Terrorism and Voting: The Effect of Rocket Threat on Voting in Israeli Elections

Appendix

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Contents

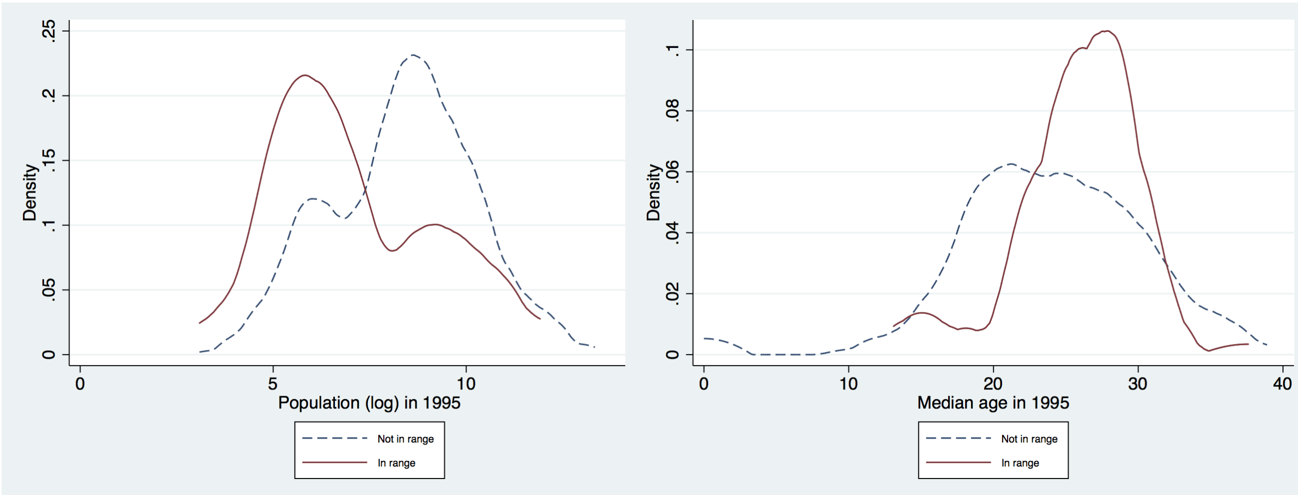
A. Supplementary Tables / Figures (Removed from Original Paper)

A.1. Figures

These are kernel density plots that present the distribution of various observable attributes in localities within the range (solid line) and outside the range (dashed line). These localities are well balanced if the lines appear similar, or at least have similar sets of values, such that each locality within the range can be compared to a similar locality outside the range.

Figure A.1: Localities In and Out of Range - Demography

(a) Population Size (b) Median Age



(c) Male-to-Female Ratio

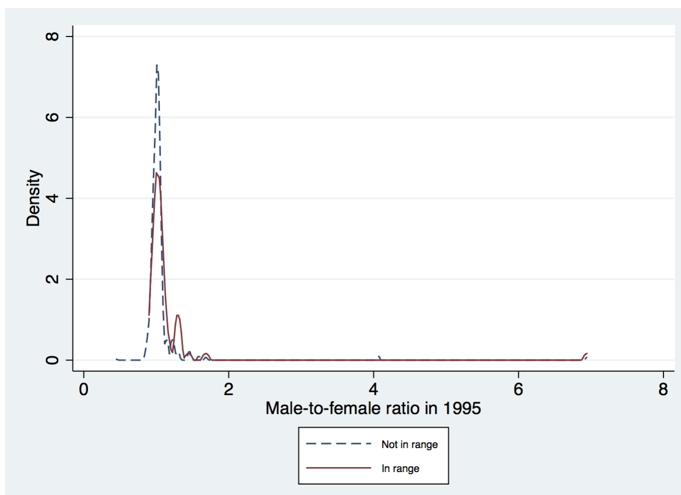
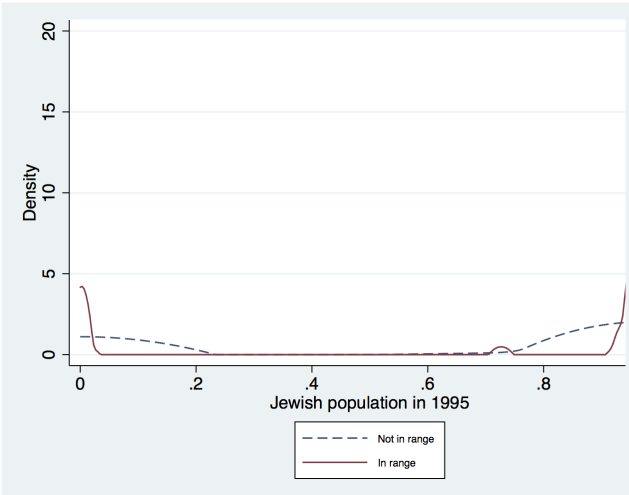
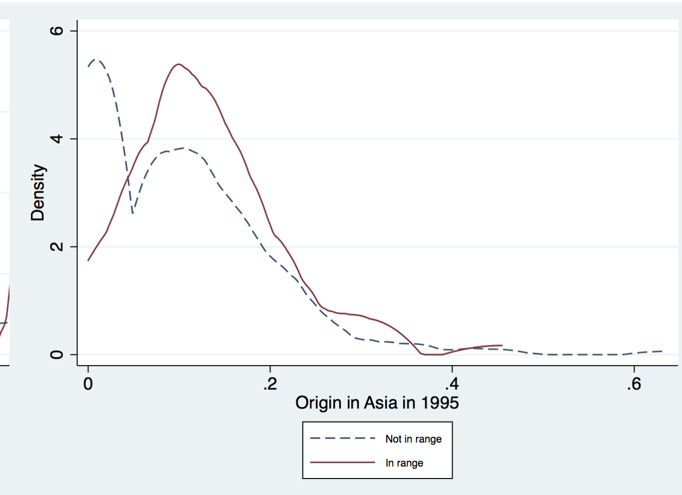


Figure A.2: Localities In and Out of Range - Ethnicity and Origin

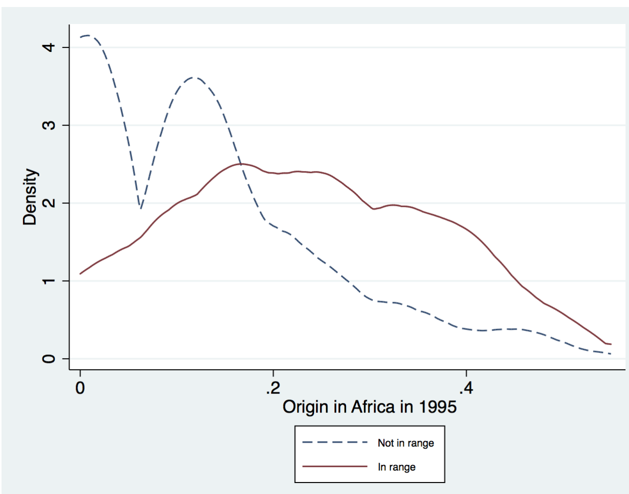
(a) Jewish Population



(b) Origin in Asia



(c) Origin in Africa



(d) Origin in the former Soviet Union

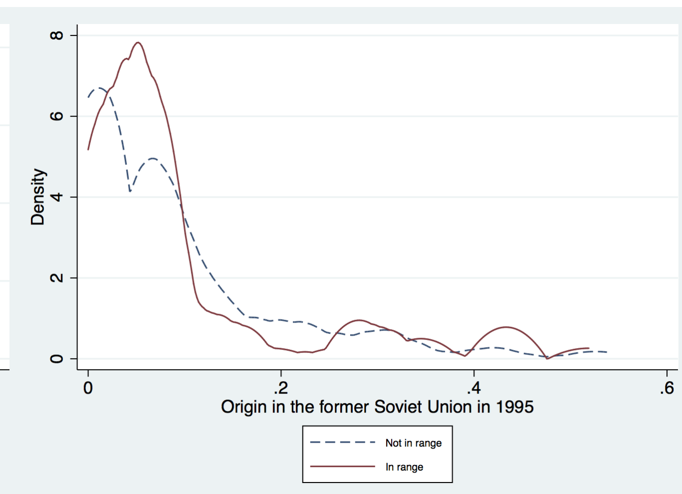
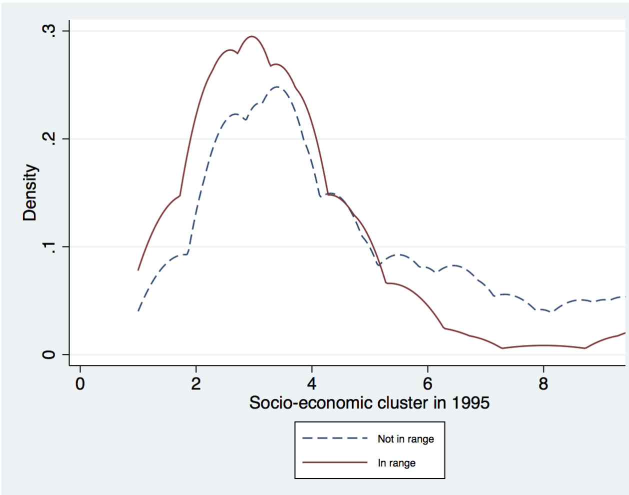
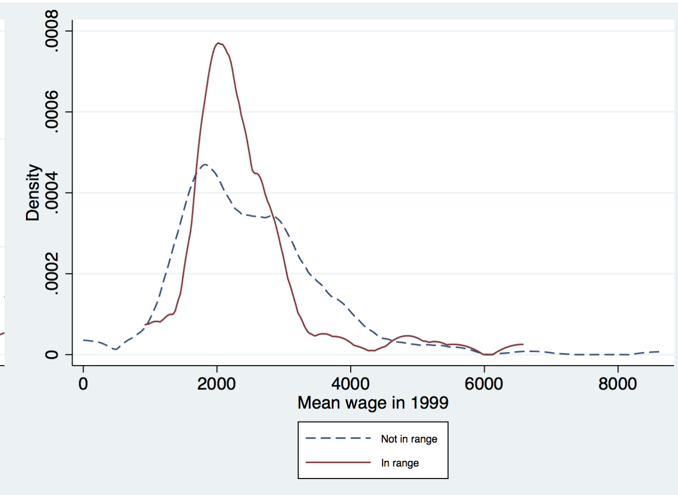


Figure A.3: Localities In and Out of Range - Socio-Economic Status

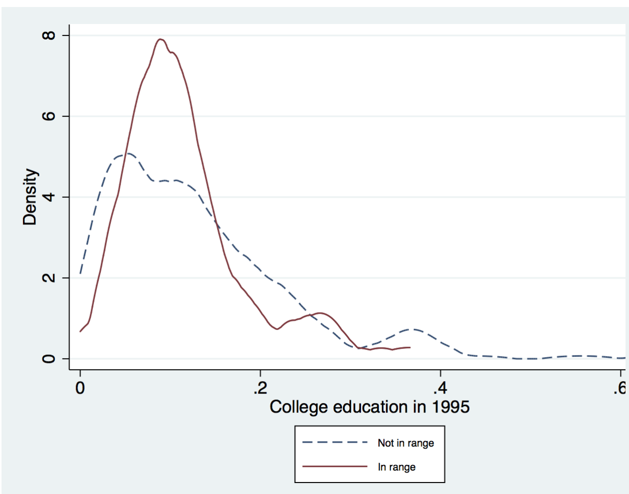
(a) Socio-Economic Cluster



(b) Mean Wage



(c) College Education



(d) Highschool graduates

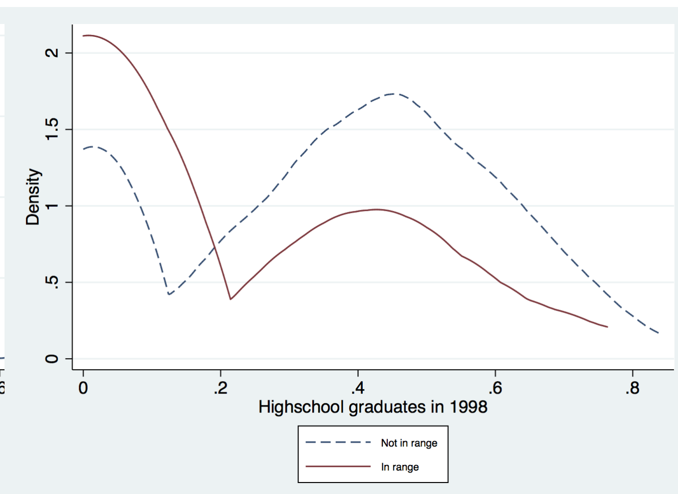
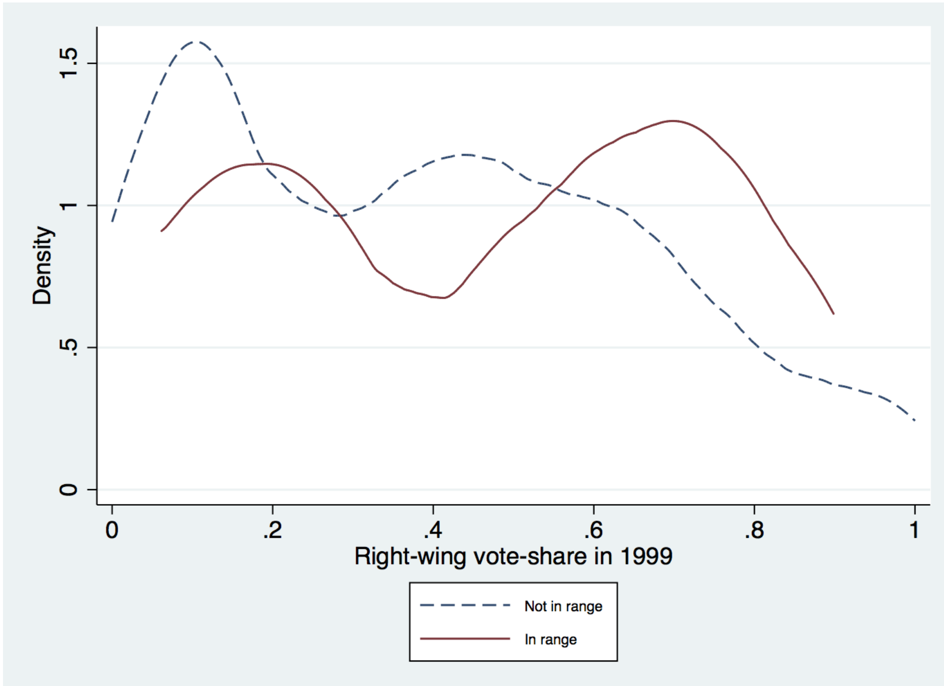


Figure A.4: Localities In and Out of Range - Voting Behavior

(a) Right-Wing Vote-Share in 1999



(b) Turnout in 1999

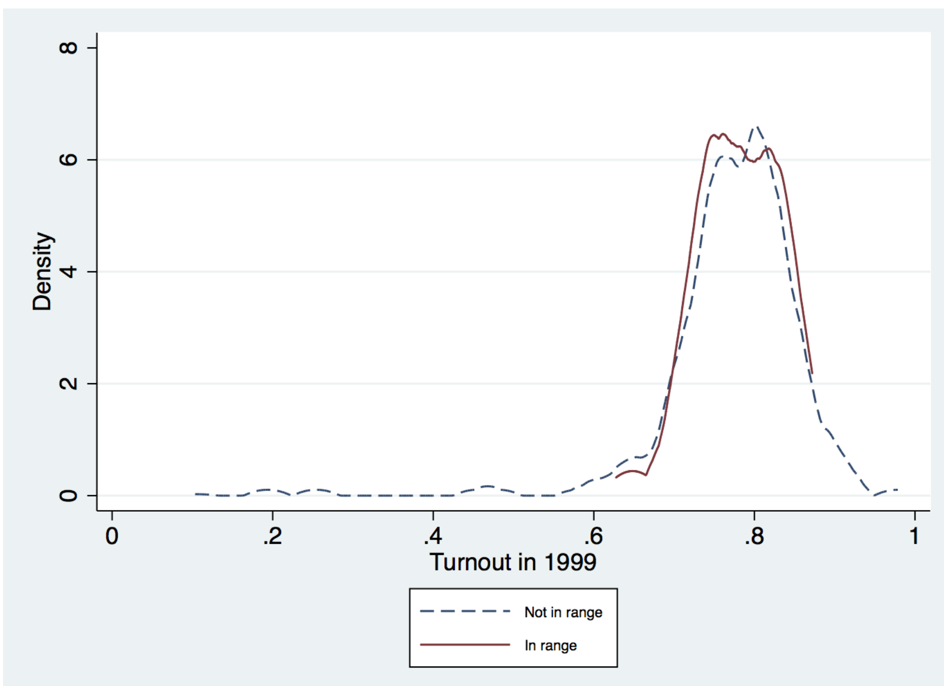
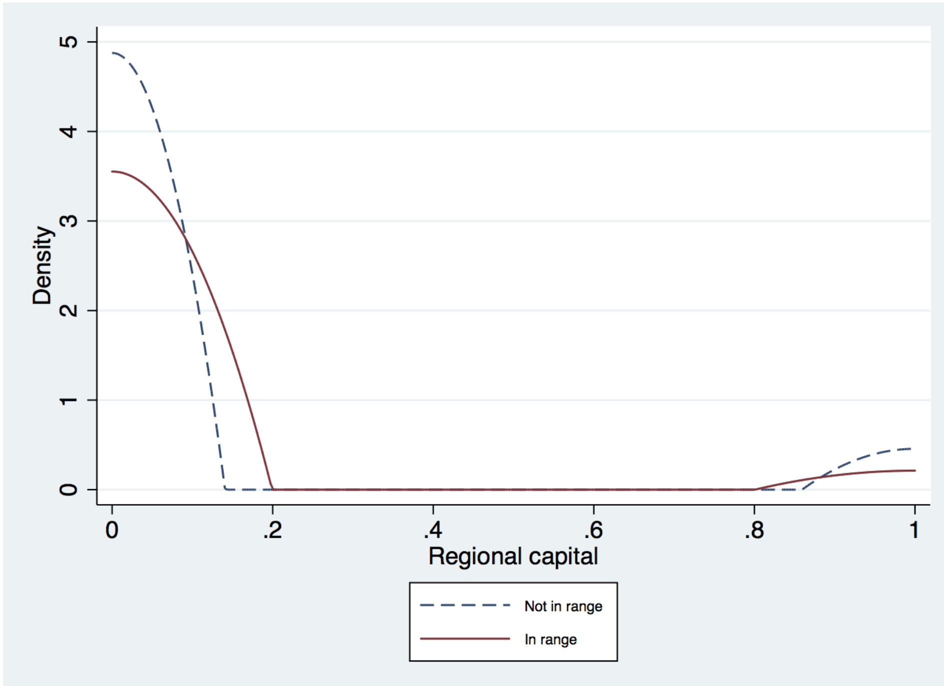
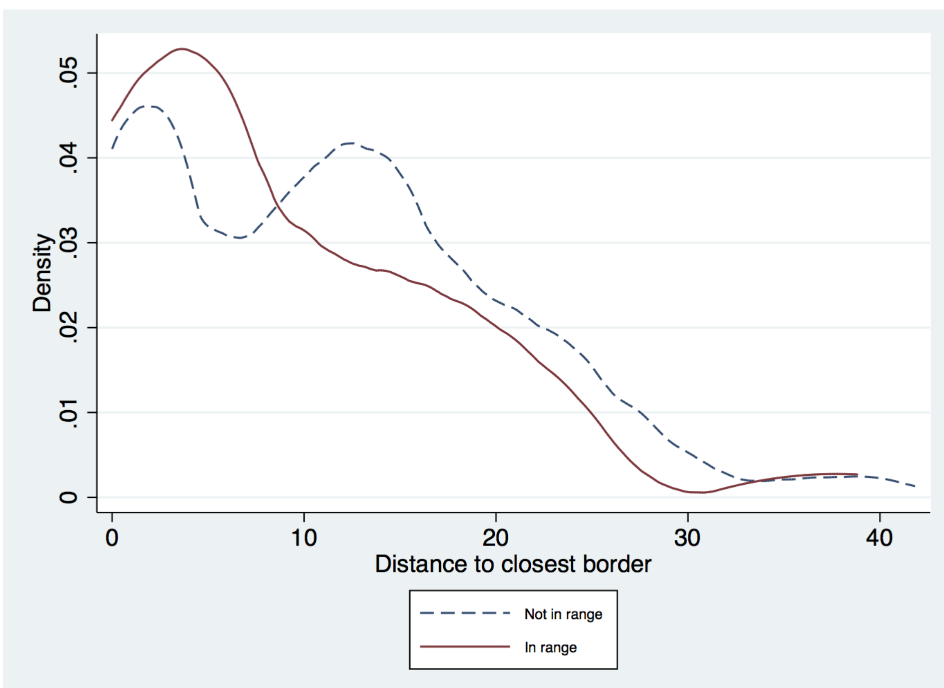


Figure A.5: Localities In and Out of Range - Centrality

(a) Regional capital



(b) Distance from border



A.2. Tables

A.2.1. The effect of being in the range on specific parties' vote-shares

Table **??** on the next page presents the effect of being in the range of rockets on vote-shares of several key parties: Likud (the largest right-wing party), Labor (the main left-wing party), and Shas (the main religious party). We estimate these effects using our main model specification (equivalent to column 3 in table 4).

Table A.1: The Effect of Being in the Rockets Range on Parties' Vote-Shares

	Likud (1)		Labor (2)		Shas (3)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
In range	0.02***	(0.01)	0.01	(0.01)	-0.01	(0.00)
Suicide terror fatalities	-0.01	(0.01)	-0.00	(0.01)	-0.00	(0.01)
Mean wage	0.01	(0.01)	0.00	(0.01)	0.01	(0.01)
Population	0.02	(0.02)	-0.05**	(0.02)	-0.00	(0.01)
Median age	-0.00**	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Male-to-female ratio	-0.01	(0.03)	-0.04	(0.06)	-0.00	(0.04)
Net migration	-0.09	(0.09)	-0.13**	(0.06)	-0.03	(0.02)
Jews share	0.08**	(0.04)	-0.02	(0.07)	-0.00	(0.02)
High school graduates	-0.00	(0.04)	-0.02	(0.03)	-0.01	(0.01)
Constant	0.06	(0.20)	0.66***	(0.19)	0.11	(0.09)
Locality fe	yes		yes		yes	
Year dummies	yes		yes		yes	
R^2	0.604		0.417		0.105	
No. of obs (Localities)	796 (262)		796 (262)		796 (262)	

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

Each column estimate a linear panel regression to Likud, Labor, and Shas vote-shares, respectively, on whether a locality is within the rockets' range.

A.2.2. Different measures of distance from Gaza and their effect of who is in the range

Table A.2 shows how different measures of distance affect the number of localities within the range in each election year.

Table A.2: Localities Within the Range - Different Definitions

Distance measure	Election year		
	2003	2006	2009
Original measure: Perimeter-to-perimeter all units within range	10	13	48
Perimeter-to-center all units within range	9	13	45
Perimeter-to-perimeter at least one units within range	12	14	50
Perimeter-to-perimeter all units within range Range -3km	8	13	39
Perimeter-to-perimeter all units within range Range -5km	8	11	35

Table A.3 complements column 3 and 4 in table 7 in the paper. It shows that our results are robust to two additional measures of distance.

Table A.3: Robustness Tests - Alternative Measures of Distance from Gaza

	Perimeter-to-perimeter at least one unit < range		Perimeter-to-perimeter all units < range range -3km	
	Coef.	Std. err.	Coef.	Std. err.
In range	0.02***	(0.01)	0.02***	(0.01)
Suicide terror fatalities	0.02	(0.02)	0.02	(0.02)
Mean wage	-0.02**	(0.01)	-0.02**	(0.01)
Population	-0.44***	(0.16)	-0.45***	(0.16)
Median age	-0.01***	(0.00)	-0.01***	(0.00)
Male-to-female ratio	-0.05	(0.07)	-0.05	(0.07)
Net migration	-0.11	(0.10)	-0.12	(0.10)
Jews share	0.06	(0.04)	0.06	(0.04)
High school graduates	0.01	(0.04)	0.01	(0.04)
Constant	1.50***	(0.37)	1.51***	(0.37)
Locality fe	yes		yes	
Year dummies	yes		yes	
R^2	0.526		0.527	
No. of obs (Localities)	823 (275)		823 (275)	

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

Column 1 reports results of a linear panel regression of right-wing vote-share on range, using an alternative definition of range (in discontinuous localities, at least one unit has to be within the range). In column 2, we deduct 3km from the range to address the possibility that rockets are fired from within Gaza, and not its perimeter

Does the Length of Exposure to Rockets Matter?

Table **??** reports the the effect of being in the range for one, two, and three elections, compared to not being in the rockets' range. The dependent variable is the right-wing vote share in a locality. The main independent variables are dummies for the number of elections a locality has been within the rockets' range. The omitted baseline category is localities that are beyond the range. We control for time-varying locality-level characteristics, locality fixed effects, and year dummies.

The results suggest a positive effect of being in the range on right-wing vote-share, though the statistical significance varies. Localities that vote for the first time within the range of rockets experience a 2 percentage points increase in the right-wing vote-share, compared to localities that are not within the range. Localities that vote for the second time within the range also increase their right-wing vote-share, but this result is not statistically significant.[1] The largest increase in right-wing vote-share is for localities that have been exposed for the longest period: 6 percentage points increase in localities that are voting within the range for the third time.[2]

These results are based on small number of observations that fall within each of these categories, as evident from table 1 in the paper. We therefore treat these results with caution. We believe that they suggest that the effect of being in the range is increasing in duration of exposure, but the to small number of observations within each category does not allow us to explore these effects fully.

[1] 2006 vote-shares of localities that came into the range before 2003 elections, and 2009 right-wing vote-shares of localities that came into the range between 2003 and 2006 elections.

[2] 2009 right-wing vote-shares in localities that came into the range before 2003 elections.

Table A.4: Length of Exposure

	DV: Right-Wing Vote-Share	
	Coef.	Std. err.
Duration of being in the range:		
1st election in the range	0.02***	(0.01)
2nd election in the range	0.01	(0.01)
3rd election in the range	0.06***	(0.02)
Suicide terror fatalities	0.01	(0.01)
Mean wage	-0.02*	(0.01)
Population	-0.05**	(0.02)
Median age	-0.01***	(0.00)
Male-to-female ratio	-0.04	(0.07)
Net migration	-0.03	(0.09)
Jews share	0.05	(0.04)
High school graduates	-0.00	(0.04)
Constant	1.03***	(0.20)
Locality fe	yes	
Year dummies	yes	
R^2	0.533	
No. of obs (Localities)	796 (254)	

* p<0.10, ** p<0.05, *** p<0.01

B. Alternative Specifications / Variables

B.1. Dropping the Town of Sderot

Table **??** shows that our results are robust to dropping the town of Sderot that has been heavily targeted by rockets (compare to table 4, column 3 and 4). This is one of our tests that demonstrates that the right-wing vote-share is higher within the range, and not necessarily in localities that are targeted.

Table B.1: The Effect of Being in the Rockets Range on Right-Wing Parties' Vote-Shares (Without Sderot)

	DV: Right-Wing Vote-Share			
	(1)		(2)	
	Coef.	Std. err.	Coef.	Std. err.
In range	0.02***	(0.01)	0.04***	(0.01)
Suicide terror fatalities	0.01	(0.01)	0.02***	(0.01)
Mean wage	-0.01	(0.01)	-0.00	(0.01)
Population	-0.04**	(0.02)	-0.00	(0.00)
Median age	-0.01***	(0.00)	0.00	(0.00)
Male-to-female ratio	-0.04	(0.07)	0.09	(0.07)
Net migration	-0.03	(0.08)	-0.01	(0.02)
Jews share	0.10	(0.07)	0.10***	(0.02)
High school graduates	-0.01	(0.04)	-0.10**	(0.04)
Origin from Asia in 1995			-0.04	(0.04)
Origin from Africa in 1995			0.03	(0.03)
Origin from the Soviet Union in 1995	0.00	(.)	0.05	(0.03)
Regional capital			0.02**	(0.01)
Distance to border			-0.00	(0.00)
Lagged DV			0.85***	(0.02)
Constant	0.91***	(0.19)	-0.03	(0.09)
R^2	0.539		0.856	
No. of obs (Localities)	787 (256)		702 (253)	
Locality fe	yes		no	
Year dummies	yes		no	

* p<0.10, ** p<0.05, *** p<0.01

B.2. Alternative Locality-Level Economic Indicator

In table **??**, we substitute *Mean Wage* with the share of locality's residents who receive unemployment benefits (*Unemployment*). Note that this indicator is probably lower than locality-level unemployment rate since those who are out of work for too long are no longer entitled to receive these benefits.

Column 1 depicts results of a fixed effects model, and column 2 the results of a lagged dependent variable model (equivalent to columns 3 and 4 in table 4, respectively).

The effect of the range on voting remain positive and significant. The point estimate is now larger than in our original results, whereas the statistical significance remains the same. The share of residents who receive unemployment benefits is positively and significantly correlated with right-wing vote-share.

Table B.2: The Effect of Being in the Rockets Range on Right-Wing Parties' Vote-Shares (Unemployment Benefits Recipients)

	DV: Right-Wing Vote-Share			
	(1)		(2)	
	Coef.	Std. err.	Coef.	Std. err.
In range	0.07***	(0.01)	0.05***	(0.01)
Suicide terror fatalities	0.01	(0.01)	0.02***	(0.01)
Unemployment	7.92***	(0.91)	2.43***	(0.64)
Population	0.03	(0.02)	-0.00	(0.00)
Median age	0.01	(0.01)	0.00	(0.00)
Male-to-female ratio	-0.08	(0.06)	0.10	(0.07)
Net migration	-0.05	(0.10)	-0.01	(0.02)
Jews share	0.03	(0.05)	0.10***	(0.02)
High school graduates	0.02	(0.02)	-0.09**	(0.04)
Origin from Asia in 1995			-0.05	(0.04)
Origin from Africa in 1995			-0.00	(0.03)
Origin from the Soviet Union in 1995			0.01	(0.03)
Regional capital			0.02***	(0.01)
Distance to border			-0.00	(0.00)
Lagged DV			0.84***	(0.02)
Constant	-0.08	(0.26)	-0.06	(0.09)
R^2	0.139		0.856	
No. of obs (Localities)	786 (254)		702 (251)	
Locality fe	yes		no	
Year dummies	yes		no	

* p<0.10, ** p<0.05, *** p<0.01

B.3. Alternative Measure of Education

In table **??**, we use the share of college graduates in a locality as a measure of education, instead of the share of high school graduates among 17-25 year olds, as in our original tables. The data on college graduates are available from 1995 and 2008 censuses. We use 1995 data for 1999-2006 elections, and 2008 data for 2009 election.

We replicate the results of a fixed effects model (column 1) and a lagged dependent variable model (column 2), comparable to column 3 and 4 in table 4, respectively.

Our substantive results remain the same as in table 4.

Table B.3: The Effect of Being in the Rockets Range on Right-Wing Parties' Vote-Shares (College Graduates Share)

	DV: Right-Wing Vote-Share			
	(1)		(2)	
	Coef.	Std. err.	Coef.	Std. err.
In range	0.03**	(0.01)	0.03***	(0.01)
Suicide terror fatalities	0.01	(0.01)	0.03***	(0.01)
Mean wage	0.02*	(0.01)	-0.02***	(0.01)
Population	-0.05**	(0.02)	0.00	(0.00)
Median age	-0.01***	(0.00)	-0.00	(0.00)
Male-to-female ratio	0.00	(0.00)	0.12	(0.07)
Net migration	-0.10	(0.08)	0.01	(0.02)
Jews share	0.10	(0.10)	0.02	(0.02)
College graduates	0.03	(0.04)	0.43***	(0.04)
Origin from Asia in 1995			0.15***	(0.05)
Origin from Africa in 1995			0.20***	(0.04)
Origin from the Soviet Union in 1995			0.09**	(0.04)
Regional capital			0.01	(0.01)
Distance to border			0.00	(0.00)
Lagged DV			0.81***	(0.03)
Constant	0.65***	(0.21)	-0.16	(0.10)
R^2	0.216		0.870	
No. of obs (Localities)	761 (257)		682 (254)	
Locality fe	yes		no	
Year dummies	yes		no	

* p<0.10, ** p<0.05, *** p<0.01

B.4. Using 1995 and 2008 Locality-Level Data on Origin of the Jewish Population

In our original tests, we use 1995 data on share of residents with family origin in Asia and Africa. These data are also available from 2008 census (but not data on share of residents with origin in the former Soviet Union; these data are available only in 1995 census). In table **??**, we replicate our tests using 1995 data form 1999-2006 election and 2008 for 2009 election.

As before, column 1 depicts results of a fixed effects model, and column 2 the results of a lagged dependent variable model (equivalent to columns 3 and 4 in table 4, respectively).

Table B.4: The Effect of Being in the Rockets Range on Right-Wing Parties' Vote-Shares (1995 and 2008 Data on Asia and Africa Origin Residents)

	DV: Right-Wing Vote-Share			
	(1)		(2)	
	Coef.	Std. err.	Coef.	Std. err.
In range	0.02***	(0.01)	0.05***	(0.01)
Suicide terror fatalities	0.01	(0.01)	0.02**	(0.01)
Mean wage	0.01	(0.01)	-0.00	(0.01)
Population	-0.04	(0.02)	-0.00	(0.00)
Median age	-0.01***	(0.00)	0.00	(0.00)
Male-to-female ratio	-0.04	(0.07)	0.08	(0.06)
Net migration	-0.02	(0.08)	-0.03	(0.02)
Jews share	0.05	(0.04)	0.14***	(0.02)
High school graduates	-0.01	(0.04)	-0.12***	(0.04)
Origin in the Soviet Union in 1995			0.02	(0.03)
Origin in Asia	0.46	(0.07)	-0.22***	(0.06)
Origin in Africa	-0.28***	(0.06)	-0.08**	(0.03)
Regional capital			0.02**	(0.01)
Distance to border			-0.00	(0.00)
Lagged DV			0.87***	(0.02)
Constant	0.36	(0.24)	-0.06	(0.08)
R^2	0.214		0.858	
No. of obs (Localities)	790 (257)		705 (254)	
Locality fe	yes		no	
Year dummies	yes		no	

* p<0.10, ** p<0.05, *** p<0.01

B.5. No Cluster in Fixed Effects Model

Originally, we clustered the standard errors at locality level. However, following a comment that this might be redundant if we also include locality fixed effects, we show that our results do not change if we do not cluster. In table ?? below we replicate columns 1 through 3 from table 4 without clustering the standard errors at locality level. The results do not change.

Table B.5: The Effect of Being in the Rockets Range on Right-Wing Parties' Vote-Shares (Without Cluster)

	DV: Right-Wing Vote-Share					
	(1)		(2)		(3)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
In range	0.04***	(0.01)	0.06***	(0.01)	0.02*	(0.01)
Suicide terror fatalities			0.02	(0.02)	0.01	(0.01)
Mean wage			0.10***	(0.01)	-0.01	(0.01)
Population			0.02	(0.02)	-0.05**	(0.02)
Median age			-0.00	(0.00)	-0.01***	(0.00)
Male-to-female ratio			-0.06	(0.08)	-0.04	(0.06)
Net migration			-0.08	(0.07)	-0.03	(0.05)
Jews share			0.10	(0.11)	0.06	(0.08)
High school graduates			-0.08***	(0.03)	-0.00	(0.03)
Constant	0.40***	(0.00)	0.08	(0.27)	0.95***	(0.21)
R^2	-0.347		-0.280		0.302	
No. of obs (Localities)	1000 (268)		790 (257)		790 (257)	
Locality fe	yes		yes		yes	
Year dummies	no		no		yes	

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

B.6. First Difference Model

In table ?? we report the results of a first difference model (FD). This approach is related to the fixed effects model because in both cases time invariant variables drop out. However, it estimates substantively different relationship (change from the previous period as opposed to deviation from the mean), and thus the coefficients might not be comparable.

Nonetheless, the coefficient of *Range* is positive and statistically significant. Moreover, the substantive effect is comparable to what we estimate using fixed effects and lagged dependent variable model: right-wing vote-share increases by 2.6 percentage points within the range.

Table B.6: First Difference Estimation

	Coef.	Std. err.
ΔIn range	0.03***	(0.01)
ΔSuicide terror fatalities	0.00	(0.00)
ΔMean wage	-0.00	(0.00)
ΔHigh school graduates	0.11***	(0.02)
ΔPopulation	-0.03	(0.02)
ΔMedian age	-0.00	(0.00)
ΔMale-to-female ratio	-0.08	(0.08)
ΔNet migration	-0.12***	(0.03)
ΔJews share	-0.03	(0.07)
R^2	0.578	
No. of obs (Localities)	529	
Year dummies	yes	

* p<0.10, ** p<0.05, *** p<0.01

B.7. Controlling for Distance to the Gaza Strip

In table **??** we report the results of a lagged dependent variable model controlling for the log of distance in km between each locality and the Gaza strip, instead of distance between each locality and the closest border as in our main specification (we also run a model where we kept the distance to the closest border, in addition to the distance to Gaza, and the results are substantively identical to the ones described below). This is an alternative specification of table 4 column 4 (lagged dependent variable).

In column 1, we omit our main explanatory variable, *Range*, and control only for the distance between a locality and Gaza (*Distance to Gaza*). The coefficient of *Distance to Gaza* is negative and not statistically significant (it is negative and statistically significant in a model without controls, but loses statistical significance when we add controls). In column 2, we add the explanatory variable *Range*. Now the *Distance to Gaza* coefficient is positive (changed sign compared to column 1) and statistically significant, and so is the coefficient of *Range*. This suggest that the effect of *Range* is beyond simply living in proximity to Gaza, and that localities with bigger right-wing vote-shares are the ones that are further from Gaza. We suspect that this finding might be due to nonlinear relationship between distance to Gaza and voting patterns. In column 3, we add a quadratic term of distance to capture the fact that distance to Gaza may only matter for localities living close to Gaza, and "die out" for localities further away. The coefficient of *Range* remains the same. The coefficient of distance to Gaza is positive and no longer statistically significant, and the coefficient of the quadratic term is negative and not statistically significant.

These results suggest the following: (1) The coefficient of *Range* is consistent (positive and statistically significant) across all of our different model specifications (see table 4 and table B.7). It is positive and statistically significant in models without control variables, in models with locality fixed effects and year dummies, and in models with lagged dependent variable and various controls; and (2) the coefficient of distance to Gaza depends on model specification – the sign and the statistical significance vary across models. We thus conclude that *Range* has an effect beyond simply living in proximity to Gaza. If being in the range was simply capturing the effect of living in proximity to Gaza, the coefficient of *Distance to Gaza* would have been negative and statistically significant in column 1 of table B.7. This supports our main argument: rocket range influences voting chiefly via threat from terrorism, and not simply geographic proximity to Gaza.

Table B.7: Controlling for distance to Gaza

	Distance and no Range (1)		Distance and Range (2)		Distance, Distance^2 and Range (3)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
In range			0.08***	(0.01)	0.08***	(0.01)
Distance to Gaza	-0.00	(0.00)	0.02***	(0.00)	0.02	(0.01)
Distance to Gaza^2					-0.00	(0.00)
Suicide terror fatalities	0.02***	(0.01)	0.02***	(0.01)	0.02***	(0.01)
Mean wage	-0.01	(0.01)	0.00	(0.01)	0.00	(0.01)
Population	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Median age	0.00**	(0.00)	0.00	(0.00)	0.00	(0.00)
Male-to-female ratio	0.11	(0.07)	0.11*	(0.07)	0.11*	(0.07)
Net migration	-0.01	(0.02)	-0.01	(0.02)	-0.01	(0.02)
Jews share	0.11***	(0.02)	0.10***	(0.02)	0.10***	(0.02)
High school graduates	-0.09**	(0.04)	-0.09**	(0.04)	-0.09**	(0.04)
Origin from Asia in 1995	-0.03	(0.04)	-0.01	(0.04)	-0.01	(0.04)
Origin from Africa in 1995	0.06**	(0.03)	0.03	(0.03)	0.03	(0.03)
Origin from Soviet Union in 1995	0.03	(0.03)	0.06*	(0.03)	0.06*	(0.03)
Regional capital	0.02**	(0.01)	0.02**	(0.01)	0.02**	(0.01)
Lagged DV	0.84***	(0.02)	0.85***	(0.02)	0.85***	(0.02)
Constant	-0.07	(0.09)	-0.16*	(0.09)	-0.16*	(0.09)
Locality fe	no		no		no	
Year dummies	no		no		no	
R^2	0.858		0.860		0.860	
No. of obs (Localities)	706 (255)		706 (255)		706 (255)	

* p<0.10, ** p<0.05, *** p<0.01

C. Additional Information on Model Fit and Cross Validation

C.1. AIC and BIC

In table **??**, we report the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) that provide a measure of goodness of fit taking into account model complexity (number of right-hand-side variables). A better model is the one than minimizes the information loss. We compare the fixed effects model from column 3 in table 4 to the lagged dependent variable model from column 4 in table 4.

The fixed effects model has lower AIC and BIC scores than the lagged dependent variable model.

Table C.1: Model Fit - AIC and BIC

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
FE model	790	1038.274	1344.345	12	-2664.691	-2608.626
LDV model	705	-153.7234	536.4549	16	-1040.91	-967.9786

C.2. Cross Validation

We use Stata *regvalidate* command to perform a cross validation test of the fixed effects model (column 3 in table 4) vs the lagged dependent variable model (column 4 in table 4). To perform cross validation on the fixed effects model, we demean the data by hand because this command only works after the command "regress" (does not work after xtreg). This produces the same coefficients, but a different R^2 compared to the xtreg model.

This command partitions the data into samples, leaves one sample out, estimates the model, and then tests to which extent the model (estimated on part of the data, "train" sample) can predict the sample that was left out ("test" sample). We performed 200 replications of this procedure. A good model (one that has a better predictive capacity) is the one that produces similar results in the train and the test samples (similar R^2, mean square error (MSE), slope and constant).

Table C.2: Model Fit - Cross Validation

Model	Statistic	Orig.	Train	Test	Diff.	Orig. Adj.
FE model	R^2	0.14	0.16	0.10	0.07	0.07
	MSE	0.00	0.00	0.00	-0.00	0.00
	fit slope	1.00	1.00	0.73	0.27	0.73
	fit constant	0.00	-0.00	0.00	-0.00	0.00
LDV model	R^2	0.86	0.86	0.84	0.00	0.84
	MSE	0.01	0.01	0.00	-0.00	0.01
	fit slope	1.00	1.00	0.99	0.01	0.99
	fit constant	0.00	-0.00	0.01	-0.01	0.01

Table **??** shows that LDV model has smaller differences between the train and the test results. We perform another cross validation test using Stata *crossfold* command. This tests similarly partitions of the data into k subsamples, and performs a leave-one-out estimation. The *crossfold* command reports the root mean square error (RMSE) of each partition. Similarly to the *regvalidate* results, LDV model has a smaller RMSE.

Despite these results, we do not believe that we should abandon the fixed effects model, but instead use it together with the LDV results, as recommended by Angrist and Pischke (2008). This is because we are not aiming to predict the vote-share in each locality, but to estimate the effect of being in the range on voting results. Since locality voting is path dependent, it is not surprising that LDV model is better at predicting locality-level election outcomes. However, this does not mean that the LDV performs better than the fixed effects model in isolating the effect of being in the range on voting. It is important to also emphasize that the results do not substantively change when we use the fixed effects model as compared to the LDV model.

C.3. Correlation Among Independent Variables

We present correlations among the independent variables in table **??**. Several independent variables are correlated with each other. For example, there is a statistically significant correlation among demographic variables – the share of the Jewish population is correlated with residents with origin in Asia, Africa, or the Soviet Union. Likewise, there is a strong correlation among mean wage, education, and demographic variables.

This correlation implies that our tests might suffer from multicollinearity. However, as long as the multicollinearity is not perfect, we can still estimate our model. The coefficients are still the best linear estimates, and the standard errors are correct and efficient. We might not be able to get reliable estimates of the effects of the independent variables on voting, but then our goal is to study the effect of range, and not the effect of other variables. Even though range is correlated with some of the independent variables, these correlations are low (at most 0.2). Moreover, we use several alternative specifications without controls as well as alternative variables for some of the controls, and our results with respect to voting in the range do not change.

In light of this, we do not believe that our results with respect to the effect of being in the range on voting are affected by multicollinearity.

Table C.3: Correlation Among Independent Variables

Variables	In range	Terror.	Mean wage	High school	Pop	Age	Male/ female	Migrt'n	Jews share	Asia	Afr.	USSR	Reg. Capital	Border
In range	1.0													
Terrorism	-0.0	1.0												
Mean	0.0	0.0	1.0											
High school	0.1*	0.0	0.6*	1.0										
Pop	-0.0	0.1*	0.1*	0.1*	1.0									
Age	0.1	0.0	0.7*	0.5*	0.4*	1.0								
M/F	0.0	-0.0	-0.1*	-0.3*	-0.2*	-0.1*	1.0							
Migration	0.0	-0.0	0.1*	0.0	-0.4*	-0.1	0.0	1.0						
Jews	0.1*	0.0	0.6*	0.3*	0.1*	0.5*	-0.0	0.1	1.0					
Asia	0.1*	0.0	0.5*	0.2*	0.2*	0.4*	-0.0	-0.0	0.7*	1.0				
Africa	0.2*	0.0	0.2*	0.1*	0.2*	0.3*	0.0	-0.1*	0.7*	0.4*	1.0			
USSR	0.0	0.0	0.2*	0.2*	0.4*	0.5*	-0.1*	-0.1*	0.5*	0.3*	0.5*	1.0		
Reg. capital	-0.0	0.1*	0.1*	0.1*	0.5*	0.2*	-0.1*	-0.1*	0.2*	0.1*	0.2*	0.4*	1.0	
Border	-0.1*	-0.0	-0.2*	-0.1	0.0	0.1*	-0.0	0.1	-0.2*	-0.1*	-0.0	0.1*	-0.0	1.0

* $p<0.05$

C.4. Multicollinearity Test (VIF)

Table **??**, reports the Variance Inflation Factors (VIF) that measures the extent to which multicollinearity inflated the variance of the coefficients. As a rule of thumb, VIF>10 implies a high degree of multicollinearity. As you can see, none of the independent variables has a VIF >10.

Table C.4: Variance Inflation Factors

Variable	VIF	1/VIF
Range	1.14	0.87
Suicide terror fatalities	1.03	0.97
Mean wage	4.56	0.22
High school graduates	2.67	0.37
Population	1.98	0.51
Median age	4.58	0.22
Male-to-female ratio	1.49	0.67
Net migration	1.24	0.81
Jews share	6.05	0.17
Origin in Asia	2.13	0.47
Origin in Africa	2.38	0.42
Origin in the former Soviet Union	2.85	0.35
Regional capital	1.49	0.67
Distance to border	1.22	0.82