,128	7,128	7,128

Notes. The dependent variables are expressed as percentage of the eligible voters (0-100).

Table A.9: Regressions by period

	Right-wing parties (%)	
	1980-1998 (1)	1999-2013 (2)
Mosque	0.0367 (0.0584)	0.0547 (0.0748)
Ramadan \times Mosque	0.3693 (0.0518)	0.0946 (0.0519)
Controls:		
Municipality \times Election type	Y	Y
Election date	Y	Y
Municipality characteristics	Y	Y
Observations	3,960	3,168

Notes. The dependent variables are expressed as percentage of the eligible voters (0-100).

Table A.10: Demographic Endogeneity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Panel A: Right-wing parties (%)													
Mosque	0.0388 (0.0406)	0.0382 (0.0405)	0.0481 (0.0406)	0.0412 (0.0406)	0.0441 (0.0403)	0.0435 (0.0406)	0.0450 (0.0401)	0.0334 (0.0399)	0.0348 (0.0398)	0.0326 (0.0390)	0.0312 (0.0391)	0.0182 (0.0385)	0.0261 (0.0383)
Ramadan × Mosque	0.1172 (0.0391)	0.1174 (0.0392)	0.0768 (0.0411)	0.1179 (0.0390)	0.1026 (0.0387)	0.1182 (0.0392)	0.1043 (0.0385)	0.1167 (0.0392)	0.1044 (0.0387)	0.1140 (0.0393)	0.1156 (0.0385)	0.1143 (0.0388)	0.0804 (0.0413)
Foreigners (%)		0.0034 (0.0222)	-0.0090 (0.0351)										
Ramadan × Foreigners (%)													
Female (%)			0.0191 (0.0118)	0.0130 (0.0132)	0.0003 (0.0358)								
Ramadan × Female (%)													
Gender Imbalance						-0.0208 (0.0091)	-0.0044 (0.0092)						
Ramadan × Gender Imbalance													
Male 18-24 (%)								0.0456 (0.0155)	0.0826 (0.0177)				
Ramadan × Male 18-24 (%)													
Population 18-24 (%)										0.0876 (0.0179)	0.1348 (0.0182)		
Ramadan × Population 18-24 (%)													
Employed (log)													
Ramadan × Employed (log)													
													-0.2394 (0.0510)
													0.0197 (0.0089)
Panel B: Left-wing parties (%)													
Mosque = 1	0.1910 (0.0689)	0.1978 (0.0703)	0.2189 (0.0696)	0.1876 (0.0684)	0.1949 (0.0684)	0.1916 (0.0691)	0.1931 (0.0691)	0.1759 (0.0667)	0.1769 (0.0668)	0.1769 (0.0649)	0.1761 (0.0649)	0.1377 (0.0637)	0.1643 (0.0630)
Ramadan × Mosque	0.3647 (0.0641)	0.3616 (0.0641)	0.2749 (0.0665)	0.3637 (0.0641)	0.3255 (0.0628)	0.3649 (0.0640)	0.3510 (0.0640)	0.3634 (0.0637)	0.3548 (0.0636)	0.3574 (0.0632)	0.3583 (0.0633)	0.3574 (0.0631)	0.2434 (0.0643)
Foreigners (%)			-0.0389 (0.0380)										
Ramadan × Foreigners (%)													
Female (%)													
Ramadan × Female (%)													
Gender Imbalance													
Ramadan × Gender Imbalance													
Male 18-24 (%)													
Ramadan × Male 18-24 (%)													
Population 18-24 (%)													
Ramadan × Population 18-24 (%)													
Employed (log)													
Ramadan × Employed (log)													
													-0.6184 (0.0816)
													0.0662 (0.0097)
Controls:													
Municipality × Election type FE													Yes
Election date													Yes
Observations													7,128

Notes. Standard errors are clustered at the municipality level. In this Table we show results from several regressions in which we additionally include one control variable at the time interacted and un-interacted with the Ramadan dummy. These control variables are: share of foreigners, share of females, gender imbalance (i.e., ratio of male to female residents aged 18-49), share of young males (age 18-24), share of young population (age 18-24), number of employed.

Table A.11: Backyard Mosques

	(1)	(2)	(3)
Panel A: Right-wing parties (%)			
Ramadan × Backyard Mosques (#)	0.0121 (0.0032)	0.0093 (0.0029)	
Ramadan × Mosque		0.0913 (0.0391)	
Ramadan × Ever Mosque (any)			0.0788 (0.0226)
Panel B: Left-wing parties (%)			
Ramadan × Backyard Mosque (#)	0.0406 (0.0070)	0.0319 (0.0063)	
Ramadan × Mosque		0.2654 (0.0620)	
Ramadan × Ever Mosque (any)			0.2336 (0.0266)
Panel C: Established parties (%)			
Ramadan × Backyard Mosque (#)	-0.0954 (0.0216)	-0.0685 (0.0180)	
Ramadan × Mosque		-0.8421 (0.1651)	
Ramadan × Ever Mosque (any)			-0.7545 (0.1211)
Panel D: Turnout (%)			
Ramadan × Backyard Mosque (#)	-0.0341 (0.0131)	-0.0236 (0.0122)	
Ramadan × Mosque		-0.3111 (0.1324)	
Ramadan × Ever Mosque (any)			-0.3841 (0.1121)
Controls:			
Municipality × Election type FE	Y	Y	Y
Election date	Y	Y	Y
Municipality characteristics	Y	Y	Y
Observations	7,128	7,128	7,128

Notes. Standard errors are clustered at the municipality level. In Column (1), we interacted the Ramadan dummy with a variable indicating the number of backyard mosques in the municipality as of 2013. In Column (2), we additionally include the interaction between Ramadan and a dummy for the presence of visible mosques. Finally, Column (3) reports the estimates of the interaction between Ramadan and the *Ever Mosque (any)* dummy, which indicates if municipalities ever had a mosque, either backyard or visible.

Table A.12: Descriptive statistics - German municipalities

	<u>All</u>		<u>with mosque</u>		<u>w/o mosque</u>	
	Mean	SD	Mean	SD	Mean	SD
Eligible voters ('000)	5.60	26.51	84.12	155.35	4.15	12.40
Turnout (%)	74.26	9.97	71.94	10.91	74.30	9.95
Established parties (%)	69.66	12.21	67.46	12.62	69.70	12.20
Left-wing parties (%)	1.01	1.71	1.30	1.87	1.01	1.70
Right-wing parties (%)	1.55	1.71	1.49	1.62	1.55	1.71
Observations	152,418		2,767		149,651	

Notes. The table reports averages of electoral results and municipalities' characteristics at each election over the time window analyzed across Western German municipalities, excluding the state of NRW. The table distinguishes between municipalities that have ever had a mosque (92) and those that have not (8219).

Table A.13: Descriptive statistics - Berlin

	<u>All</u>		<u>with mosque</u>		<u>w/o mosque</u>	
	Mean	SD	Mean	SD	Mean	SD
Population ('000)	1.77	0.57	1.85	0.63	1.76	0.56
Foreigners (%)	13.43	10.54	22.79	10.56	12.24	9.93
Eligible voters ('000)	1.27	0.39	1.17	0.33	1.29	0.40
Turnout (%)	47.46	7.16	47.42	5.67	47.46	7.33
Established voters (%)	31.9	9.31	33.03	6.57	31.75	9.59
Left-wing parties (%)	7.83	5.42	7.14	4.34	7.92	5.54
Right-wing parties (%)	3.03	2.91	2.08	2.07	3.14	2.98
Observations	9,709		1,093		8,616	

Notes. The table reports averages of electoral results and electoral districts' characteristics at each election over the time window analyzed in Berlin. The table distinguishes between blocks that are located within a 1500 meter radius from a mosque and those that were not.

Table A.14: European Social Survey - 7th Wave

	Mean	SD	Obs.
	(1)	(2)	(3)
Extremism	0.050	0.218	2884
Right-wing extremism	0.013	0.114	2884
Left-wing extremism	0.037	0.188	2884
Anti-Muslims	0.313	0.464	2942
Anti-Jewish	0.136	0.343	2945
Foreign-Born (perceived %)	22.395	15.126	2894
Same traditions	0.280	0.449	2988
Immigration: White	0.005	0.071	2989
Immigration: Christian	0.013	0.112	2988
Immigration: Education	0.181	0.385	2987

Notes. Mean and standard deviation of dependent variables in Table 5.

Table A.15: Political extremism and Ramadan - Twitter

	(1)	(2)	(3)
Panel A: AfD tweets (logs)			
Mosque	1.3374 (0.1790)		
Ramadan	0.2541 (0.0253)	0.2541 (0.0253)	
Ramadan \times Mosque	0.4682 (0.0772)	0.4682 (0.0772)	0.4682 (0.0773)
Panel B: Die Linke tweets (logs)			
Mosque	0.5729 (0.1020)		
Ramadan	0.1266 (0.0180)	0.1266 (0.0180)	
Ramadan \times Mosque	0.4123 (0.0767)	0.4123 (0.0767)	0.4123 (0.0768)
Controls:			
Municipality FE	N	Y	Y
Date	N	N	Y
Observations		7,128	

Notes. Standard errors are clustered at the municipality level. In Panel A the dependent variable is the log number of tweets containing the word *AfD*; in Panel B the dependent variable is the log number of tweets containing the term *Die Linke*. The sample covers the period from April 25 to August 24, 2018.

Table A.16: Saliency effects on right-wing support by mosques per km² and population

	(1)	(2)	(3)	(4)
Mosque per sq. km	6.0848 (3.3210)	3.9709 (2.4414)		
Ramadan \times Mosque per sq. km	8.1028 (2.5213)	8.2198 (2.5723)		
Mosque per 1,000 inhabitants			0.4305 (1.7576)	0.7564 (1.5615)
Ramadan \times Mosque per 1,000 inhabitants			3.3829 (1.9561)	3.4276 (1.9309)
Controls:				
Municipality \times Election type	Y	Y	Y	Y
Election date	Y	Y	Y	Y
Municipality characteristics	N	Y	N	Y
Observations			7,128	

Notes. The sample includes all elections in the State of NRW over the 1980-2013 period. Standard errors are clustered at the municipality level. The dependent variable is the vote share for far-right parties. The table reports coefficients from four different regressions in which the Ramadan dummy has been interacted with the number of mosques per square kilometer (columns 1 and 2) and the number of mosques per 1,000 native inhabitants (columns 3 and 4). Regressions in columns (1)-(4) have been weighted by the native population.

Table A.17: Saliency effects on right-wing support by employment growth rate

	(1)	(2)
Ramadan \times Mosque	0.1469 (0.0406)	0.1537 (0.0386)
Ramadan \times Mosque \times $\Delta Empl_{t-1}$	-0.1254 (0.0718)	
Ramadan \times Mosque \times $\overline{\Delta Empl}_{t-1,t-2}$		-0.1948 (0.0680)
Controls:		
Municipality \times Election type	Y	Y
Election date	Y	Y
Observations	7,128	

Notes. Standard errors are clustered at the municipality level. The dependent variable is the vote share for far-right parties. The table reports coefficients from two different regressions in which the treatment variable (Ramadan \times Mosque) has been interacted with the (standardized) employment growth rate in the year before the election (Column 1), the (standardized) average employment growth rate in the two years prior to the election (Column 2).

B DATA APPENDIX

This appendix provides a description of the ancillary datasets used in the paper *Minority Salience and Political Extremism*.

GOOGLE SEARCHES. We collected geo-coded information on Google searches in Germany at the monthly level over the years 2014–2018 (Social Marketing Nerds, 2018).¹ The sample includes municipalities with a population size of at least 10,000, i.e., 533 cities. Among them, 141 cities have at least one mosque. The data’s focus is on searches for Muslim-related words, such as *Muslim*, *Islam*, *Mosque* and *Ramadan* (in German).

TWITTER DATA. We developed a python code that retrieves tweets by keyword and location (Twitter, 2018). We first defined a set of words that should capture Muslims’ salience, these are: *Ramadan*, *Muslim*, *Mosque*, *Islam* (in German). We then looked for anti-Muslim tweets, e.g., containing words such as *stop islam* and *islamization*, anti-racist tweets, i.e., including the term *anti-racism*. We finally searched for tweets containing the name of the main right-wing and left-wing parties, i.e., *AfD* and *Die Linke*, respectively. For each tweet that includes one of these keywords the data contains the user name of the Twitter user, its location (at the city level), the text of the tweet and the number of re-tweets. The code only retrieves tweets back by ten days.² For this reason, we only focus on last Ramadan over a time window that goes from 21 days before and 100 days after the start of Ramadan (May 16, 2018). Additionally, we focused on the 396 municipalities of North Rhine-Westphalia. Overall, the sample is composed of 7,128 weekly city-level observations (396 municipalities \times 18 weeks).

¹ We purchased these data from a consultancy specialized in social media marketing based in Germany (“*Social Marketing Nerds*”).

² This is a limit imposed by the Twitter platform. We thus ran the code every ten days over the period from May 5 to August 25, 2018, thus allowing to cover the period from April 25 to August 25.

BERLIN ELECTIONS. We use data for the electoral districts (*Wahlkreis*) of Berlin over the period 2006–2016. These data are publicly available (Amt für Statistik Berlin-Brandenburg, 2016). The sample covers two federal (2009, 2013) and three state-level (2006, 2011, 2013) elections. The statistical office of Berlin does not provide information on previous elections at such finely grained geographical level. However, data on Berlin elections at the (aggregate) municipality level are available since 1990. The data provide information on votes for each party and a set of population characteristics at the *Wahlkreis* level.³ Table A.13 provides a description of the data, distinguishing between districts within a 1,500 meter radius around a mosque and those outside. The city of Berlin is divided into twelve boroughs (*Bezirk*), comprising a number of smaller neighborhoods (approx. 160), roughly coinciding with electoral districts (*Wahlkreis*) whose average population is about 1,700 people. One disadvantage of the data is that the number and the definition of electoral districts within a borough vary across elections due to changes in population; however, the definition of boroughs does not change. The number of observed districts ranges from 1,709 to 2,501 depending on the election considered.

EUROPEAN SOCIAL SURVEY. The European Social Survey provides data on European citizens' attitudes, beliefs and behavior patterns. It is conducted every two years in European countries. The survey comprises a core module and two or more rotating modules, repeated at intervals. Core topics each year include: political engagement and trust, social and political values, national, ethnic and religious identify. We use the seventh wave of the European Social Survey (2014), which interviewed roughly 3,000 German residents between August 2014 and February 2015. This survey wave is particularly suitable for our purposes as it asks specific questions eliciting individual attitudes towards minority groups, including Muslims.⁴ The data also provide information on demographic and economic characteristics

³ The set of variables reported changes in each election. The only variables that are always present are the total population and the foreign-born population.

⁴ Respondents are asked a variety of questions aimed at measuring opinions towards minorities and immigration, as well as political preferences and socio-economic characteristics. The specific question

of the respondents. As the municipality of residence is not disclosed, we only exploit variation in the interview date. Figure A.2 plots the share of respondents by date of interview. Table A.14 reports main demographic, economic, and political outcomes of respondents.

ATTACKS ON MOSQUES. We collected information on attacks against mosques from a list released by the Federal Ministry of the Interior in May 2012. The list is part of the response by the Federal Government to an inquiry made by the party *Die Linke* (Deutscher Bundestag, 2012). The list contains all recorded offenses against Muslim communities in Germany from January 2001 to December 2011. The data provide information on each attack’s date, municipality, and type. We counted 219 offenses against mosques, including vandalism (e.g. swastika graffiti), death threats and arsons.

PRODAT. The PRODAT project assembles data on protests in (West) Germany over the period 1950 until 2002 based on newspaper articles in national newspapers. Out of 15,973 recorded protest events, 1,656 protests can be identified as either left- or right-oriented. The information covers a broad range of attributes of each recorded protest: exact place and time, and precise information on topic, size, and the interest groups/supporters including their political orientation, and whether these protests triggered or displayed a counter-protest.⁵

CENSUS 1987. The information on the county-level population share of Muslims comes from the population census (*Volkszählung*) conducted in West Germany in 1987. We use county-level census tabulations (?) provided by Schmitt *et al.* (1994).

on attitudes toward Muslims is: “*Would you allow many or few Muslims to come and live in your country?*”. Answers range from “*Allow many to come and live here*” (1) to “*None*” (4). The website <http://www.europeansocialsurvey.org> provides a complete description of the data.

⁵ A public use version of the data is available at <https://www.wzb.eu/de/forschung/beendete-forschungsprogramme/zivilgesellschaft-und-politische-mobilisierung/projekte/prodat-dokumentation-und-analyse-von-protestereignissen-in-der-bundesrepublik>.

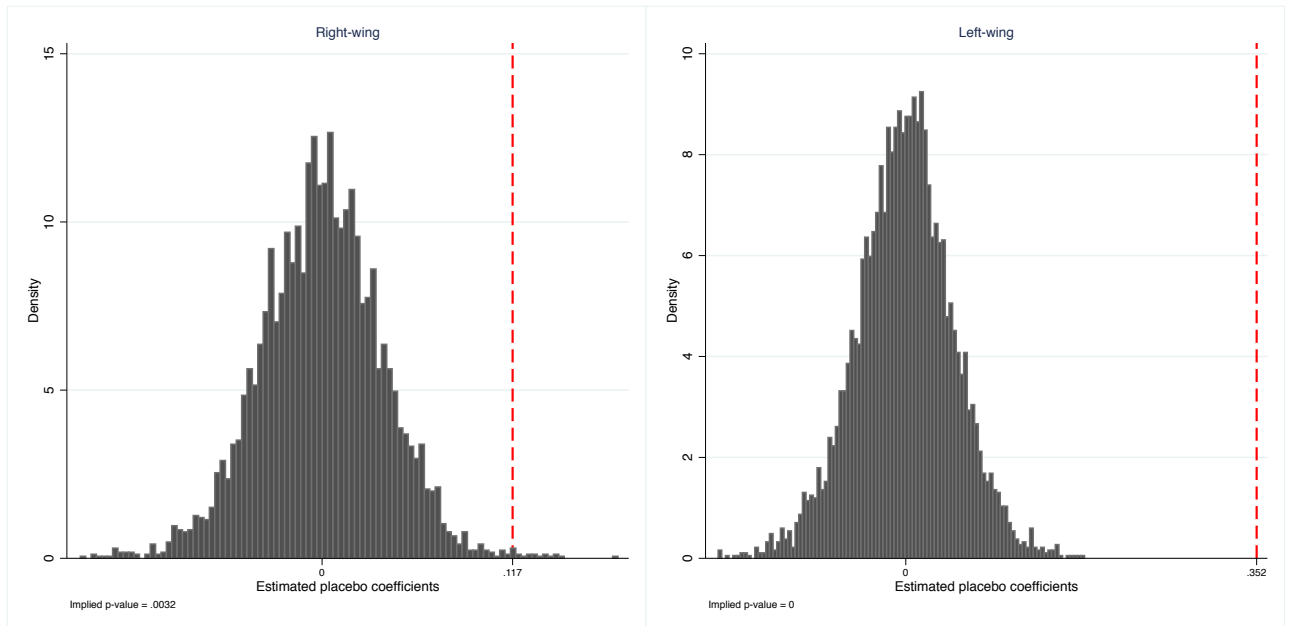
C ADDITIONAL ANALYSIS

In this appendix, we present several additional analyses complementing the paper *Minority Salience and Political Extremism*.

C.1 PERMUTATION TESTS

We perform a permutation exercise to assess the validity of the parametric standard errors of our main estimations and ensure that our main results are not driven by a “bad draw” of treated observations. To provide evidence that our results actually represent a meaningful effect exceeding random fluctuations in voting outcomes, we randomly define elections as happening close to Ramadan, as well as artificially distributing mosques to municipalities on a random basis.

Figure C.1: Permutation Tests



Notes: The figure plots the distributions of placebo coefficients obtained by estimating regression (2) with a joint “placebo” mosque dummy and Ramadan dates. All regressions include the same set of controls as in Table 1, Column (4). Placebo mosques and dates have been obtained by randomly assigning mosques to municipalities and Ramadan treatment to election dates. We repeated this procedure 5,000 times. Vertical dashed lines report the true coefficient, i.e., Column (4) Table 1. The implied p-values are computed as the number of placebo parameters above the true coefficient over the number of repetitions, i.e., 5,000.

In particular, we artificially assign mosques and Ramadan to municipality-election observations according to the actual share of treated observations. Repeating the procedure 5,000 times yields the distribution of placebo estimates shown in Figure C.1. The intuition of this exercise is that if the treatment had a significant effect on extremist votes, we would expect the estimated coefficient to be in the upper tail of estimated placebo effects. In almost every case, the placebo coefficients are lower than the “true” one. The estimated coefficient exceeds about 99% and 100% of all simulated coefficients for the right- and left-wing dependent variables, respectively. The implied p-values for the hypothesis that $|\beta_2|^{Placebo} > |\beta_2|^{True}$ are close to zero for both right- and left-wing vote shares. These tests confirm that the occurrence of Ramadan in municipalities with a mosque led to an unusually high level of support for fringe political parties.

C.2 HETEROGENEITY BY MUNICIPALITY AND MOSQUE

CHARACTERISTICS

The average effect of salience might mask heterogeneity if either voters are heterogeneous in their sensitivity towards raised salience or characteristics of mosques lead to differential increases in visibility. In the following, we use information on the characteristics of mosques and municipalities of the state of NRW to uncover this potential heterogeneity and shed light on the type of voters that react the most. Effects of salience potentially differ by the exposed population, which may differ in their potential for fringe parties’ mobilization. Immigration-related topics might have higher impact in municipalities with difficult labor market conditions. We examine such heterogeneity in columns (1) to (3) of Table C.1. We interact the treatment variable with a dummy equal to one for values above the median for municipal characteristics: population density, share of 18–24 years old and the gender ratio. We observe stronger polarization in municipalities with a higher population density. Effects on the right-wing are larger in areas with a younger population structure. These observations are in line with descriptive characterizations of far-right support being stronger among the

young and in urbanized areas. The regression results in column (3) show no statistically significant differences in municipalities where there is a large male-to-female ratio.

Mosques differ strongly in their visibility, appearance and size. These differences might mediate the effect of higher salience during Ramadan. To test for this heterogeneity, we acquired additional data on the mosques in NRW: the height of the mosques' minaret in meters, the year of construction and whether they are located in a residential area. Results of interactions of our treatment with the respective mosque characteristics are summarized in columns (4) to (6) of Table C.1. While both location in a residential area and minaret height are a priori expected to increase the salience effect, they seem to effect different parts of the electorate. Location in a residential area raises the effect of salience on extreme left support. The height of minarets raises the effect on support for right-wing parties. The latter is in line with the presence of minarets being an especially sensitive issue in the public debate, which even has triggered calls for a ban of minarets in Germany and Switzerland.⁶ We do not observe heterogeneity with respect to the time since the construction of a mosque. This suggests that the effect does not disappear over the years as the majority group becomes acquainted with the minority group.

⁶ In 2009, the Swiss People's Party and the Federal Democratic Union proposed an initiative against the construction of minarets in Switzerland, which 57.5% of the Swiss electorate eventually approved. In 2016, the party AfD backed an election manifesto calling for a ban on minarets in Germany.

Table C.1: Heterogeneous effects

	Municipality			Mosque		
	Pop density (1)	Pop (18-24) (2)	Gender Ratio (3)	Residential (4)	Minaret (5)	Years (6)
Panel A: Right-wing (%)						
<i>Ramadan</i> × <i>Mosque</i> × <i>Median</i>	0.4025 (0.0759)	0.2227 (0.0823)	0.0777 (0.0926)	0.0880 (0.0699)	0.1859 (0.0714)	0.0585 (0.0812)
Panel B: Left-wing (%)						
<i>Ramadan</i> × <i>Mosque</i> × <i>Median</i>	0.4633 (0.2423)	-0.1696 (0.1581)	-0.0133 (0.1383)	0.2432 (0.1096)	0.0752 (0.1323)	0.1092 (0.1207)
Controls:						
Municipality × Election type	Y	Y	Y	Y	Y	Y
Election date	Y	Y	Y	Y	Y	Y
Municipality characteristics	N	N	N	Y	Y	Y
Observations	7,128					

Notes. Standard errors are clustered at the municipality level. The table only reports coefficients of the triple interaction $Mosque \times Ramadan \times Median$, which is a dummy indicating municipalities' values above the median for each characteristic of the municipality or mosque. Pop (18-24) is the share of municipality's residents aged 18 to 24. Gender ratio is the ratio of male to female residents aged 18-49. Pop density is the municipality's population density. Residential is a dummy indicating whether the mosque is located in a residential area. Minaret indicates the height of the mosque's minaret. Years refer to the median number of years since the mosque was established in a municipality, i.e., 11 years.

C.3 POLITICALLY-MOTIVATED CRIMES

Thus far, our empirical findings have shown that a change in the salience of a religious minority significantly affects political preferences. We now investigate whether the increase in political extremism translates into actions beyond voting. In particular, we consider violent behavior. This section specifically addresses this point by examining whether the change in Muslims’ salience during Ramadan also affects the probability that a mosque is attacked. We collected information on politically-motivated crimes against Muslims. Following a parliamentary inquiry by the party *Die Linke*, the Federal Ministry of the Interior released a list of “anti-Muslim” offenses that occurred between January 2001 and December 2011 across Germany (Deutscher Bundestag, 2012). This list comprises 219 offenses against mosques, including vandalism (e.g. swastika graffiti), death threats and arsons.⁷ The final sample used in this analysis is a time series comprising 4,017 observations, i.e., each day from January 1, 2001 to December 31, 2011. We estimate the following linear probability model:

$$y_t = \theta_0 + \theta_1 \text{Ramadan}_t + \epsilon_t \quad (\text{C.1})$$

where y_t is a dummy indicating whether an attack occurred on day t . *Ramadan* is a dummy that switches on when day t is within 90 days after the start of Ramadan. We augment the equation with controls for the day of the week, the day of the year and the calendar month by interactions between month and year. Standard errors are clustered at the week level to allow for arbitrary correlation of errors across the observations of the same calendar week.⁸ Table C.2 shows the regression results. In column (1), the estimated coefficient indicates that the likelihood of attacks increases by about four percentage points on days within three months

⁷ This list may be incomplete, with several Muslim organizations having complained that there is a large number of unreported offenses. Still, it displays the most comprehensive data available on violent attacks against Muslims. The dataset contains information on crimes’ calendar date and type. The state of NRW experienced the largest number of attacks (79), followed by Baden-Württemberg, the second most populated state by Muslims.

⁸ These results are robust to a more conservative clustering of standard errors, e.g., clustering at the calendar month or week level.

Table C.2: Ramadan and attacks on mosques

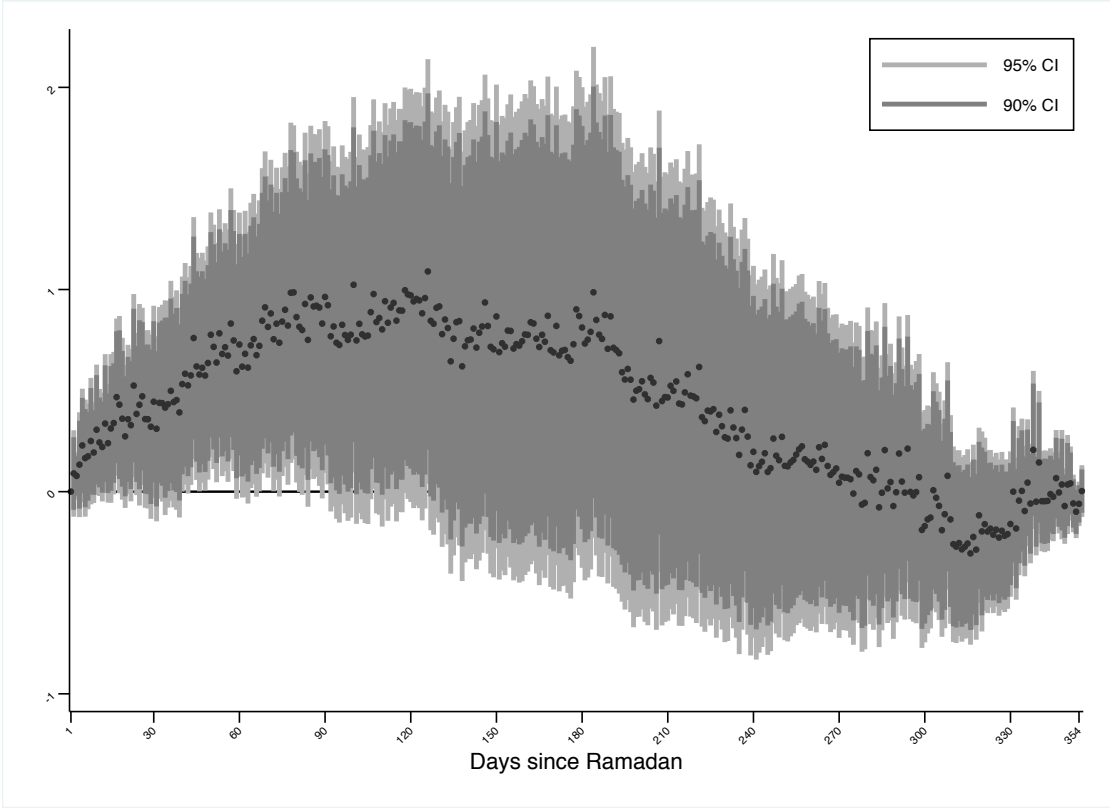
	(1)	(2)	(3)	(4)	(5)
<i>Ramadan</i>	0.0402 (0.0191)	0.0420 (0.0197)			
<i>Ramadan</i> (1-30 days)			0.0117 (0.0210)		
<i>Ramadan</i> (31-90 days)			0.0717 (0.0227)		
<i>Ramadan before</i> (90 days before)				0.0123 (0.0201)	
<i>Ramadan before</i> (90-61 days before)					0.0250 (0.0223)
<i>Ramadan before</i> (60 days before)					-0.0025 (0.0220)
Controls:					
Day of the week	Y	Y	Y	Y	Y
Day of the year	Y	Y	Y	Y	Y
Month \times Year	Y	Y	Y	Y	Y
Attacks $t-1$	N	Y	N	N	N
Observations	4,017	4,016	4,017	4,017	4,017
Mean dep. Var.			0.0533		
SD dep. Var.			0.2246		

Notes. Standard errors clustered at the calendar week level. The dependent variable is the probability of attack on a mosque in Germany. Data are daily and cover the period 1/1/2001-31/12/2011. *Ramadan* is a dummy switching on when the day is within 3 months after the start of Ramadan.

after Ramadan starts. This is a considerable increase given that the baseline probability is about 5.3%. In column (2), we include a dummy indicating whether an offense happened the day before t , as this may lower the likelihood that a mosque is attacked due to an increase in police displacement around mosques. The estimated coefficient is almost unchanged. In column (3), we split our explanatory variable into two different variables: a dummy for days during Ramadan and another dummy indicating days in the second and third month after the beginning of Ramadan. We expect offenses to be unlikely to happen during the festivity given the increased number of Muslims going to the mosque at any time of the day. The results show that the estimated effect turns to be positive but statistically not significant for days during Ramadan and positive and statistically significant for the days in the two months after the end of Ramadan. We eventually run placebo regressions including a dummy for days in the three months before, i.e., column (4): the estimated coefficient is smaller

than the ones in column (1) and not significant, thus confirming our intuition. In column (5) we include dummies for 90–61 days and 60 days before Ramadan, analogous to column (3). Since an attack on a mosque is more difficult to perform during Ramadan than during other periods, crimes against Muslims may be postponed or anticipated. However, there is no statistically significant reduction in crime on days during Ramadan nor an increase in the days before the start of Ramadan.

Figure C.2: Attacks on mosques and days after the start of Ramadan



Notes: The figure plots estimated coefficients of dummies for each day since the start of Ramadan on the attack on a mosque. The baseline is the first day of Ramadan. Vertical lines indicate 95% and 90% confidence intervals. Standard errors are clustered at the calendar week level.

Figure C.2 plots estimated coefficients of days since the start of Ramadan on the attack probability. In practice, we modify model (C.1) by replacing the dummy *Ramadan* with a set of dummies for each day since the start of the Ramadan. As we can only identify 354 coefficients, we restrict the coefficient of the first day of Ramadan to be zero. The model

additionally includes fixed effects for the calendar week. The figure shows a clear pattern on the offense probability: it starts increasing after the second week of Ramadan, reaching its peak in the third month and finally decreasing after the 120th day.

C.4 MUSLIMS VOTE, TOO!

A considerable share of Muslims are German citizens and thus are entitled to vote at state and federal elections. We therefore cannot rule out that a part of the estimated electoral effects is driven by a change in Muslims' voting behavior. While it is unlikely that Muslims vote for anti-Islam and xenophobe political parties, it could be the case that far-left support is partially explained by changing voting patterns of Muslim voters. To assess the effect of Ramadan on Muslim voters, we draw from the European Social Survey and construct a sample of about 10,000 Muslims in 35 countries over the period 2002 to 2017. This data contains information about the individual level of interest in politics and political orientation on a 0-10 left-to-right scale, as well as gender, age and ISCED-coded highest educational level. We use this information to assess the influence of being interviewed during Ramadan on political interest and orientation, while holding constant year of interview, month and country of interview, as well as gender, age and education. Political interest is unrelated to the interview held during Ramadan, with a very small and insignificant partial correlation ($n = 13,733$, $\beta = -.017[.047]$). The correlation between political orientation and interview held during Ramadan is larger in magnitude, but insignificant, too ($n=10,841$, $\beta = -.05[.045]$). For the smaller set of observations from Germany ($n=399$), distributions for Muslims interviewed during or outside of Ramadan are virtually identical. We conclude from these results that Muslims' votes are unlikely to drive the results on extremist parties on the left and right.

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