Terrorism and Voting: The Effect of Exposure to Rockets on Voting in Israeli Elections

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Abstract

How does exposure to terrorism affect voting? Localities in southern Israel have been exposed to rocket attacks from Gaza Strip starting in 2001. We rely on variation across time and space in exposure to rockets to identify the effect of terrorism on voting in Israeli elections. We show that rockets range does not depend on the characteristics of the targeted localities. Using the evolution of rockets range over time, we compare changes in voting patterns of those localities that are within the range to very similar localities that are outside the range during 4 national elections in Israel. Our results suggest that the right-wing vote-share increases by 2 to 6 percentage points in localities that are within the rockets range, which constitutes a substantially significant effect.

How does the threat of becoming a victim of terrorism affect voting behavior? Are voters more likely to support parties that favor extending greater concessions to terrorists in order to avoid further violence, or are they more likely to vote for parties that oppose concessions and that favor more aggressive policy towards the perpetrators? These questions have direct implications for conflict resolution, as well as for understanding and assessing the effectiveness of terrorism as a political tool. The existing literature on the effects of terrorism on political behavior has been mixed, with some studies suggesting that exposure to terrorism leads voters to be more accommodating of terrorist demands, and others showing a hardening of attitudes (a rightward shift) in the electorate. We argue that these conflicting findings are due to the difficulty in disentangling causal effects from the strategic interaction of terrorists and government.

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Our study improves on the existing studies in several ways. First, rockets are different from other modes of attack because their effect depends on their range. In the context of the Israeli-Palestinian conflict, rockets' launchers are confined to Gaza Strip, and therefore the effect of rockets depends on the maximum distance that these rockets can travel from Gaza. We show that the rockets' range is determined by the availability of rocket technology and launching expertise in Gaza, and crucially is exogenous to the Israeli political circumstances. This allows us to assess the effect of the threat of rockets on voting. Specifically, we explore the variation in the range of rockets from 2001 through 2009, and show that voters who reside in the range of rockets become more likely to vote for right-wing parties. We estimate that the effect of being in the rockets' range is an increase of 2 to 6 percentage points in the right-wing vote-share, and this implies additional 2 to 7 seats in the parliament (out of 120) for the right-wing block, if all voters in Israel were within the rockets' range.

In addition to estimating the effect of being in the rockets' range on the right-wing block as a whole, we explore changes in different subsets of that block, as well as in vote-shares of specific parties. Moreover, we analyze whether the duration of exposure to rockets matters, and whether these effects depend on the incumbent's political affiliation. We find that among the right-wing parties, rockets range affects primarily the nationalistic parties (rather than religious or ethnic parties that also belong to the right-wing block). Furthermore, we show that incumbent parties are not punished by voters for allowing the rockets' range to expand. Instead, right-wing parties gain additional votes in localities that are within the rockets range, when the incumbent is non-right-wing, and the Likud party gains additional votes within the rockets' range also when it is the incumbent. Additionally, we find evidence that while coming into the range of rockets has immediate effects on voting, longer exposure increases the support for right-wing parties even further. These findings, however, are based on a small number of observations, and we therefore treat them as suggestive.

We conduct several robustness checks that confirm our main results. We omit observa-

tions that lie outside the common support, and reestimate our model using a smaller set of localities. In addition, we use alternative measures of distance from Gaza that affect which localities are considered to be in the range of rockets. Furthermore, we explore whether our results are due to a change in the voter's positions, or because of a change in the voter's composition. Specifically, we show that our results hold also for subset of Israeli localities in which the turnout is high and migration is low, thereby alleviating concerns that our findings are driven by changes in the composition of the electorate.

The paper proceeds as follows: in the next section, we review the existing literature and evidence with respect to the effect of terrorism on voting, and highlight the relevance of this question in the broader context of conflict management and resolution. Then, we provide a brief overview of rocket fire from the Gaza Strip, and discuss the data and our empirical strategy. Afterwards, we present our empirical results, and conclude with a discussion of the implications for conflict resolution and terrorism literature.

Theories of Terrorism, Violence, and Political Behavior

How does living under the threat of terrorism affect voting? This question is related to three strands of extant literature: 1) the effect of violence on political behavior, 2) the strategic nature of terrorist - government interactions, and 3) the literature on voting.

Existing studies explore various effects of violence and terrorism. While Pape (2003) suggests that terrorism, and in particular suicide bombings, might be effective in coercing governments to provide concessions to terrorists, Abrahms (2006, 2012) questions the overall effectiveness of terrorism as a political strategy. Many papers assert that terrorism and counterterrorism lead to cycles of violence (Haushofer, Biletzki and Kanwisher, 2010; Jaeger and Paserman, 2008). However, others provide evidence that some forms of counterterrorism might be effective in reducing further insurgent violence (Lyall, 2009), or in curbing future

terrorist attacks (Benmelech, Berrebi and Klor, 2010*a*).

With respect to the effect of terrorism on political behavior, in the Israeli-Palestinian context Berrebi and Klor (2008) use a variation in Palestinian suicide terrorism across time and space to argue that attacks shift the Israeli voters to right-wing parties that are less supportive of granting political concessions to Palestinians. Specifically, they estimate that right-wing parties' vote-share increases by 1.35 percentage points in Israeli localities that experience Palestinian suicide attacks. Moreover, suicide attacks increase the support for the right-wing block beyond those localities in which they take place. Gould and Klor (2010) use a similar identification strategy to make a more nuanced argument: while terrorism increases the vote-share of right-wing parties, it also shifts the entire political spectrum to the left, thereby making voters and parties more supportive of accomadating Palestinian political demands.

Outside the Israeli-Palestinian conflict, Kibris (2011) finds that Turkish nationalistic parties' vote-shares increase following fatal PKK attacks against police targets. However, in the case of Spain, Bali (2007) and Montalvo (2011) show that the 2004 Madrid bombings mobilized opposition voters and shifted the electoral map to the left against an unpopular foreign policy.[1] Outside terrorism studies, there is an extensive literature that asserts that public support for military interventions is sensitive to casualties (Gelpi, Feaver and Reifler, 2006).

Several studies suggest that political responses to terrorism might be mediated by psychological variables. For instance, Canetti-Nisim, Halperin, Sharvit and Hobfoll (2009) finds that exposure to terrorism leads individuals to adopt more exclusionary attitudes towards minorities. Especially relevant to the current study, Zeitzoff (2013) shows that individuals exposed to rockets from Gaza become more ingroup-oriented than those in low exposure

[1] A dissenting view is offered by Lago and Montero (2006), who find that that the bombings solidified already negative feelings about the incumbent government, rather than shifting the electorate.

localities. Other studies are less sanguine, finding rocket exposure associated with increased adolescent violence and aggression (ans Golan Shahar, 2013). Numerous other studies draw a connection between war-time, nationalism and patriotism (Baker and Oneal, 2001; Skitka, 2005). Huddy, Feldman and Cassese (2007) shows that perceptions of threat post-9/11 were more likely to favor aggressive military actions. Finally, Abramson, Aldrich, Rickershauser and Rohde (2007) connect George W. Bush's 2004 presidential election win to his ability to appear to be a strong leader, an especially important factor considering the import voters placed on the War on Terror.

Habituation to terror can also shape voters' behavior. Becker and Rubinstein (2011) show that reduction of services and goods purchased in Israel during the Second Intifada occurred only among "occasional users", since regular users are able to adjust their behavior.

Review of these studies suggests that exposure to terrorism might increase, decrease, or have no effect on electoral support for right-wing parties. What complicates this question even further is the strategic nature of terrorist - government interactions. Powell (2007) shows that both terrorists and governments choose actions that maximize their utility, given their expectations regarding the other side's actions. Terrorists choose the targets and the timing of their attacks strategically. For example they may try to derail peace talks (Kydd and Walter, 2002), trigger government response that would facilitate terrorist recruitment (Bueno de Mesquita and Dickson, 2007), or maximize government concessions (Lake, 2002; Pape, 2003). Thus, they target those populations that are more likely to respond in the desired manner, either by voting for right-wing parties (if terrorists' goals are to "spoil" talks or facilitate recruitment), or by voting for left-wing parties (if terrorists' goals are to extract concessions). Governments, who are motivated to protect against attacks as well as to increase their vote-shares, are also strategic in their response to terrorism, and protect targets to minimize the overall expected impact of attacks (Powell, 2007).[2] Thus, in equilibrium,

[2]For instance, Getmansky (2011) shows how changes in the partisanship of Israeli governments influence

terrorist attacks might have no effect on voting, or they might strengthen public support for the incumbent.

Finally, theories of voting can also illuminate how terrorism affects voting. The retrospective voting theory suggests that voters evaluate candidates based on their past performance and achievements in areas such as economic policy (Fiorina, 1978; Kiewiet and Rivers, 1984). Alternatively, Petrocik (1996) and Wright (2012*a*) argue that some parties have an advantage in certain areas, and they tend to benefit when their issues become salient. In the Israeli context, Schofield and Sened (2005) and Arian and Shamir (2008) argue that right-wing political parties enjoy a valence advantage on security issues.

In the context of conflict and terrorism, there is evidence that incumbents lose electoral support following attacks and casualties, as expected if the retrospective voting theory is correct (Bali, 2007; Gassebner, Jong-A-Pin and Mierau, 2008; Gelpi, Feaver and Reifler, 2006; Karol and Miguel, 2007; Montalvo, 2011). However, Berrebi and Klor (2008) and Koch and Tkach (2012) find that in Israel incumbents are not punished for suicide attacks, and the right-wing block increases vote-shares regardless of the incumbent's political affiliation, in accordance with the valence theory.

In this paper, we contribute to literature on the electoral effects of terrorism by addressing the concern that terrorist targeting might be driven by strategic considerations. As discussed above, terrorists choose their targets strategically to maximize their goals. Thus, if we observe an increase in the right-wing vote-share following terrorist attacks, it might be because terrorists, aiming to spoil peace talks, or to enhance recruitment, target those who are more likely to respond in this manner. Alternatively, if we observe a left-wing vote-share increase following attacks, it might be because terrorists target those who are more likely to support granting concessions in order to avoid future violence. Thus, without randomizing

decisions on the path of the separation barrier. Bueno de Mesquita (2007) demonstrates how governments use allocation of counterterrorism funds to maximize their reelection chances.

exposure to terrorism, we cannot reliably estimate the causal effect of exposure to terrorism on voting. Rockets' range in the Israeli context provides such randomization because, as we show in subsequent sections, it is orthogonal to the political circumstances of the communities in range, and largely depends on access to materials and launching expertise in Gaza. Our research design allows us to adjudicate between theories which suggests that terrorism makes voters more likely to acquiesce with concessions (increase support for left-wing), or hardens voters against concessions (shift rightwards). Furthermore we are able to estimate whether the effect of terrorism depends on the political affiliation of the incumbent, and whether the duration of exposure matters, thereby illuminating questions related to voting and to the psychological effects of living under the threat of terrorism.

Rocket Fire From Gaza

Since 2001, areas of southern Israel have been under a continual threat of rockets from a variety of militant groups[3] in the Gaza Strip. Following the Israeli disengagement from Gaza in 2005, and the ascension of Hamas in Gaza, there was a dramatic increase in rocket fire (Intelligence and Center, 2009). Continued hostilities between Israel and Hamas–including the 2008-2009 Gaza War and the 2012 Gaza Conflict (alternatively called operation Cast Lead and Operation Pillar of Defense, respectively)–have been blamed on rocket fire from Gaza (Bronner, 2011; Wright, 2012*b*). Most recently, in the 2012 Gaza Conflict, rockets reached Tel Aviv and Jerusalem for the first time (Wright, 2012*b*).

The rockets employed by Palestinian groups are not usually aimed at specific military targets. Rather they are fired in the general direction of cities and towns (Fisher, 2006), which has lead to criticism from human rights groups.[4] Furthermore, Hamas explicitly chose

[3]These include Hamas, Islamic Jihad, and the Popular Front for the Liberation of Palestine (PFLP). See `http://www.nytimes.com/2012/10/20/world/middleeast/hamas-works-to-suppress-militant-groups-in-gaza.html`

[4]See `http://www.hrw.org/news/2009/08/06/gazaisrael-hamas-rocket-attacks-civilians-unlawful`

to increase the number of rockets it produced at the expense of accuracy (Intelligence and Center, 2009). Most of the rockets fired into Israel, have been of the locally-manufactured Qassam, with a range of approximately 10 kilometers (Intelligence and Center, 2009). Longer range, Grad and Grad-2 rockets have been fired less frequently and have ranges of 20 and 40 kilometers respectively. These rockets are smuggled into Gaza through tunnels underneath the border with Egypt, or through the sea. During the 2012 Gaza Conflict, Hamas used its longer range Fajr-5 rockets to strike Tel Aviv and Jerusalem for the first time (Bronner, 2012). This rockets is also not locally-manufactured, but smuggled across the border.

Rocket attacks have so far resulted in few deaths. However they have instilled widespread fear among the Israeli populace within range (Palmieri et al., 2008). In response to the threat from rockets, Israel deployed in 2011 a missile defense system to intercept the rockets from Gaza, called the "Iron Dome" (*Missiles vs rockets: Dome warfare*, 2012).[5]

Our identification strategy rests on rocket range being orthogonal to Israeli political behavior (see Empirical Strategy). We look at how rocket fire affects Israeli political behavior through the 2009 election (pre-Iron Dome), thus avoiding any threats to inference from the deployment of the Iron Dome system. There is good anecdotal and empirical evidence to suggest that Palestinian militant groups tried and would have liked to extend the range as far as possible, and were only limited by technological and material obstacles (Bronner, 2012; Ganor, 2014). Rockets range, is therefore not a result of a strategic choice, but a rather a result of exogenous constraints (Daraghmeh, 2012; Kenner, 2012). We further explore this argument in the Empirical Strategy section.

[5]While the efficacy of the defense system is debated, it has been at least partially effective in stopping rockets. See `http://www.nytimes.com/2013/03/21/world/middleeast/israels-iron-dome-system-is-at-center-of-debate.html?pagewanted=all`

Data and Variables of Interest

Range of Rockets

Our main explanatory variable is a binary indicator $Range_{i,t}$ of whether a locality is within the range of rockets one day before elections.[6] This indicator depends on two factors: the maximum distance that a rocket can travel from Gaza, and a locality's distance from Gaza.

The information on rockets range comes from the Israel Defense Forces and Home Front Command websites. To determine whether a locality is within the range of rockets, we used ArcGIS to calculate the shortest distance between a locality and Gaza strip perimeter. A locality is considered to be within the range if one day before the election that distance is less than or equal to the rockets range. Some localities, mostly regional councils, are composed of discontinuous units. We consider such localities to be within the rockets' range if the minimum distance between all units composing a locality and Gaza strip is less than or equal to the rockets' range.[7] In the robustness checks section, we also use alternative measures of distance that affect which localities are included in the range.

The rockets technology has evolved over time, as described in the previous section. The first rockets were fired in 2001. By the 2003 election, the rockets range extended to 10km, and continued to double between elections. Table 1 presents the evolution of the rockets range and the number of Israeli residents within the range during every election. Figure 1 depicts the map of areas within the rockets range during this period.

[6]Locality is a municipal unit recognized by the Ministry of Interior. Localities are distinguished by their population size and by whether they are urban or rural. There are two types of urban localities: municipalities and local council. The former are larger than the latter in terms of their population. Rural municipalities are grouped in regional councils that include several small villages and communities. Our unit of analysis is locality (either municipality, local council, or regional council) in an election year.

[7]For example, if regional council X consists of three discontinuous units, a, b, and c, we measure the shortest distance between the Gaza strip perimeter and the perimeter of each of these units. X is coded as within the range if all the three distances are less than or equal to the rockets range one day before the election. If at least one of these distances is greater than the rockets' range, X is coded as beyond the range, even if some of its units are within the range.

[Table 1 about here.]

[Figure 1 about here.]

In addition the binary indicator, we also explore the cumulative effect of being in the range of rockets on voting. We create a variable, ($CummRange_{i,t}$) that counts the number of previous electoral campaigns a locality voted within the range of rockets.

Voting

Our main variable of interest is the change in the voting behavior in Israeli national parliamentary elections from 1999 through 2009.[8] Voting data are available from the Israel Social Sciences Data Center (ISDC) at The Hebrew University of Jerusalem[9] based on data released by the Central Election Committee at the level of a polling station, and we aggregated it to the locality level. To measure changes in voting behavior, we classify Israeli parties into left-wing, centrist, and right-wing blocks according to their positions on the Israeli-Palestinian issue: right-wing parties are less willing to provide concessions to Palestinians than centrist and left-wing parties. We follow party classification proposed by Arian and Shamir (2008). Our party classification is also very similar to the estimated party positions in Schofield and Sened (2005). Table 2 presents our division of parties into political blocks during the four elections we study. The right-wing block is the most heterogeneous among the three blocks, and we further divide it into nationalistic (secular and religious), religious ultra-orthodox, and Russian immigrants' parties.

[Table 2 about here.]

[8] Israel is a parliamentary system with proportional representation. Despite this, in 1999 there was a direct vote for the prime minister, in addition to the traditional vote for a party. Voting in 2003-2009 elections was for parties only.

[9] `http://isdc.huji.ac.il/mainpage_e.html`, accessed March 25, 2013.

In each locality, we calculate the vote-share of right-wing, centrist, and left-wing parties in each of the elections studied here. Our main dependent variable is $RightShare_{i,t}$ that measures the right-wing block's vote-share in locality i in election t. In addition, we look at the changes in vote-shares of nationalistic parties ($Nationalistic_{i,t}$), religious ultra-orthodox parties ($Religious_{i,t}$), and Russian immigrants' parties ($Russian_{i,t}$). Finally, we examine changes in vote-shares of major parties, $Likud_{i,t}$, $Labor_{i,t}$, and $Shas_{i,t}$. We calculate vote-shares by dividing the number of votes a block, a subset of a block, or a party received by the number of valid votes in a locality in a given election. Vote-share variables are continuous, and range from 0 to 1.

We focus on vote-shares as our dependent variable for two reasons. First, they reflect voting behavior, and thus of direct relevance to understanding how terrorism affects voters. Second, Israel has a highly proportional representation system, with vote-shares closely corresponding to seat-shares in the parliament. Thus, they not only represent changes in voting behavior, but also have direct substantive implications for government composition and policy. Finally, as discussed above, our unit of analysis is locality-election year. By focusing on localities (municipalities, local council, or regional councils), rather than on smaller units (polling stations or small rural communities), we reduce the likelihood that our results are influenced by vote-shares in very small small communities (we also control for population size, as we explain below).

Control Variables

To estimate the effect of being in the range of rockets on voting behavior, we control for variables other than the rockets range that can affect voting.

The first set of variables accounts for the demographic characteristics that are available from the Central Bureau of Statistics, and that can affect voting outcomes in a locality: population size, median age, ratio of males to females, share of Jewish population, and share

of Jewish population with family origin in Asia, Africa, and the former Soviet Union. These data are available on an annual basis except for the data on the share of Jewish population with family origin in Asia, Africa that are available from the 1995 and the 2008 censuses, and data on Jewish residents with family origin in the Soviet Union that are available only from the 1995 census. We use the 1995 data in models without locality fixed effects.

Additionally, we control for the economy by including the average wage in a locality adjusted for inflation using 2006 as the base year.[10]

Education can also affect voting behavior, and we therefore control for the share of high school graduates among residents who are 17-25 years old. We also have data on the share of residents with college education from the 1995 and 2008 censuses. We use the 1995 data in models without locality fixed effects.

We control for population movement in and from localities, by including the net migration, and dividing it by locality's population size. In some specifications that do not include locality fixed-effects, we also include distance to the closest border and a binary indicator of whether a locality is a regional capital.[11]

Rocket attacks are not the only form of political violence that occurred in Israel during this period. Some localities also experienced suicide attacks by Palestinians, and previous studies relate such attacks to changes in political attitudes and voting (Berrebi and Klor (2008), Gould and Klor (2010)). To isolate the effect of being within the range of rockets, we control for the number of local fatalities due to suicide attacks in a locality since previous election. These data are available from Benmelech, Berrebi and Klor (2010*b*).

Finally, in some models, we include year dummies to control for secular trends that affect

[10]Data on average income in all localities are not available consistently for all localities on an annual basis. We use the 1995 value for 1999 elections, 2001 value for 2003 elections, 2003 value for 2006 elections, and 2006 value for 2009 elections. We use the 2006 average wage as the base line, and adjust the other three values using the average consumer price index: $\frac{100}{mean\ consumer\ price\ index} \times\ average\ income$, when the mean consumer price indices for 1995, 2001, 2003, and 2006 are 66%, 91%, 97%, and 100% respectively.

[11]Based on whether there is a regional office of the Ministry of Interior's Population and Immigration Bureau in a locality

all localities, and that could impact voting. Year dummies capture such covariates as the national economy, quality of electoral campaigns, leaders' characteristics, and events related to the Israeli-Palestinian conflict that affect Israel as a whole. Furthermore, in some models, we include locality fixed effects that capture locality-level time-invariant factors that can shape voting behavior, such as distance to border, to Gaza strip, or to the West Bank, distance to the center, national importance of the locality, and topography.

Empirical Strategy

Econometric Model

Our goal in this paper is to identify the causal effect of the risk of exposure to terrorism on voting behavior. Our unit of analysis is an Israeli locality during an election year, and we model the voting results in a locality as a function of whether it is within the range of rockets from Gaza one day before an election, controlling for locality-level time-varying observable characteristics that can potentially affect voting, as well as locality fixed effects and year dummies. Specifically, we estimate the following linear model:

$$RightShare_{i,t} = \alpha \times Range_{i,t} + \boldsymbol{\beta} \times (\boldsymbol{X_{i,t-1}}) + \gamma_t + \mu_i + \varepsilon_{i,t}, \tag{1}$$

where $RightShare_{i,t}$ is the vote-share of right-wing parties in locality i in election t, $Range_{i,t}$ is a binary indicator of whether locality i is in rockets range one day before election t, and $(\boldsymbol{X_{i,t-1}})$ is a vector of lagged time-varying locality-level characteristics that can potentially affect voting results. These characteristics include population size, age and gender ratio, share of Jewish population, share of Jewish residents with origin in Asia, Africa, or the former Soviet Union, migration, average wage, and fatalities due to suicide terrorism. In some models, we also include locality distance to border and to Gaza, and whether a locality

is a regional capital. γ_t is election year dummy that capture secular trends, μ_i is locality fixed effects, and $\varepsilon_{i,t}$ is the locality-clustered robust error term that captures unobserved determinants of voting.

Using this specification, we intend to estimate α, that identifies the effect of being in the range of rockets on change in the right-wing parties' vote-share. We expect α to be positive and statistically significant if localities that are within the range of rockets increase their support for right-wing parties. A negative and statistically significant α would imply that Israeli localities within the range of rockets tend to decrease their support for the right-wing block, and are more likely to support centrist or left-wing parties. α coefficient that is statistically not significant would imply that Israeli localities within and beyond the range of rockets do not differ with respect to their voting behavior.

Is Rockets Range Exogenous to Voting?

Our key identification assumption is that the range of rockets is exogenous to voting. That is, we assume that localities come into the range of rockets for reasons that are unrelated to their anticipated voting behavior. To investigate this assumption, we examine whether observable variables that are correlated with voting also determine whether certain localities are within the range of rockets. This is important because if such confounding variables exist, there might be a correlation between voting and rockets' range without any causal relationship between these two variables. Conversely, if localities within the range are similar to those out of range, then any differences in voting can be attributed to living in the range of rockets.

Assessing the similarity of localities within and beyond the range is also important because, as King and Zeng (2006) show, extrapolation bias might arise if the treatment and the control groups do not overlap. The analysis below shows that localities within the range (treatment group) and beyond it (control group) are overall very similar with respect to several observable indicators that can affect voting. In some cases, however, the overlap is

not perfect and the distribution of some variables differs across localities that are within and beyond the range. To make sure our causal inferences do not depend on the functional form of our empirical model, as it is often the case with non overlapping distributions, we drop the observations outside of common support, and repeat our estimation in the robustness checks section.

The summary statistics of the various variables we use for this comparison are in table 3, and the kernel density plots of their distributions are in figures 2 - 6.

[Table 3 about here.]

[Figure 2 about here.]

[Figure 3 about here.]

[Figure 4 about here.]

[Figure 5 about here.]

[Figure 6 about here.]

Overall, the distribution of these variables appears to be very similar, however, some variables have non-overlapping ranges. Localities within the range tend to have smaller population size than localities beyond the rockets' range (figure 2a). Median age is higher in localities within the range, implying fewer children than in localities beyond the rockets' reach (figure 2b). Figures 3b and 3c show that localities within the range have higher shares of residents with family origin in Asia and in Africa. Moreover, localities outside the range appear to have a higher share of highschool graduates (figure 4d), but they are more similar with respect to college graduates (figure 4c). Furthermore, as figure 5a shows, localities within the range have higher right-wing vote-shares in 1999 election than localities

outside the range. Finally, localities within the range, naturally, are closer to the border than localities beyond the range, but not by much (figure 6b).

There are also many similarities between the localities that are within and beyond the range. Specifically, gender ratio (figure 2c), share of immigrants from the former Soviet Union (figure 3d), socio-economic cluster and mean wage (figures 4a and 4b), as well as turnout in 1999 election (figure 5b) and presence of regional capitals (figure 6a) are distributed very similarly and overlap.

Moreover, even with respect to variables that have graphically different distributions, there is a broad range of common support, and we check the robustness of our results by dropping observations with non overlapping values (outside of common support)

Results

Main Results

Table 4 presents the effect of being in the range on right-wing parties' vote-shares. Column 1 reports the results of an OLS model with locality fixed effects. The estimated effect is a 4 percentage points increase in the right-wing vote-share within the range (95% confidence interval is 3-5 percentage points increase) . In column 2, when we add time-varying controls in the second column, and the estimated effect of being in the range of rockets is now a 6 percentage points increase in the right-wing vote share (95% confidence interval now is 5-9 percentage points increase). We add year dummies in column 3, which is our main specification as in equation (1). The estimated effect of being in the range drops, but it is still positive and significant: being in the range adds 2 percentage points to the right-wing vote share (95% confidence interval is 0.4-3 percentage points increase). The fourth column presents the results of a lagged dependent variable model without locality fixed effects and year dummies. The estimated effect is an increase of 4 percentage points in right-wing

vote-share in localities within the range (95% confidence interval is 2-6 percentage points increase).

[Table 4 about here.]

Our main results suggest that being in the range of rockets increases the right-wing vote-share in a locality by 2 to 6 percentage points depending on the model (95% confidence interval is 0.4-9 percentage points increase). Israel is a proportional representation system with a single district. The electoral threshold in 1999 and 2003 elections was 1.5% of the popular vote, and was raised to 2% in 2006 and 2009 elections. The Israeli parliament (Knesset) has 120 seat that are allocated to parties that pass the electoral threshold proportionately to each party's vote-share. Thus, a seat in the parliament requires 0.8% of votes.[12]. Thus, an increase of 2 to 6 percentage points in the right-wing parties' vote-shares implies additional 2 to 7 seats for the right-wing block, if all voters were within the rockets' range.

We now turn to estimate the effect of being in the range of rockets on various subsets of the right-wing block (as presented in Table 2). Table 5 presents results of a locality fixed effects model with time-varying covariates and year dummies (equivalent to column 3 in table 4).

[Table 5 about here.]

Our results indicate that nationalistic parties add 3 percentage points to their vote-share in localities that fall within the range of rockets (95% confidence interval is 0.3-5 percentage points). Religious parties gain 1 percentage point, but this result is not statistically significant. Parties of Russian immigrants lose 1 percentage point, but this result also falls short of acceptable levels of statistical significance.

We conclude the presentation of our main results by estimating the effect of being in the rockets' range on vote-shares of several key parties - Likud (the largest right-wing party),

[12]In light of the threshold, the minimum number of seats a party can get is 2.

Labor (the main party in the left-wing block), and Shas (the main religious ultra-orthodox party). We estimate these effects using our main model specification that includes locality fixed effects, year dummies, and locality time-varying observable characteristics (equivalent to column 3 in table 4, and to table 5). As shown in table 6, Likud party gets additional 2 percentage points in localities that are within the rockets range (95% confidence interval is 1-3 percentage points). This is similar to the effect of being in the range on nationalistic and right-wing parties. Labor and Shas experience a minor increase and decrease in their vote-shares in localities within the range, respectively, but these effects are not statistically significant.

[Table 6 about here.]

Does the Effect of Rockets Depend on the Party in Power?

Our main results suggest an increase in the right-wing and nationalistic vote-share in localities that are within the reach of rockets. There are several possible explanations for this finding. First, right-wing vote-shares could increase because voters punish non-right-wing parties.[13] This is consistent with the retrospective voting theory, as presented above. To the extent that voters perceive being in the rockets' range as a negative outcome, we expect right-wing vote-share to decrease in localities within the range after a term of a right-wing prime minister, and we expect it to increase if the incumbent is from a non-right-wing block.

Second, right-wing vote-share could also increase because voters view right-wing parties as better positioned to deal with security challenges, i.e. they enjoy a valence advantage when it comes to threats. If valence theory is correct, expansion of the rockets' range should increase the salience of security issues, and benefit right-wing parties that are perceived to be more competent in matters of security.

[13]The incumbent party in 2003 election was right-wing (Likud), whereas in 2006 and 2009 the incumbent party was centrist (Kadima).

We explore the conditional effect of rockets' range on right-wing vote-shares by including a dummy variable $RightPM_t$ that is equal to 1 if the incumbent is from the right-wing block, and 0 if otherwise. To estimate the effect of being in the range on right-wing vote-shares conditional on the incumbent's identity, we include an interaction term: $Range_{i,t} \times RightPM_t$. This interaction term is equal to 1 if locality i is within the rockets' range one day before election t and the incumbent is from the right-wing block, and it is equal to 0 otherwise. We thus estimate the following model:

$$\begin{aligned} RightShare_{i,t} &= \alpha Range_{i,t} + \delta_1 RightPM_t + \delta_2 Range_{i,t} \times RightPM_t \\ &\quad + \boldsymbol{\beta}(\boldsymbol{X_{i,t-1}}) + \gamma_t + \mu_i + \varepsilon_{i,t}, \end{aligned} \tag{2}$$

The effect of being in the range of rockets under a right-wing incumbent is equal to $\alpha + \delta_2$.[14]

Column 1 in table 7 reports the effect of rockets' range on right-wing vote-share. The coefficients of the constitutive terms ($Range_{i,t}$, $RightPM_t$) and the interaction term are statistically significant at 95% confidence level. Similarly to previous findings, right-wing vote-share in localities within the range under a non-right-wing incumbent is 2 percentage points higher than right-wing vote-share beyond the range (95% confidence interval is 0.6, 3 percentage points). Right-wing incumbent also has a positive effect on right-wing vote-share. The interaction term, however is negative. Adding the two coefficients (0.0195 and -0.0246) suggests that right-wing parties lose 0.5 percentage points in localities within the range under a right-wing incumbent. The 95% confidence interval, however, includes a zero (the confidence interval for the point estimation is -4, 3 percentage points). This decrease is also not statistically significant at 90% confidence level. Thus, we conclude that whereas

[14]This effect is equal to α under a non-right-wing incumbent because the interaction term is then equal to 0 (Brambor, Clark, and Golder 2006).

right-wing vote-share increases in localities that are within the range under a non-right-wing incumbent, there is no effect of being in the range when the incumbent is from the right-wing block. Finally, the overall marginal effect of being in the rockets' range on right-wing vote share, taking the incumbent's affiliation into account, is an increase of 1 percentage points (the 90% confidence interval is 0.02, 2.3 percentage points[15]). In light of these results, we conclude that right-wing parties clearly gain additional votes only when the incumbent is non-right-wing. When the incumbent is right-wing, voters do not punish right-wing parties, but these parties also do not achieve substantial gains, as they do under non-right-wing incumbents.

[Table 7 about here.]

Column 2 presents the effect of rockets' range on Likud vote-shares, conditional on the incumbent's affiliation. Under a non-right-wing incumbent, there is an increase of 2 percentage points in Likud vote-share in localities that are within the range (95% confidence interval is 0.5, 3 percentage points). The interaction term of $Range_{i,t}$ and $RightPM_t$ is positive, but not statistically significant. The overall marginal effect of $Range_{i,t}$ on Likud vote-share is about 2 percentage points increase in localities that are within the range (95% confidence interval is 0.8, 3.7 percentage points).[16] It is important to note that this model includes year dummies, and therefore controls for secular trends that affect all Israeli localities, thereby isolating the local effect of being in the range on voting. These results show that unlike the entire right-wing block, Likud's vote-shares increase in localities that are within the range even under a right-wing (Likud) incumbent. This is consistent with the assertion that Likud, as a right-wing party, has valence when it comes to security problems. However, this might also be consistent with the rally 'round the flag phenomenon, and a possible tendency of

[15]The 95% confidence interval includes a 0. We calculated the marginal effect in this model using the `margins` command in Stata.

[16]We calculated the marginal effect using the `margins` command in Stata

voters to support the incumbent party, especially when confronted with security challenges. Therefore, in column 3 we also examine the effect of rockets range on Kadima party's vote shares when Kadima was the incumbent.

Kadima was founded before 2006 election, and ran in 2006 and 2009 elections. The incumbent in these elections was also from Kadima.[17] Since Kadima vote-shares are available only for elections in which the incumbent was also from Kadima, there is no need to include $RightPM_t$ and the interaction term (they drop out because there is no variation in $RightPM_t$ during these years). Results in column 3 suggest that expansion of rockets' range under Kadima incumbent does not affect Kadima's vote-shares, controlling for locality time-varying observable characteristics, locality fixed-effects, and year dummies. The coefficient is negative, through substantially small, and statistically not significant at acceptable significance levels. Thus, unlike Likud, Kadima did not gain votes in localities that are within the range.

These results lead us to the following conclusions: First, there is no evidence that incumbents are punished in localities that are within the range: right-wing parties and Likud did not lose votes in 2003 election, and Kadima did not lose votes in localities that are within the range in 2006 and 2009 elections. Second, right-wing parties gain votes in localities that are within the range when the incumbent is non-right-wing. Moreover, Likud gains additional votes in localities that come into the rockets' range even under a right-wing incumbent. This cannot be interpreted as rally 'round the flag, since Kadima's vote-shares within the range do not increase when Kadima is in power. Instead, we view these findings as partially consistent with the valence argument: whereas Likud enjoys valence when it comes to security problems even when these problems emerged during Likud's time in office, right-wing block as a whole gains votes only under a non-right-wing incumbent.

[17] Ariel Sharon was the prime minister prior to 2006 election. He had left Likud, and formed Kadima in 2005, and ran in 2006 as the head of Kadima party. Ehud Olmert from Kadima was the prime minister before 2009 election. Thus, we code Kadima as the incumbent before 2006 and 2009 election.

Does the Length of Exposure to Rockets Matter?

As we show in figure 1, the rockets range has evolved from 2003 through 2009 elections. Thus, some localities have been within the range longer than others. In this section, we explore how the duration of being in the rockets' range affects voting, and specifically whether localities that have been within the range longer than others differ with respect to their right-wing vote-shares.

Table 8 reports the the effect of being in the range for one, two, and three elections, compared to not being in the rockets' range. We use our main specification (equation 1). 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 category is localities that are beyond the range. As before, we control for time-varying locality-level characteristics, as well as locality fixed effects, and year dummies. The results suggest an overall 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.[18] 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.[19]

[Table 8 about here.]

These results, however, are based on small number of observations that fall within each of these categories, as evident from table 1. We, therefore, treat these results with caution.

[18] Those are the 2006 right-wing vote-shares in localities that came into the range before 2003 elections, and 2009 right-wing vote-shares in localities that came into the range between 2003 and 2006 elections.

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

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.

Robustness Checks

To ascertain the robustness of our results, we conduct two types of robustness checks. First, we reestimate our models omitting observations that are outside of common support. Second, we use alternative measures of distance from Gaza.

In table 3 and in figures 2 through 5 we identify areas of non-overlap between localities within and beyond the rockets' range. This non-overlap poses a potential problem because it makes the two groups of localities incomparable in those ranges of the variables in which there is no overlap, and thus makes the results model-dependent (King and Zeng, 2006). In this section, we reestimate our baseline specification (column 3 in table 4), and drop those observations that are outside of common support. This reduces the number of localities from 275 to 126.

The results in table 9 are substantively similar to our previous findings. Column 1 reports the effect of being in the range on right-wing vote-share, controlling for time-varying locality-level characteristics, as well as locality fixed-effects and year dummies. The result is positive and statistically significant, and suggests that localities within the range experience a 4 percentage points increase in the right-wing vote share. Column 2 similarly estimates the effect of being in the range on nationalistic parties' vote-share, and finds that it increases by 7 percentage points. Columns 3 and 4 report the effect of being in the rockets' range on religious and Russian parties' vote-shares, respectively, and as before, these effects are not statistically significant.

[Table 9 about here.]

Since we study the effect of being in the rockets' range, it is important to make sure that our findings are robust to different ways of measuring distance from Gaza. In this section, we employ four alternative measures of distance that affect which localities are included in the rockets' range[20]: First, we measure distance between Gaza strip perimeter and locality's center (rather than perimeter as before). A locality is considered to be within the range if that distance is less than or equal to rockets' range. A discontinuous locality is considered to be within the range if the distance between Gaza strip and all of its units' centers is less than or equal to the rockets' range at that time. Second, we consider a locality to be within the range if the minimum distance between the perimeter of at least one of its units (rather than all of them, as before) and the perimeter of Gaza strip is less than or equal to the rockets' range.[21] Finally, we reduce the range by 3 and 5 km to account for the possibility that rockets are not launched from the perimeter of Gaza, but from deeper areas within the strip. Gaza strip is between 6 km and 12 km wide, and we chose 3 km and 5 km as midpoints.

[Table 10 about here.]

Table 10 shows how different measures of distance affect the number of localities within the range in each election year. We repeat the estimation of our main specification (equation 1 and column 3 in table 4) using these four alternative measures of distance. The results are in table 11. The results are very similar across these four alternative measures of distance, and they are similar to the results we reported before: right-wing vote-shares increase by 2 percentage points in localities within the range. This result, as we show in this section, is robust to different measures of distance, as well as to removing non-overlapping observations.

[20]Our main results are based on the shortest distance between each locality's perimeter and Gaza strip perimeter. A locality is coded to be within the range if this distance is less than or equal to the rockets' range. If a locality is composed of discontinuous units, it is considered to be within the range if the distance between Gaza strip and all of its units' perimeters is less than or equal to the rockets' range.

[21]This definition is similar to our original definition, except that it allows a discontinuous locality to be included in the range if at least one of its units is within the range, whereas the original definition requires all units of discontinuous localities to be within the range of that locality to be considered part of the range.

[Table 11 about here.]

Is Turnout Affected by Rockets?

One potential explanation for the increase in the right-wing vote share is that the composition of the electorate changes. For example, it is possible that left-leaning voters become less likely to vote in areas exposed to rockets, or right-leaning voters become more likely to vote. If this is true, then the changes in right-wing vote-shares are not driven by changes in voters' positions, but by changes in the composition of the electorate. To investigate this possibility, in column 1 of table 12 we report the effect of being in the rockets' range on turnout, using locality-level time-varying controls and fixed effects, as well as year dummies as in table 4. These results suggest that the effect of rockets range on turnout is substantively marginal and statistically non significant. Localities that come into the range do not differ with respect to turnout range from localities that are beyond the range.

This, however, does not rule out the possibility that coming into the range simultaneously affects both the right-leaning and the left-leaning voters, such that the overall turnout remains the same, but the composition of the electorate changes. To address this possibility, we reestimate our main specification using a subset of localities with turnout greater than 69% (the median turnout). In these localities, the the majority of eligible voters votes, and therefore any change in right-wing vote-shares must be due to changes in preferences, and not changes in the composition of the electorate. Column 2 in table 12 is similar to the results we report in other specifications: being in the range of rockets increases the right-wing vote-share by 2 percentage points. Due to a smaller set of observations, the significance level now is lower than in previous tests, but this result is still significant at 90% confidence level.

[Table 12 about here.]

Are the Results Affected by Migration?

One potential problem with our results could be that the composition of residents changes when a locality enters the rockets range. Left-leaning residents might choose to leave and move beyond the reach of rockets, while right-leaning residents might choose to move into these localities to demonstrate their patriotism. In our estimations so far, we control for the net migration defined as the number of immigrants minus the number of emigrants. This, however, does not address the possibility that right-leaning and left-leaning residents might be moving simultaneously in and out of localities, respectively, such that the overall migration net is low despite changes in population composition.

To address this possibility, conduct two tests using locality-level data on the number of incoming and outgoing residents in each locality-year. This information is not available for regional councils, and for all localities prior to 2002. Nonetheless, these data allow us to test, using a smaller set of locality-years, whether our findings are driven by migration rather than by changes in voters' preferences. The tests below are based on municipalities and local councils during 2003-2009 elections.

First, we reestimate our main specification using localities in which the number of incoming and outgoing residents is below the median in each category (lowest 50%). The median number of incoming residents is 291, and the median number of outgoing resident are 256, and we use all locality-years that are below these two thresholds.[22] Very few people immigrate to and emigrate from these localities, and any changes in vote-shares are therefore likely to be not due to migration, but due to changes in preferences. Column 1 in table 13 presents the results that include time-varying locality-level controls as in column 3 of table 4, as well as locality fixed effects and year dummies. These results suggest that localities with

[22]Focusing on localities with low migration reduces the number of observations. The lowest thresholds that allow us to estimate the model are localities with fewer than 145 incoming residents, and fewer than 130 outgoing residents (the lowest 35%). The results are substantively similar to the ones in column 1 of table 13.

lower-than-median incoming and outgoing flow of residents experience a 4 percentage point increase in their right-wing vote-shares when they are in the rockets' range, compared to similar localities that are beyond the reach of rockets.

[Table 13 about here.]

Second, we create a new variable that conservatively estimates the number of right-wing votes in each locality, assuming that all incoming residents are right-leaning, and all outgoing residents are left-leaning.[23] This is a very strong assumption that allows us to estimate the lowest possible right-wing vote-share in a locality given that migration could pose a problem. We then reestimate our main specification (equation 1) using this conservative estimate as the dependent variable. Column 2 in table 13 shows that the effect of range on this conservative estimate of right-wing vote-share is still positive and statistically significant: localities within the range experience a 3 percentage point increase in the right-wing vote-share compared to localities that remain beyond the range.

Conclusions

How does the threat of terrorism affect voting behavior? We answer this question by focusing on the effect of being in the range of rockets fired from Gaza strip on voting in 2003-2009 Israeli parliamentary elections. The underlying assumption that allows us to estimate the effect of being in the range is that rockets' range is orthogonal to the political circumstances of Israeli localities. We provide evidence that localities within the range are very similar to those that are beyond the range. In addition, we perform robustness tests to address those cases in which the two sets of localities differ from each other.

[23] First, we deduct the number of incoming residents in year $t-1$ from the number of right-wing votes in year t. Second, we add the number of outgoing residents in year $t-1$ to the total number of voters who cast a ballot in election year t. Then we divide the first umber by the second: $\frac{rightwing\ votes_{i,t} - incoming\ residents_{i,t-1}}{total\ votes_{i,t} + outgoing\ residents_{i,t-1}}$

Our findings suggest that entering the rockets' range substantially affects voting and support for right-wing block. In particular, right-wing block's vote-share increases by 2 to 6 percentage points in localities that are within the range. In practical terms, this means that right-wing parties would gain 2 to 7 additional seats in the parliament due to rockets, if all Israeli localities were within the range. These results support findings in Berrebi and Klor (2008) and Kibris (2011). Furthermore, they are in line with previous findings on the psychological effects of exposure to terrorism and violence in general. Conversely, these findings contradict the argument that voters in democracies tend to support concessions when faced with increased risk of exposure to violence.

We furthermore show that this effect is mostly due to the increase of vote-shares of nationalistic parties. Moreover, the largest right-wing party, Likud, obtains additional votes even under a right-wing (Likud) incumbent, suggesting that it has valence when it comes to addressing security concerns. Right-wing block as a whole overall gains additional votes under a non-right-wing incumbent in localities that are within the range, but does not enjoy valence under a right-wing incumbent (the right-wing block does not lose votes either under a right-wing incumbent in localities that are within the range).

We find some evidence that support for right-wing parties increases immediately after exposure to the rockets' range, and that the effect of exposure increases in duration. However, the number of observations do not allow us to explore the effect of different exposure lengths on voting.

Furthermore, we show that our results are robust to different model specifications, to dropping of observations, and to various definitions of distance from Gaza. Finally, we demonstrate that the same results hold also in localities with high turnout and with low migrations, thereby suggesting that our results are not driven by changes in the composition of the electorate, but instead by changes in preferences of the voters.

Our findings contribute to the growing body of literature on the effects of violence and

terrorism on voting behavior in three ways. First, while our findings are substantively similar to Berrebi and Klor (2008), who report a 1.35 increase in right-wing vote-share in localities targeted by suicide terrorists, we show that these results are not driven by terrorists' strategic choice of targets. This is possible only by considering rockets' range, rather than suicide terrorism that is strategic in its nature. Second, we compartmentalize the right-wing block into subsets of parties, and explore more nuanced effects of terrorism on voting. Finally, the Israeli-Palestinian conflicts is considered one of the longest-running, most "intractable" conflicts (Bar-Tal, 2001). Many have argued that the rocket fire from Gaza has directly or indirectly led to two recent conflicts (2008-2009 and 2012) and remains an obstacle to peace (Kershner and Gladstone, 2012). Understanding the effects of rocket from Gaza is important for both academics and policymakers hoping to resolve the conflict.

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Figure 1: Rocket Ranges, 2003-2009 Elections

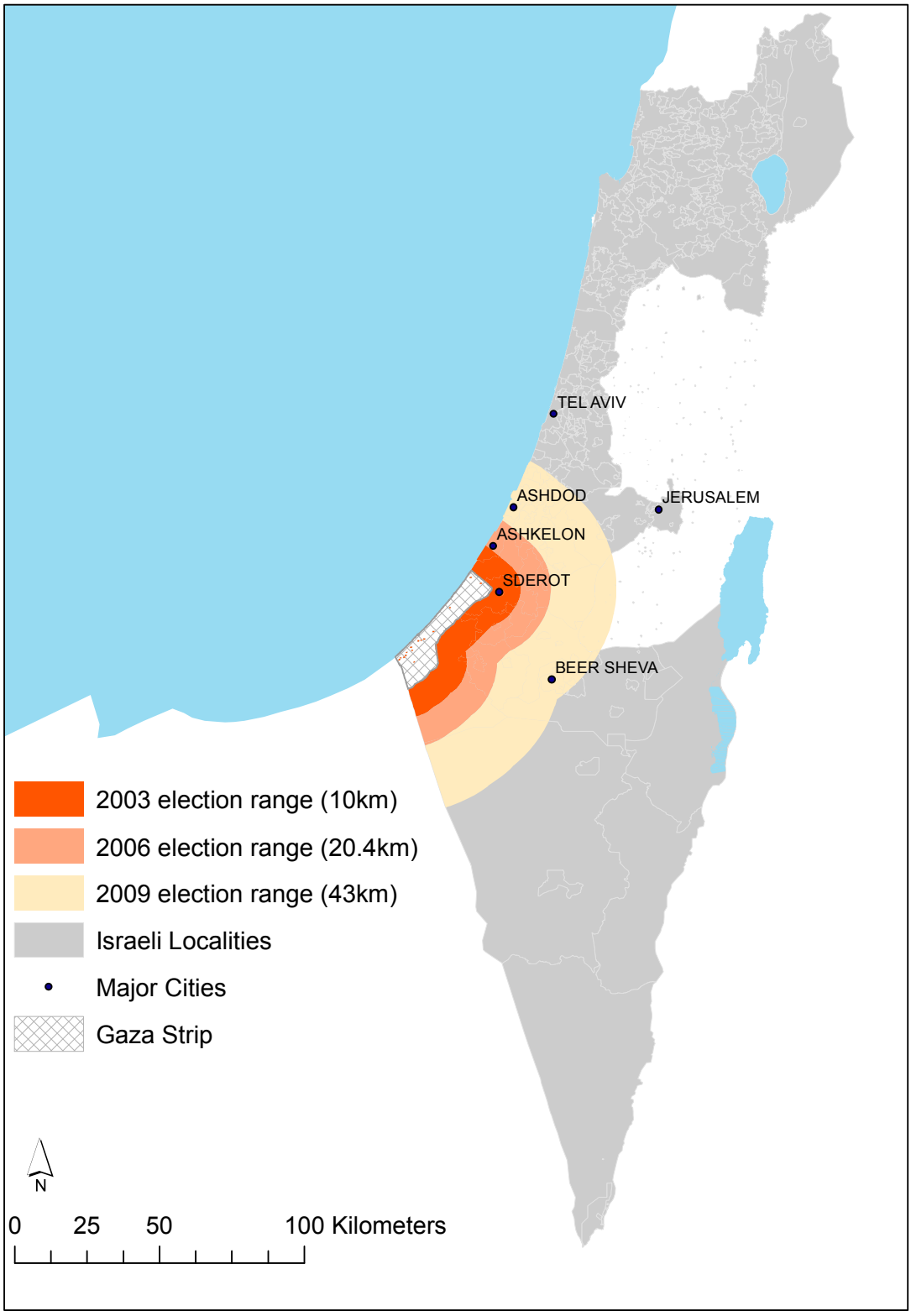
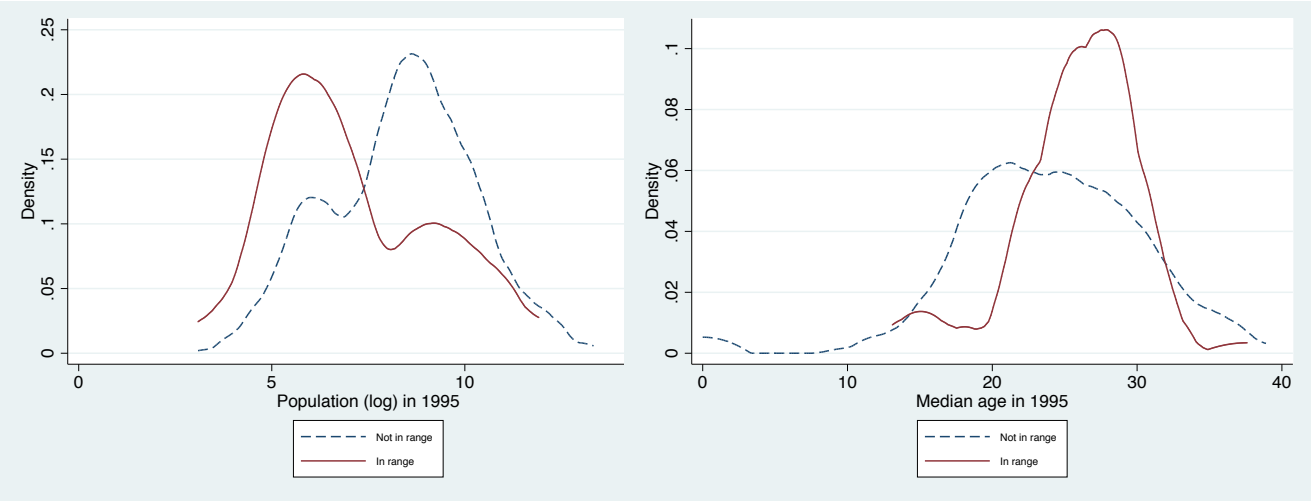


Figure 2: Localities In and Out of Range - Demography

(a) Population Size

(b) Median Age



(c) Male-to-Female Ratio

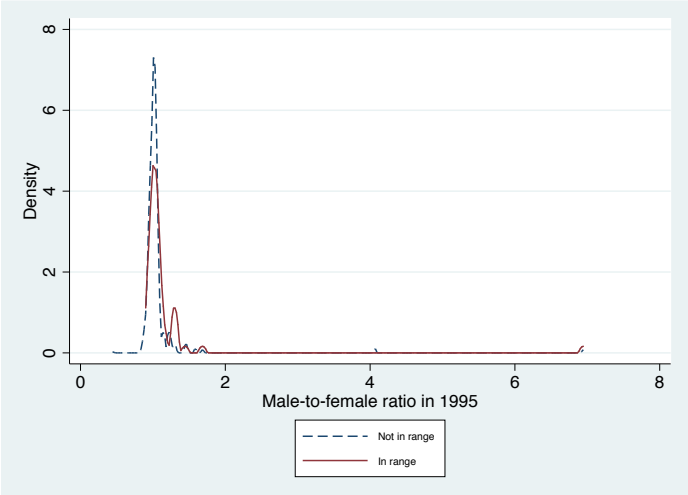
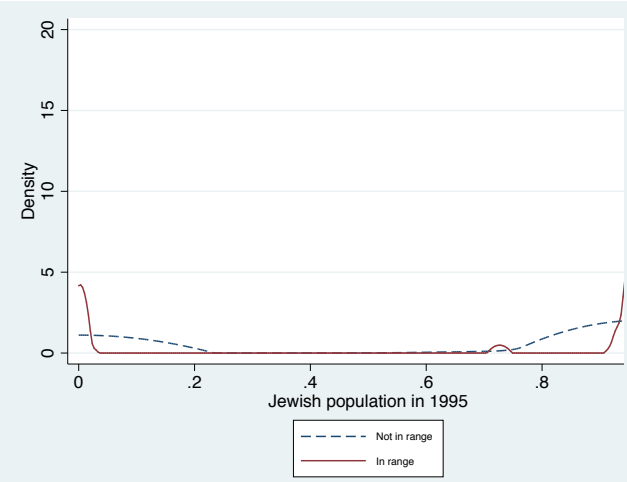
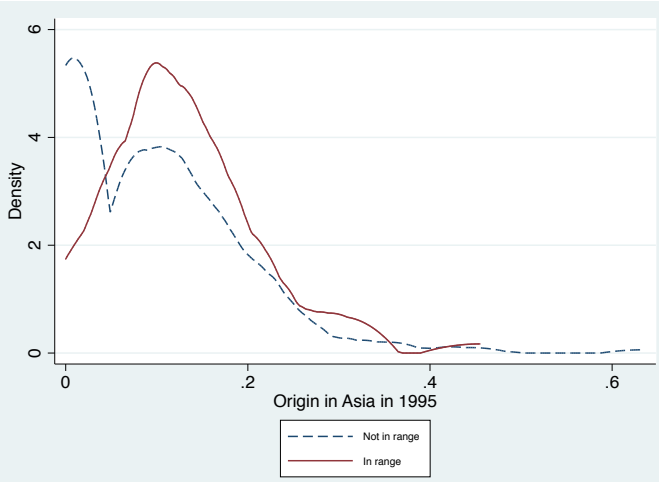


Figure 3: Localities In and Out of Range - Ethnicity and Origin

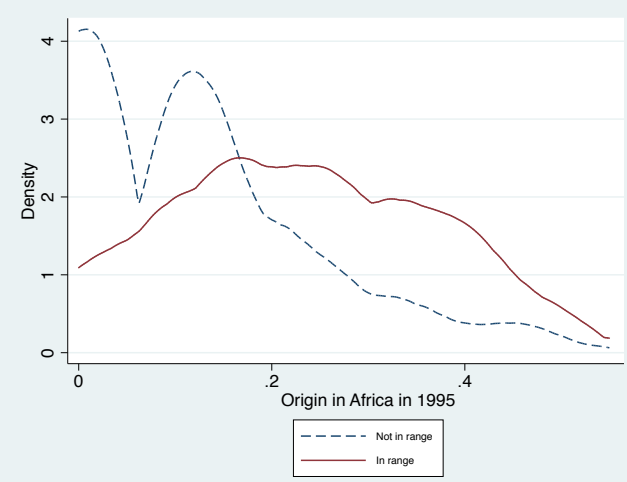
(a) Jewish Population



(b) Origin in Asia



(c) Origin in Africa



(d) Origin in the former Soviet Union

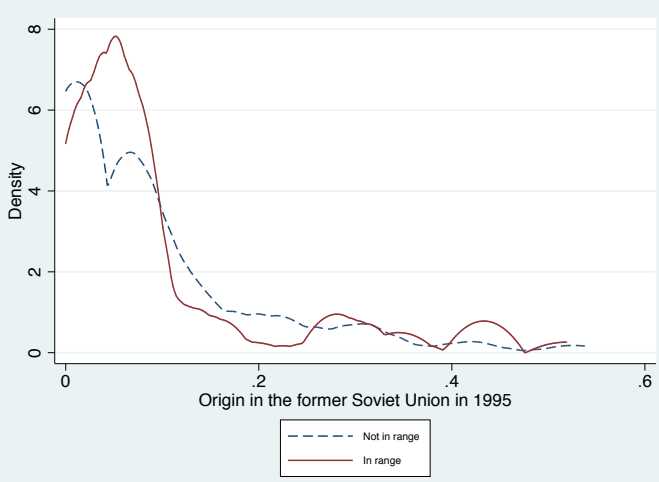
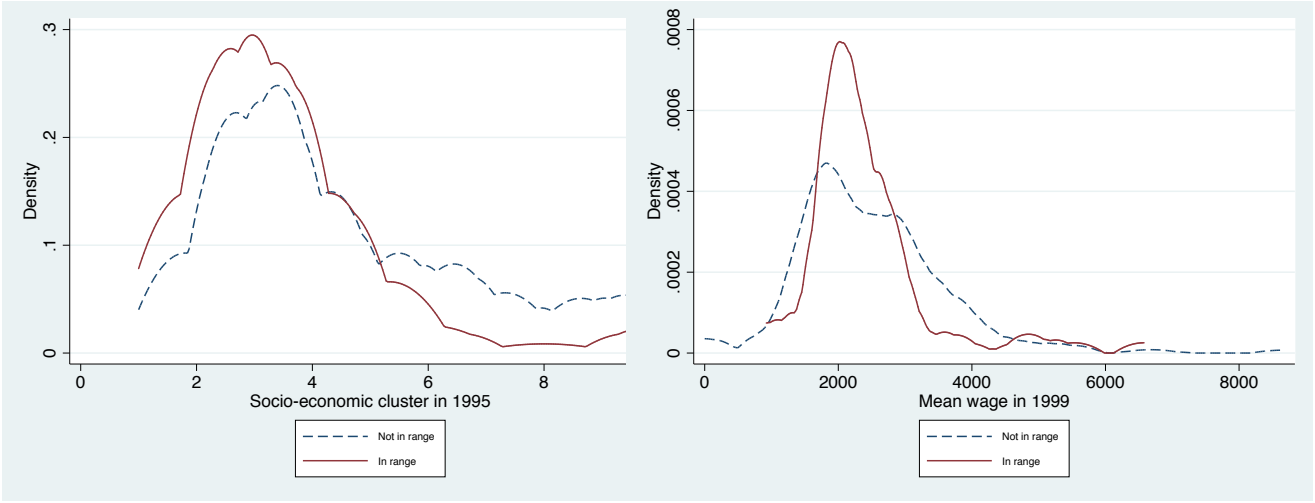


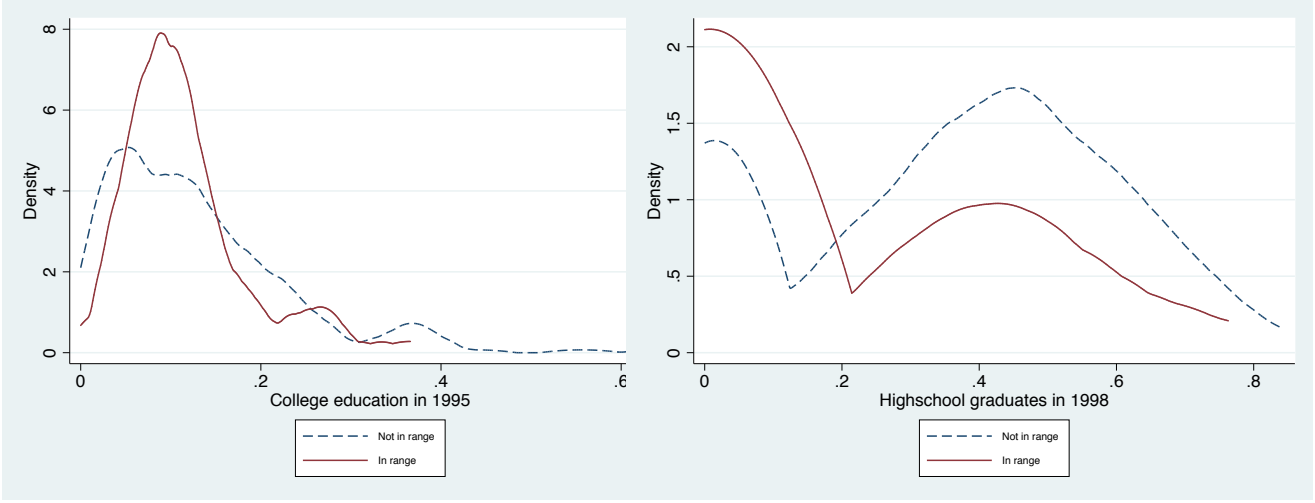
Figure 4: Localities In and Out of Range - Socio-Economic Status

(a) Socio-Economic Cluster



(b) Mean Wage

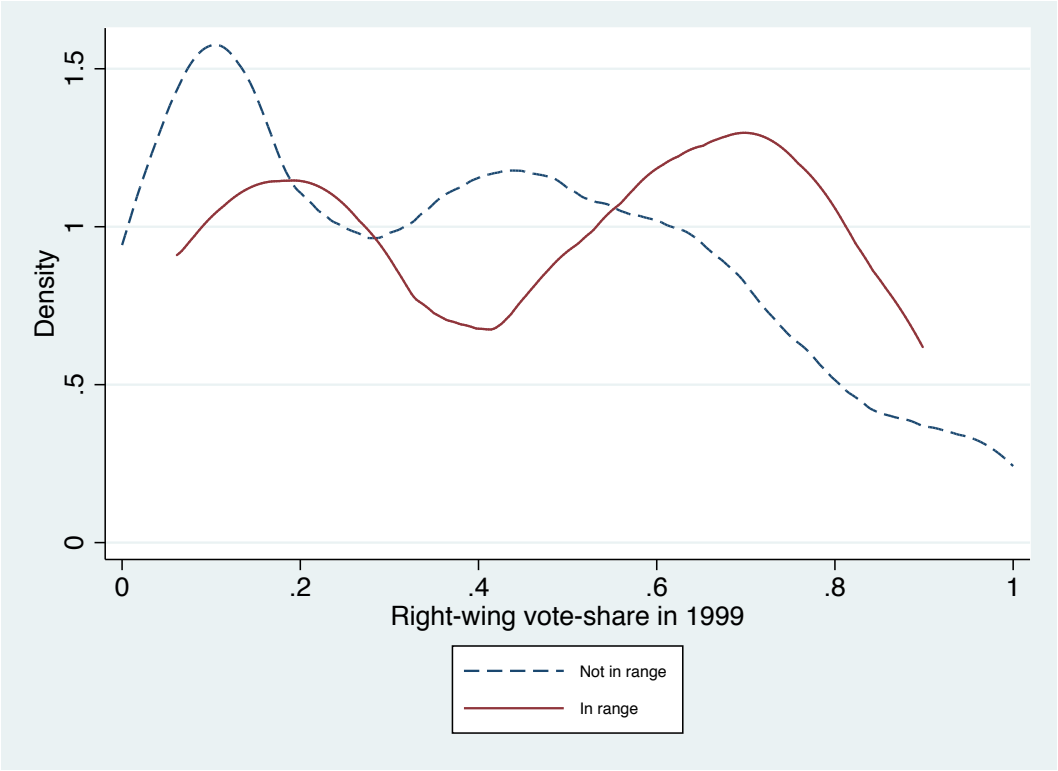
(c) College Education



(d) Highschool graduates

Figure 5: Localities In and Out of Range - Voting Behavior

(a) Right-Wing Vote-Share in 1999



(b) Turnout in 1999

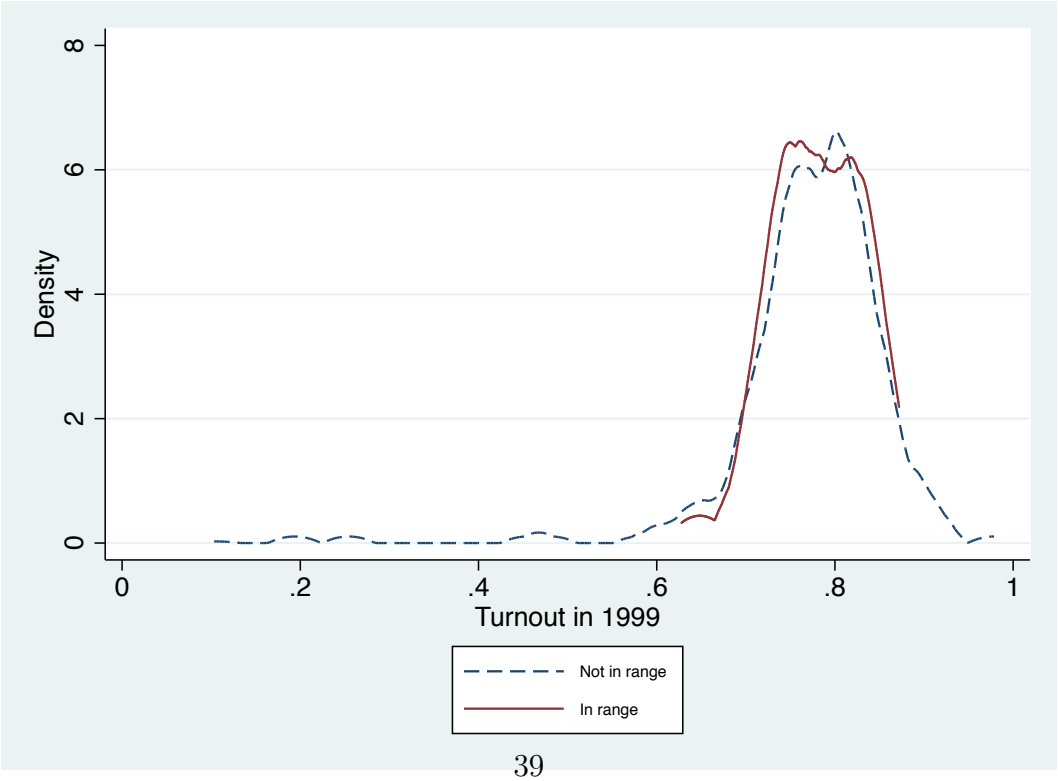
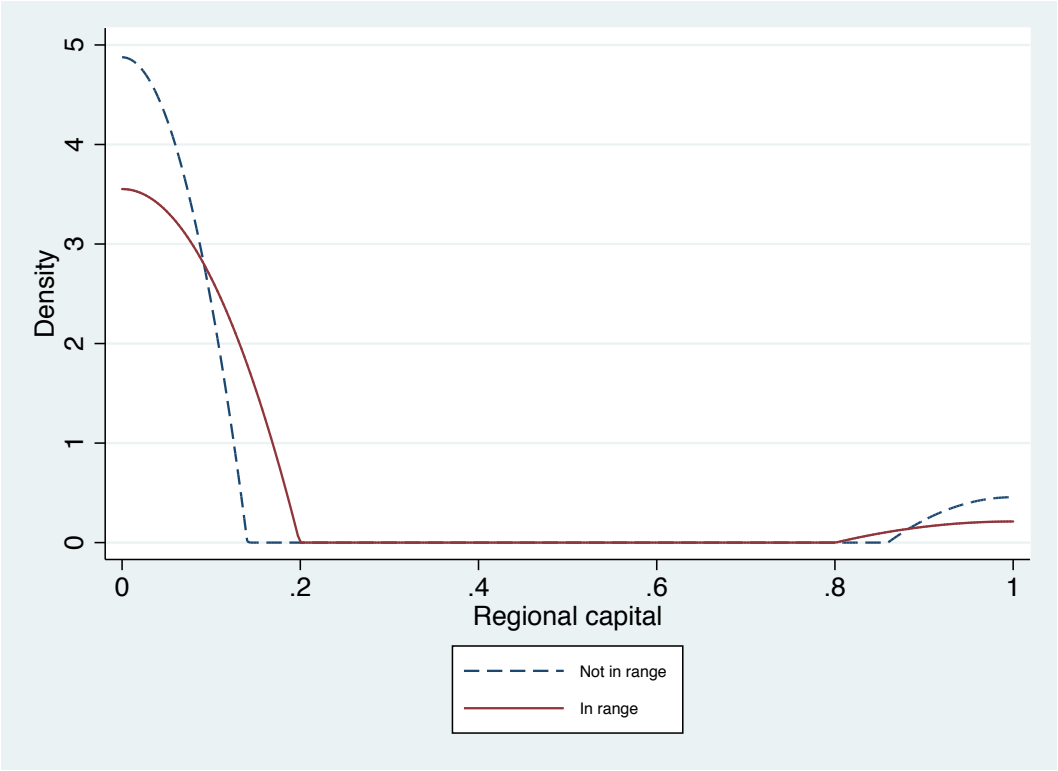


Figure 6: Localities In and Out of Range - Centrality

(a) Regional capital



(b) Distance from border

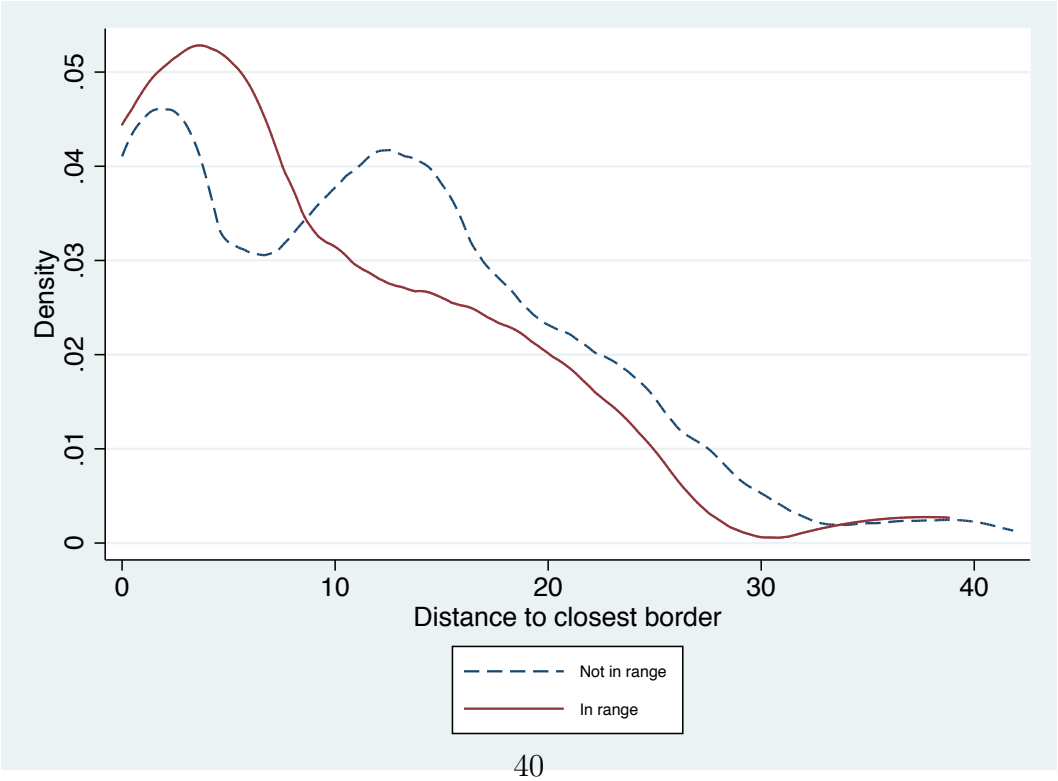


Table 1: Population In Range Of Rockets

Election Year	**1999**	**2003**	**2006**	**2009**
Number of people (% of all population)	0 (0%)	65,557 (1%)	210,082 (3%)	1,028,178 (14%)
Number of localities (% of all localities)	0 (0%)	10 (4%)	13 (5%)	48 (17%)
Range from Gaza (km)	NA	10	20.4	43

Table 2: Parties in political blocks

	Blocks		
Year	**Left**	**Center**	**Right**
1999	Labor, Meretz, Am Echad, Balad, Chadash, Raam, Daam	Shinui, haMerkaz	**Nationalistic:** Likud, Mafdal, haIchud haLeumi,Tzomet, Moreshet Avot **Ultra-Orthodox:** Yahadut haTorah, Shas **Russian:** Israel Baaliya, Israel Beteinu
2003	Labor, Meretz, Am Echad, Chadash-Taal, Balad	Shinui, haMerkaz	**Nationalistic:** Likud, Mafdal, haIchud haLeumi,Tzomet, Herut **Ultra-Orthodox:** Yahadut haTorah, Shas, Ahavat Israel **Russian:** Israel Baaliya
2006	Labor, Meretz, Chadash, Balad, Raam-Taal, Daam, haMiflaga haleumit haAravit	Shinui, Kadima, Tafnit	**Nationalistic:** Likud, haIchud haLeumi - Mafdal, Tzomet, Herut, Hazit Yehudit Leumit **Ultra-Orthodox:** Yahadut haTorah, Shas, Brit Olam **Russian:** Israel Beteinu
2009	Labor, Meretz, Meimad, Chadash, Balad, Raam, Daam	Kadima	**Nationalistic:** Likud, haBait haYehudi, haIchud haLeumi, Tzomet **Ultra-Orthodox:** Yahadut haTorah, Shas **Russian:** Israel Beteinu, Israel haMitchadeshet

Table 3: Summary statistics of pre-treatment variables

Variable	Mean	Min.	Max.	Mean	Min.	Max.
	In Range (N=71, 50 localities)			**Out of Range (N=1029, 237 localities)**		
Mean wage in 1999[a]	1597.99	609	4341	1633.00	741.93	5723
Population in 1995 (log)	7.12	3.09	11.91	8.33	3.10	13.33
Median age in 1995	25.85	13.10	37.60	23.83	10.90	38.90
Male-to-female ratio in 1995	1.16	0.9	6.95	1.06	0.44	6.95
Jews share in 1995	0.85	0	1	0.64	0	1
Highschool graduates in 1998	0.18	0.08	0.76	0.35	0	0.84
College degree in 1995	0.12	0	0.37	0.13	0	0.64
Socio-economic cluster in 1995	3.57	1	10	4.51	1	10
Asia origin in 1995	0.13	0	0.46	0.09	0	0.64
Africa origin in 1995	0.23	0	0.55	0.12	0	0.55
Soviet Union origin in 1995	0.10	0	0.52	0.09	0	0.54
Turnout in 1999	0.78	0.63	0.87	0.77	0.10	0.98
Right-wing vote-share in 1999	0.46	0.06	1	0.39	0	1
Regional capital	0.06	0	1	0.09	0	1
Distance to closest border (km)	8.84	0	38.82	11.34	0	41.83

[a]Normalized by consumer index, 2006 is a base year.

Table 4: The Effect of Being in the Rockets Range on on Right-Wing Parties' Vote-Shares

	Right-Wing Vote-Share							
	(1)		(2)		(3)		(4)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
In range	0.04***	(0.01)	0.06***	(0.01)	0.02**	(0.01)	0.04***	(0.01)
Suicide terror fatalities			-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Mean wage			0.00***	(0.00)	-0.00*	(0.00)	-0.00*	(0.00)
Population			0.00**	(0.00)	-0.00**	(0.00)	0.00	(0.00)
Median age			-0.00	(0.00)	-0.01***	(0.00)	-0.00	(0.00)
Male-to-female ratio			-0.08	(0.07)	-0.04	(0.07)	0.11	(0.08)
Net migration			-6.31**	(2.73)	2.33	(1.61)	-10.56*	(6.03)
Jews share			0.10	(0.06)	0.07*	(0.04)	0.09***	(0.02)
Highschool graduates			-0.07***	(0.02)	0.01	(0.04)	-0.09*	(0.04)
College degree in 1995							0.22***	(0.06)
Asia origin in 1995							0.09	(0.06)
Africa origin in 1995							0.13***	(0.05)
Soviet Union origin in 1995							0.06	(0.04)
Regional capital							0.02**	(0.01)
Distance to border							0.00	(0.00)
Lagged DV							0.77***	(0.03)
Constant	0.39***	(0.00)	0.25	(0.15)	0.56***	(0.09)	-0.06	(0.10)
Locality fe	yes		yes		yes		no	
Year dummies	no		no		yes		no	
R^2	0.014		0.132		0.521		0.856	
No. of obs (Localities)	1041 (285)		823 (275)		823 (275)		673 (237)	

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

Table 5: The Effect of Being in the Rockets Range on Right-Wing Parties' Vote-Shares

	Nationalistic		Religious		Russian	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
In range	0.03**	(0.01)	0.01	(0.01)	-0.01	(0.02)
Suicide terror fatalities	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Mean wage	-0.00***	(0.00)	-0.00	(0.00)	-0.00***	(0.00)
Population	-0.00	(0.00)	-0.00*	(0.00)	-0.00	(0.00)
Median age	-0.00	(0.00)	-0.00***	(0.00)	0.01	(0.00)
Male-to-female ratio	-0.09	(0.09)	0.04	(0.04)	-0.02	(0.09)
Net migration	3.86**	(1.52)	-1.22	(1.33)	1.99	(2.08)
Jews share	0.04	(0.04)	0.03	(0.02)	0.03	(0.06)
Highschool graduates	0.03	(0.04)	-0.01	(0.02)	0.02	(0.04)
Constant	0.45***	(0.11)	0.19***	(0.06)	-0.00	(0.17)
Locality fe	yes		yes		yes	
Year dummies	yes		yes		yes	
R^2	0.528		0.118		0.049	
No. of obs (Localities)	823 (275)		823 (275)		823 (275)	

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

Table 6: The Effect of Being in the Rockets Range on Parties' Vote-Shares

	Likud		Labor		Shas	
	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	0.00	(0.00)	0.00	(0.00)	-0.00	(0.00)
Mean wage	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
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	-0.02	(0.03)	-0.04	(0.06)	-0.00	(0.04)
Net migration	0.20	(1.46)	-2.59	(2.13)	-0.60	(0.95)
Jews share	0.07**	(0.03)	-0.00	(0.07)	0.00	(0.02)
Highschool graduates	-0.00	(0.04)	-0.02	(0.03)	-0.01	(0.01)
Constant	0.13**	(0.06)	0.25***	(0.09)	0.11*	(0.06)
Locality fe	yes		yes		yes	
Year dummies	yes		yes		yes	
R^2	0.599		0.399		0.102	
No. of obs (Localities)	823 (275)		823 (275)		823 (275)	

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

Table 7: The Effect of Being in the Rockets Range on Vote-Shares Conditional on Incumbent

	Right-Wing		Likud		Kadima	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
In range	0.02***	(0.01)	0.02***	(0.01)	-0.00	(0.01)
RightPM	0.10***	(0.02)	0.12***	(0.02)		
In Range × RightPM	-0.03**	(0.01)	0.01	(0.02)		
Suicide terror fatalities	-0.00	(0.00)	0.00	(0.00)	-0.00	(0.00)
Mean wage	-0.00*	(0.00)	0.00	(0.00)	-0.00***	(0.00)
Population	-0.00**	(0.00)	0.00	(0.00)	-0.00	(0.00)
Median age	-0.01***	(0.00)	-0.00**	(0.00)	0.00	(0.00)
Male-to-female ratio	-0.05	(0.07)	-0.02	(0.03)	-0.04	(0.11)
Net migration	2.34	(1.62)	0.20	(1.46)	3.72	(5.73)
Jews share	0.08*	(0.04)	0.07**	(0.03)	-0.07	(0.06)
Highschool graduates	0.01	(0.04)	-0.00	(0.04)	0.05	(0.04)
2003o.year	0.00	(.)	0.00	(.)	0.08***	(0.03)
Constant	0.55***	(0.09)	0.13**	(0.06)	0.15	(0.17)
Locality fe	yes		yes		yes	
Year dummies	yes		yes		yes	
R^2	0.522		0.599		0.679	
No. of obs (Localities)	823 (275)		823 (275)		823 (275)	

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

Table 8: The Effect of Duration of Being in the Rockets Range on Right-Wing Vote-Shares

	Right-Wing Vote-Share	
	Coef.	Std. err.
Duration of being in range:		
1 election	0.02***	(0.01)
2 elections	0.01	(0.01)
3 elections	0.06***	(0.02)
Suicide terror fatalities	0.00	(0.00)
Mean wage	-0.00*	(0.00)
Population	-0.05**	(0.02)
Median age	-0.01***	(0.00)
Male-to-female ratio	-0.04	(0.07)
Net migration	-0.03	(0.08)
Jews share	0.05	(0.04)
Highschool graduates	-0.00	(0.04)
Constant	0.96***	(0.20)
Locality fe	yes	yes
Year dummies	yes	yes
R^2	0.532	
No. of obs (Localities)	796 (262)	

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

Table 9: The Effect of Being in the Rockets Range - Robustness Tests

	Right-Wing Vote-Share		Nationalistic		Religious		Russian	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
In range	0.04***	(0.01)	0.07**	(0.03)	0.00	(0.01)	0.02	(0.02)
Suicide terror fatalities	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Mean wage	-0.00	(0.00)	-0.00**	(0.00)	-0.00**	(0.00)	-0.00***	(0.00)
Population	-0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)	-0.00	(0.00)
Median age	-0.00	(0.01)	0.00	(0.01)	-0.00	(0.00)	0.02***	(0.01)
Male-to-female ratio	0.42	(0.27)	0.57	(0.36)	0.04	(0.17)	0.18	(0.33)
Net migration	22.37	(25.18)	107.33***	(35.95)	-5.06	(10.00)	106.52***	(20.03)
Jews share	-0.92	(0.62)	-1.87**	(0.77)	-0.63	(0.40)	-2.63***	(0.61)
Highschool graduates	-0.05	(0.07)	0.05	(0.10)	-0.03	(0.04)	0.07	(0.05)
Turnout								
Constant	0.34	(0.55)	0.43	(0.71)	0.61*	(0.36)	0.95*	(0.56)
Locality fe	yes		yes		yes		yes	
Year dummies	yes		yes		yes		yes	
R^2	0.567		0.599		0.125		0.244	
No. of obs (Localities)	376 (126)		376 (126)		376 (126)		376 (126)	

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

Table 10: 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 unit 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 11: The Effect of Being in the Rockets Range - Robustness Tests - Alternatives Distance Measures

	Right-Wing Vote-Share							
	(1)		(2)		(3)		(4)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
In range	0.02**	(0.01)	0.02***	(0.01)	0.02***	(0.01)	0.02***	(0.01)
Suicide terror fatalities	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Mean wage	-0.00**	(0.00)	-0.00**	(0.00)	-0.00**	(0.00)	-0.00**	(0.00)
Population	-0.05***	(0.02)	-0.05***	(0.02)	-0.05***	(0.02)	-0.05***	(0.02)
Median age	-0.01***	(0.00)	-0.01***	(0.00)	-0.01***	(0.00)	-0.01***	(0.00)
Male-to-female ratio	-0.05	(0.07)	-0.05	(0.07)	-0.05	(0.07)	-0.05	(0.07)
Net migration	-0.12	(1.80)	-0.13	(1.81)	-0.13	(1.79)	-0.20	(1.81)
Jews share	0.06	(0.04)	0.06	(0.04)	0.06	(0.04)	0.05	(0.04)
Highschool graduates	0.01	(0.04)	0.01	(0.04)	0.01	(0.04)	0.01	(0.04)
Constant	0.99***	(0.18)	1.00***	(0.18)	0.99***	(0.18)	1.01***	(0.18)
Locality fe	yes		yes		yes		yes	
Year dummies	yes		yes		yes		yes	
R^2	0.526		0.526		0.527		0.527	
No. of obs (Localities)	823 (275)		823 (275)		823 (275)		823 (275)	

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

Column (1): Distance between locality's center -Gaza perimeter; all units within the range

Column (2): Distance between locality's perimeter -Gaza perimeter; at least one unit within the range

Column (3): Distance between locality's perimeter -Gaza trip perimeter; all units within the range; range -3km

Column (4): Distance between locality's perimeter -Gaza trip perimeter; all units within the range; range -5km

Table 12: The Effect of Being in the Rockets Range on Turnout

	(1) Turnout		(2) Right-Wing Vote-Share Turnout ≥69% (Highest 50%)	
	Coef.	Std. err.	Coef.	Std. err.
In range	0.00	(0.01)	0.02*	(0.01)
Suicide terror fatalities	0.00*	(0.00)	-0.00	(0.00)
Mean wage	-0.00	(0.00)	0.00	(0.00)
Population	-0.09***	(0.03)	-0.05	(0.03)
Median age	-0.00***	(0.00)	-0.00	(0.00)
Male-to-female ratio	-0.18**	(0.07)	-0.12	(0.08)
Net migration	-1.90	(2.75)	-0.13	(2.87)
Jews share	0.11	(0.12)	-0.12	(0.31)
Highschool graduates	-0.02	(0.03)	-0.05	(0.09)
Constant	1.80***	(0.25)	1.17**	(0.48)
Locality fe	yes		yes	
Year dummies	yes		yes	
R^2	0.441		0.485	
No. of obs (Localities)	823 (275)		323 (156)	

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

Table 13: The Effect of Being in the Rockets Range on Right-Wing Parties' Vote-Shares - Migration

	Migration below median (1)		Incoming residents are right-leaning Outgoing residents are left-leaning (2)	
	Coef.	Std. err.	Coef.	Std. err.
In range	0.04***	(0.01)	0.03***	(0.01)
Suicide terror fatalities	-0.01*	(0.00)	-0.00	(0.00)
Mean wage	-0.00	(0.00)	0.00	(0.00)
Population	-0.01	(0.08)	-0.02	(0.04)
Median age	-0.00	(0.01)	-0.01	(0.00)
Male-to-female ratio	0.41*	(0.22)	0.45**	(0.20)
Net migration	-0.71	(0.85)	-1.30**	(0.61)
Jews share	-56.73*	(29.72)	-0.19	(0.44)
Highschool graduates	-0.19**	(0.08)	-0.05	(0.05)
Constant	10.05*	(5.41)	0.36	(0.54)
Locality fe	yes		yes	
Year dummies	yes		yes	
R^2	0.288		0.487	
No. of obs (Localities)	242 (92)		556 (191)	

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