Counter-Suicide-Terrorism: Evidence from House Demolitions

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This article examines whether house demolitions are an effective counterterrorism tactic against suicide terrorism. We link original longitudinal microlevel data on houses demolished by the Israeli Defense Forces with data on the universe of suicide attacks against Israeli targets. By exploiting spatial and time variation in house demolitions and suicide attacks during the second Palestinian uprising, we show that punitive house demolitions (those targeting Palestinian suicide terrorists and terror operatives) cause an immediate, significant decrease in the number of suicide attacks. In contrast, Palestinian fatalities do not have a consistent effect on suicide terror attacks, while curfews and precautionary house demolitions (demolitions justified by the location of the house but unrelated to the identity of the house's owner) cause a significant increase in the number of suicide attacks. The results support the view that selective violence is an effective tool to combat terrorist groups and that indiscriminate violence backfires.

Although it is commonly argued that government policies to deter terrorism and disrupt the operations of terror organizations tend to be effective (Ganor 2005), alternative theoretical models suggest that they may have a boomerang effect.[1] According to this view, harsh measures of counterterrorism backfire by fostering hatred and attempts to exact revenge (Siqueira and Sandler 2006). In particular, while counterterrorism policies typically affect the general population, the effectiveness of counterterrorism policies depends on their ability to target terror organizations directly (e.g., Bueno de Mesquita and Dickson 2007; Fearon and Laitin 2003).

A number of scholars studying insurgencies and counterinsurgencies have raised similar arguments. That literature posits that selective measures of violence are effective because they are consistent with a notion of fairness. In addition, they do not distort individuals' incentives to join the insurgent group since selective violence punishes only those directly involved in acts of insurgency and terrorism (Kalyvas 2006). On the contrary, indiscriminate counterinsurgency measures backfire because they create new grievances, fail to generate a clear structure of incentives, and allow insurgents to solve collective action problems (Kalyvas and Kocher 2007; Tishkov 2004; Wood 2003). As a consequence, indiscriminate violence against civilians increases popular support for terrorist and insurgent groups. Terrorists and insurgents usually translate this increase into bigger cadres and increased violence against their political opponents.[2]

From these theoretical arguments follows that the main challenge of counterterrorism strategies is to target directly those involved in perpetrating and executing terror attacks. In many conflicts plagued by terrorism, perpetrators are not only part of the local population but also deliberately launch their attacks from civil areas. This strategy is used

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1. Supplementary material for this article is available at the "Supplements" link in the online edition. Data needed to reproduce the numerical results of this article are available at Klor's personal website (http://pluto.huji.ac.il/~eklor/HD_data).

2. See Bueno de Mesquita (2013) for a theoretical analysis of the connection between economic conditions, political mobilization, and their effect on rebels' choice to resort to terrorism or insurgency.

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by terror organizations to disguise their activities and make it harder for the other side to retaliate (Berlow 1998). Yet, as the theoretical arguments go, when the government has sufficient territorial control and access to accurate intelligence, selective violence should be an effective measure of counterterrorism.

Despite the wide interest that counterterrorism policies draw and the abundance of related theoretical studies, there is little empirical evidence on the effectiveness of selective and indiscriminate measures of counterterrorism when both measures are simultaneously applied. Assessing the effectiveness of counterterrorism policies requires detailed microlevel data on terror attacks and counterterrorism operations, as well as clear criteria to differentiate between selective and indiscriminate measures. Unfortunately, such detailed data are typically not publicly available.

This article attempts to fill this gap by linking novel microlevel data on house demolitions (a policy used by the Israeli Defense Forces [IDF] to combat and deter terrorism) and suicide attacks, empirically documenting the effects of house demolitions on future suicide attacks. We differentiate between the two main types of house demolitions carried out by the IDF: precautionary demolitions and punitive house demolitions. Precautionary demolitions are intended to prevent the launching of attacks from specific locations and are not related to activities carried out by the owners or occupants of the houses being demolished. In contrast, in punitive house demolitions, the IDF demolishes or seals houses that were home to Palestinian suicide terrorists or to individuals suspected, detained, or convicted of involvement in violent acts against Israelis.

Our analysis is based on original microlevel data. We use a longitudinal microlevel data set containing information on all punitive house demolitions during the second Palestinian uprising between 2000 and 2005, as well as all precautionary house demolitions between 2004 and 2005. For each house demolished, we know the exact location of the house, the timing of the demolition, the house's size, and the number of its residents. We link this data set with data on the universe of suicide terrorists during the same time period, including each terrorist's timing of the attack and locality of residence. We augment our data with information on localities' specific economic and demographic characteristics, as well as with longitudinal variation of other counterterrorism measures imposed by the IDF, like targeted killings and curfews. This detailed data set allows us to use temporal and spatial variation to identify and quantify the effectiveness of house demolitions as a deterrence policy of counterterrorism. In addition, by looking at other measures of counterterrorism we are able to compare the effectiveness of selective and indiscriminate policies while they are being simultaneously applied with the common goal of stopping terror attacks.

We find that punitive house demolitions lead to fewer suicide attacks in the month following the demolitions. The effect is significant and sizeable—a one standard-deviation increase in punitive house demolitions leads to a decrease of 11.7% in the number of suicide terrorists originating from an average district. In contrast, precautionary demolitions (which are not related to activities of the houses' owners and occupants) are associated with more suicide attacks. Our estimates show that a standard-deviation increase in precautionary house demolitions leads to a 48.7% increase in the number of suicide terrorists from an average district.

In order to attribute a casual interpretation to our results, it is important to note that they are robust to alternative measures of house demolitions, such as the number of housing units demolished, number of residents affected, and size of demolished houses. In addition, they are obtained using a time and district fixed-effects specification. Therefore, the results are not affected by districts' characteristics that are constant over time or by political developments that are constant across districts. The results are also robust to different specifications including or excluding a wide array of control variables and counterterrorism measures. In particular, we control for Palestinian fatalities in targeted killings, other Israeli-induced Palestinian fatalities, and curfews imposed on different localities. While these measures of counterterrorism do not have a significant and robust effect on suicide terrorism, their inclusion in the econometric models does not affect the estimated impact of house demolitions on suicide terrorism, thus alleviating concerns related to selection bias. Moreover, we examine the robustness of our results under alternative counterfactuals, estimate the persistence of the effects, and test whether these effects change directions over time or are affected by reverse causality. We also focus on idiosyncratic delays in the process for authorizing home demolitions to rule out the possibility that the correlation between punitive house demolitions and other counterterror operations is the main force behind the results.

The results indicate that, when targeted correctly, counterterrorism measures such as house demolitions provide the desired deterrent effect. When used indiscriminately, however, house demolitions lead to the radicalization of the population and backfire, resulting in more subsequent attacks. That said, while interpreting our results one needs to keep in mind that house demolitions may not be an efficient policy because it may cause some undesirable consequences. The use of house demolitions may lead to an increase of

nonsuicidal terror attacks or bring about animosity from the international community against its use. However, by showing which types of demolitions deter suicide terrorists and which promote more terrorism, we shed more light on the desirability of house demolitions and their effectiveness as a counter-suicide-terrorism tool.

COUNTER-SUICIDE-TERRORISM: THE CASE OF HOUSE DEMOLITIONS

Suicide terrorism has become the dominant and deadliest form of terrorism and violence during the twenty-first century. The attacks of September 11, 2001 were the deadliest act of suicide terrorism against civilians in history. They were soon followed by suicide attacks in London in July of 2005. In the meantime, since 2003, numerous suicide bombers in Iraq have killed thousands of people. Similarly, from the onset of the Second Palestinian Intifada in September 2000 through August 2005, 150 Palestinian suicide attacks against Israeli targets resulted in almost 3,500 casualties with 515 fatalities. Yet, despite the rapid growth and widespread use of suicide attacks by terror organizations, there is no systematic evidence on effective policies to counter-suicide-terrorism.

The analysis in the previous section suggests that selective violence is more likely to be an effective counter-terrorism tool. However, this is not straightforward in the case of suicide terrorism. Terror operatives are part of the local population, which makes it difficult to obtain the necessary information to identify and detain them. Moreover, given that the attackers kill themselves during their missions, it is difficult for governments to enact policies of deterrence that mete out punishments on the terrorists themselves after the attack. The IDF resorts to house demolitions to affect terrorists' incentives to commit suicide attacks. This policy's objective is to deter potential suicide terrorists by affecting the cost-benefit calculations of those who care about the future well-being of their relatives.

House Demolitions: Background

The IDF carries out two main types of house demolitions: house demolitions in "clearing operations" and punitive house demolitions.[3,4] According to official IDF statements, house demolitions in clearing operations are intended to prevent snipers from firing at Israeli targets from these houses and areas. These demolitions are not related in any way to activities carried out by the owners or occupants of the houses being demolished. During the period 2000–2005, clearing operations took place primarily in the Gaza Strip to create "no go areas." Houses were demolished mostly along the Egyptian border in the south; around Israeli settlements, army posts, and roads that were used by settlers and IDF forces throughout Gaza prior to the Israeli evacuation of 2005; and in the northern Gaza Strip, in areas from which mortar rockets (mainly Kassam) have been fired, targeting Israeli communities in southern Israel. We refer to such demolitions as "precautionary house demolitions." We have data on precautionary house demolitions for the years 2004 and 2005.

The second type of demolition is "punitive house demolitions." In punitive house demolitions, the IDF demolishes or seals houses that were home to Palestinians suspected of, detained in connection with, or convicted of involvement in terrorism against Israelis. These acts include suicide bombings as well as thwarted attacks against soldiers or civilians. The demolished houses belong not only to perpetrators but also to individuals accused of involvement in an attack, either by planning it, dispatching the perpetrators, or providing assistance to the terrorist cell. In contrast to precautionary demolitions, punitive demolitions require precise information obtained through accurate intelligence acquisition and a certain degree of territorial control. The detailed information is necessary to identify the suspected terrorists and their houses of residence. Territorial control is necessary to penetrate Palestinian cities, impose curfews around the targeted houses, and demolish them.

Following accepted definitions of violence, we classify precautionary house demolitions as an indiscriminate policy because it targets individuals who have not broken the law (Gibbs 1975). On the contrary, punitive house demolitions are classified as a discriminate or selective policy because it only targets known offenders.

The Evolution of House Demolitions: From 1945 to the Second Intifada

The policy of house demolitions began during the British Mandate. In 1945, the acting British high commissioner for Palestine enacted emergency defense regulations that granted local authorities the power to conduct searches, make arrests, establish military courts to try civilians without right of appeal, close off areas, deport individuals, impose curfews, and, according to regulation 119(1), seize and

3. This subsection draws mostly on Darcy (2003) and Shnayderman (2004).

4. A third type of demolition is administrative house demolitions of houses built without a building permit. These demolitions occur almost exclusively in East Jerusalem, are not related to security concerns, and are not carried out by the IDF. We do not include administrative house demolitions in our analysis because, in addition to all of the above, there are no good microlevel data on them.

destroy houses, structures, and land as punishment for illegal acts.

The IDF began conducting punitive house demolitions in 1967, right after the Six Days' War, and demolished almost 1,400 houses in the late 1960s. Punitive house demolitions were rare from the early 1970s until 1987. With the beginning of the first Intifada in December 1987, the IDF significantly increased the use of punitive house demolitions to punish and deter further acts of violence, resulting in almost 500 demolitions between 1988 and 1992. There were only a few house demolitions between 1993 and 1997, and the policy was discontinued from 1998 until September 2001. The IDF informally renewed punitive house demolitions in response to the wave of violence of the second Intifada that began in October 2000. On October 23, 2001, the IDF demolished the first house during the second Intifada. This house belonged to Sa'id al-Hutri, a Palestinian suicide bomber who killed 21 Israelis when he blew himself up in Tel Aviv. The political-security cabinet of the Israeli government officially renewed the policy of punitive demolitions on July 31, 2002, right after a terror attack at the Hebrew University of Jerusalem killed nine Israelis.

The use of house demolitions as a counterterrorism tool has been hotly debated inside and outside Israel. Several human rights organizations have repeatedly challenged its legality. In cases argued before the Israeli Supreme Court of Justice, these organizations have asserted that the policy of house demolitions constitutes a war crime because it punishes innocent individuals for acts committed by others (Darcy 2003).[5] In defense of this policy, Israeli officials repeatedly argue that the policy of house demolitions falls within the exception to article 53 of the fourth Geneva Convention. According to the IDF, the demolition of houses of terror operatives is a crucial counterterrorism tool for deterring terrorism in general and suicide terrorism in particular. The Supreme Court of Justice has repeatedly declined to interfere with the IDF's operational military considerations (Nabot 2003).

The Effectiveness of House Demolitions as a Counterterrorism Policy: The Debate

Although the policy of house demolitions has been vigorously debated in political and legal arenas, there are no systematic studies ascertaining whether house demolitions are effective in stopping terrorism in general and suicide terrorism in particular (Harel and Isacharoff 2004). While the Israeli government and the IDF claim that the policy is effective, they acknowledge that "it is impossible to know the exact figures of potential terrorists that have been deterred from perpetrating attacks by this prevention tactic" (Shnayderman 2004, 64). In support of the deterrent effect of house demolitions, government and military officials often cite anecdotal evidence in which relatives of individuals recruited to commit suicide attacks have contacted the IDF and cooperated with the military in an attempt to stop the attack and save their houses from being demolished.[6]

Opponents argue that demolishing houses backfires, since it increases the Palestinians' hatred of and animosity toward Israel. For example, Shalev's report of 1991 relies on seven bimonthly observations from the first Intifada to argue that, in the aftermath of house demolitions, the number of violent events against Israelis did not decrease and sometimes even increased.

Evaluating the effectiveness of counterterror policies is a challenging empirical task. It is difficult to obtain micro-level data since security forces are reluctant to release classified counterterrorism information. But even when data are available, the effect of counterterrorism policies remains unclear because terror organizations react to the new conditions by choosing different targets and modes of attack.[7]

DATA

We use a novel data set on houses demolished between the years 2000 and 2005 as well as data containing the universe of Palestinians suicide terrorists during the same time period. We augment these data with information on other counterterrorism measures, including Palestinian fatalities in targeted killings (differentiating between the actual target of the operation and other fatalities from these operations), other Palestinian fatalities, and curfews. We also control for economic and demographic characteristics of Palestinian localities.

Our data on house demolitions were obtained from B'Tselem, a human rights organization that monitors and collects data on the Israeli-Palestinian conflict. Although several studies have used B'Tselem's data on Israeli and Palestinian fatalities, ours is the first to use B'Tselem's de-

5. These arguments are supported by the Fourth Geneva Convention, which states that occupying states are forbidden to destroy property except when this is rendered absolutely necessary by military operations.

6. Gideon Alon, "Ben Eliezer, 'There Are Testimonies that the Demolition of Terrorist's Houses Deters,'" *Ha'aretz,* August 12, 2002.

7. There is a growing literature showing that terror groups strategically adapt to counterterrorism policies. See, among others, Baliga and Sjöström (2012), Berman (2009), Berman and Laitin (2008), Enders and Sandler (1993, 2004), and Jaeger and Paserman (2009). The related theoretical literature on counterterrorism takes terror groups' strategic reaction into account for the design of efficient counterterrorism policies (see Bueno de Mesquita 2007; Powell 2007a, 2007b).

tailed microdata on house demolitions.[8] The data include all punitive house demolitions between September 2000 and December 2005 and all precautionary house demolitions for 2004 and 2005. We know the date and location of every house demolished, the house's number of units, number of residents, and its size.

Table 1 depicts the substantial variation over time on house demolitions during the second Intifada. The IDF renewed the policy of punitive house demolitions in October 2001, so there were no punitive house demolitions in 2000 and just six punitive house demolitions in 2001. The number of houses demolished increases sharply to 235 houses in 2002, the most violent year of the second Intifada. Whereas the number of punitive house demolitions remains almost unchanged in 2003, there is a monotonic decline in punitive house demolitions in the final two years of the second Intifada. For each house, we list the number of apartment units, the number of residents, and the size of the house. These measures show the same fluctuation over time. The correlation between house demolitions and apartment units demolished is 0.99, and the correlations between house demolitions and the number of residents in demolished houses and the size of the houses demolished are 0.72 and 0.88, respectively.

Table 1 also shows the high number of precautionary demolitions in 2004 and their decline in 2005. Most of these demolitions occurred in the Gaza Strip (only 25 of the 1,172 occurred in the West Bank). The large number of demolitions in the Gaza Strip is due to the IDF's attempt to stop the smuggling of weapons and explosives through tunnels. In creating a 300-meter buffer zone along the border between Gaza and Egypt, the IDF demolished 619 houses in Rafah between March and November 2004 (Human Rights Watch 2004).

The bottom panel of Table 1 presents data on suicide terrorists, Palestinian-induced Israeli fatalities, and Israeli-induced Palestinian fatalities. The data on Palestinian suicide terrorists, constructed by Benmelech and Berrebi (2007) using reports of the Israeli Security Agency, contain information on all Palestinian suicide terrorists who attacked (or attempted to attack) targets in Israel, the West Bank, and the Gaza Strip between September 2000 and December 2005. For the 150 suicide terrorists in our data set, we know their place of residence, date, and outcome of the attack.[9] As expected, the number of punitive demolitions is highly correlated with the number of suicide terrorists. We observe a yearly increase in the number of suicide terrorists up until 2002 and a monotonic decrease after that peak for all subsequent years. We observe similar patterns when we focus on the fluctuations of Israeli and Palestinian fatalities over time.

Figure 1 illustrates the spatial heterogeneity of suicide terrorists and punitive house demolitions. Listed in parentheses are the number of suicide terrorists who originated from (first number) and the number of punitive house demolitions carried out in each district in the West Bank, the Gaza Strip, and East Jerusalem (second number). There is a high geographic variation with respect to the district of origin of suicide terrorists and of corresponding house demolitions, especially in the West Bank. Some districts have a high number of suicide terrorists and punitive house demolitions (Jenin, Nablus, Bethlehem, and Hebron), while other districts are fairly calm (Tubas, Jericho, and Salfit). Districts in the Gaza Strip are more homogenous than those in the West Bank in terms of the number of suicide terrorists and punitive house demolitions.

Table A.1 in the online appendix refines the geographical description of Figure 1 by reporting summary statistics on the number of suicide terrorists originating from a locality, the number of Israeli-induced Palestinian fatalities, and the number of house demolitions for each locality in the West Bank and Gaza Strip. As shown in this table, violence varied substantially across localities. The average number of suicide terrorists originating from a locality is 0.218. Forty-three of the 683 localities had at least one suicide terrorist, and the highest number of suicide terrorists originating from a locality (Nablus) is 30. The average number of Israeli-induced Palestinian fatalities is 4.9, and the maximum is 490 (Ashati refugee camp in the Gaza district). Only a minority of Palestinian fatalities occurs in targeted killing operations. The average number of Palestinian fatalities that were the object of these operations is 0.28, while on average another 0.17 bystanders are also killed. Table A.1 also shows that there are 0.9 punitive house demolitions in the average locality affecting 5.96 residents.

Table A.2 in the appendix restricts the sample to the 43 localities from which at least one suicide terrorist originated. The average number of suicide terrorists per locality

8. For studies that use B'tselem's data on Israeli and Palestinian fatalities, see Benmelech, Berrebi, and Klor (2010, 2012), Gould and Klor (2010), Gould and Stecklov (2009), and Jaeger and Paserman (2006, 2008).

9. The theoretical arguments regarding the effect of house demolitions are not confined to suicide terrorism but apply also to other types of terror attacks. Unfortunately, we do not have information on the districts of origin of (nonsuicide) terrorists that successfully committed an attack and were not apprehended. Therefore, our analysis focuses exclusively on suicide terror attacks, which account for over 60% of Israeli fatalities from terrorism during the period at issue.

Table 1. Suicide Terror Attacks, Palestinian Fatalities, and House Demolitions by Year

	2000	2001	2002	2003	2004	2005
House demolitions						
Punitive	0	6	235	218	167	2
Precautionary	-	-	-	-	1,156	16
Units demolished						
Punitive	0	7	246	218	174	2
Precautionary	-	-	-	-	1,404	17
Number of residents in demolished houses						
Punitive	0	24	1,371	1,766	895	17
Precautionary	-	-	-	-	10,704	74
Size of houses demolished (in square meters)						
Punitive	0	1,010	26,313	32,219	23,868	400
Precautionary	-	-	-	-	216,278	1,972
Suicide terrorists	3	32	59	28	15	13
Palestinian-induced Israeli fatalities	41	191	421	185	108	50
Israeli-induced Palestinian fatalities	280	462	1,000	580	825	190

Note—Entries reflect the total number of suicide terrorists, Israeli-induced Palestinian fatalities, and house demolitions by year. The year 2000 covers only the months of October, November, and December. The data on suicide terrorists come from Israeli Security Agency reports. The data for the rest of the variables come from B'tselem.

in this subsample is 3.5, and the median is 2. There were on average 63.5 Israeli-induced Palestinian fatalities in these localities, 6.5 of which occurred in targeted killing operations. The average number of punitive house demolitions is 10.63, and the average number of precautionary house demolitions is 25.58. Likewise, about 70 local residents were directly affected by punitive demolitions within a locality, and on average 239.5 residents were directly affected by precautionary demolitions during the period at issue.

We augment the data on suicide terrorists, Palestinian fatalities, and house demolitions with economic and demographic variables from the Palestinian Labor Force Survey. Table A.3 in the appendix displays summary statistics of the economic and demographic variables of interest for all districts and provides a general overview of Palestinian economic and demographic conditions during the Second Intifada. We observe a relatively young population with low average years of schooling and a relative low unemployment rate due largely to extremely low labor-force participation. In the bottom row of Table A.3, we report summary statistics on the number of curfews days per district per quarter. The data on curfews was obtained from the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). The data on total monthly hours under curfew by district is available only between May 2002 and December 2005. Over this period, the average number of curfew days in a month within a district was 1.341, and the maximum was 4.6 days (in Hebron).[10]

THE EFFECT OF PUNITIVE HOUSE DEMOLITIONS ON THE NUMBER OF SUICIDE ATTACKS

Empirical Framework

To test the relationship between house demolitions and the number of suicide terrorists, we focus on district-month cells (or localities-month cells). Our baseline regressions identify the effect of house demolitions within a district on future suicide attacks originating from that district. We estimate Poisson regression models because the number of suicide attacks, the outcome of interest, is a nonnegative integer. Formally, we estimate different variants of the following baseline specification:

$$E[\text{suicide terrorists}_{i,t}|\mathbf{x}_{i,t-1}] = \exp(\text{HD}_{i,t-1}\beta_1 + x_{i,t-1}\beta_2 + \lambda_i + \gamma_t) \quad (1)$$

where $\text{suicide terrorists}_{i,t}$ is the number of suicide terrorists that originate from district i in month t; $\text{HD}_{i,t-1}$ is the number

10. In addition to house demolitions, curfews, and targeted killings, Frisch (2006) argues that the number of preventive arrests of Palestinians also had an important effect on the decrease of Palestinian attacks. Unfortunately, the available data on Palestinian detainees contains only time variation but not geographic variation. Therefore, we cannot include this variable in the empirical analysis.

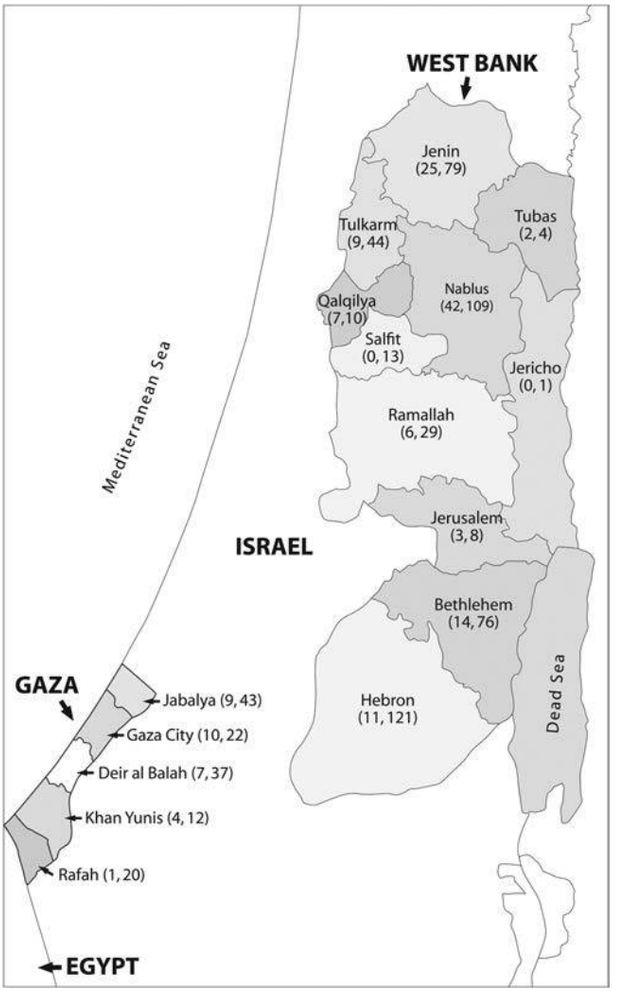

Figure 1. Suicide terrorists and house demolitions, October 2000–December 2005.

of punitive house demolitions in district *i* in month *t–1*; and $x_{i,t-1}$ represents the other explanatory variables in the model that are used to control for potential confounding factors. These include Israeli-induced Palestinian fatalities (differentiating between object of targeted killings, other fatalities in targeted killings, and the rest), demographic and economic characteristics, and Israeli security measures that vary across districts and time, all of which are listed in Table A.3. λ_i is a district fixed effect that controls for districts' unobservable characteristics that are time-invariant; λ_t is a year fixed effect that absorbs common fluctuations of violence over time. The inclusion of fixed effects for each district and year allows us to examine whether variation over time in punitive house demolitions within a district is correlated with variation over time within a district of suicide terror attacks, while controlling for the common trend in violence across districts and a rich set of districts' characteristics. In some of the specifications we also control for district-specific time trends, thus showing that the results are robust to an alternative identifying assumption. In all specifications we cluster the error term at the district level to capture nonsystematic determinants of the number of suicide terrorists.

The geographic aggregation of the data implicitly assumes that proximity to house demolitions either by actual eyesight, word of mouth, or local communication and media channels has an effect on the willingness of individuals to commit suicide terror attacks. Most of our analysis uses data aggregated at the district level because many localities do not participate in suicide terrorism (some localities are just small villages with less than a 100 inhabitants). We also show that the results are robust to aggregating the data at the locality level, and we test whether or not geographic distance from a demolition has an effect on the subsequent number of suicide attacks.[11]

Main Results

Table 2 presents the results from estimating the impact of punitive house demolitions on the number of suicide terrorists from the same district in subsequent months as formulated in model (1). The effect of punitive house demolitions on the number of suicide terrorists is not statistically significant when we only control separately for either district or year fixed effects (Columns 1–3). In fact, without controlling for district fixed effects, we observe a positive correlation between punitive house demolitions and number of suicide terrorists, which is likely caused by an omitted variable bias, since more violent districts obviously have more punitive house demolitions and a higher number of suicide terrorists. Nonetheless, a naive interpretation of this positive correlation is sometimes used in public discourse as proof that house demolitions backfire.

When we control for district fixed effects (to account for unobserved underlying heterogeneity across districts) and year fixed effects (to account for common fluctuations over time of the variables of interest), we see that punitive house demolitions in a given district significantly decrease the

11. The actual organization of terror factions provides us with another reason for the aggregation of the data at the district level. Out of the 150 suicide terrorists during the time period at issue, we have information on the location of the local terror commander that sent the terrorist to his or her mission for 114 suicide terrorists. In 103 out of these 114 cases (90.4%), the suicide terrorist and the local terror commander are from the same district. In most of the remainder cases, they reside in adjacent districts. This high correlation is not surprising given that Israeli curfews and checkpoints impose substantial obstacles on Palestinian mobility across districts.

Table 2. The Effect of Punitive House Demolitions on the Number of Suicide Attacks (all data aggregated at the district level)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Punitive House Demolitions	0.0633	0.0281	−0.0186	−0.0607*	−0.0609*	−0.0540*	−0.0466*
	[0.0334]	[0.0303]	[0.0264]	[0.0181]	[0.0203]	[0.0190]	[0.0230]
Districts' Economic and Demographic Characteristics							
Unemployment					−2.0040	−8.4726	−8.2341
					[4.075]	[4.529]	[7.037]
Percentage employed in Israel					1.5980	0.7078	−10.768
					[3.275]	[3.134]	[11.813]
Years of schooling					−0.2781	0.2926	−0.3074
					[0.4931]	[0.6227]	[0.9248]
Age					0.2900	0.5534*	−0.0006
					[0.1647]	[0.1437]	[0.3402]
Married					−0.3319	−2.6406	2.1049
					[6.746]	[7.983]	[10.511]
Male					11.070	8.881	−7.8776
					[12.806]	[11.176]	[11.124]
Other Security-Related Variables							
Palestinian fatalities							
Object of targeted killings						−0.079	0.1322
						[0.077]	[0.1825]
Other fatalities from targeted killings						−0.066	−0.0995
						[0.090]	[0.0673]
Fatalities not in targeted killings						0.011	−0.0519
						[0.006]	[0.0592]
Days with curfews							0.0621*
							[0.0245]
District fixed effects	No	No	Yes	Yes	Yes	Yes	Yes
Year fixed effects	No	Yes	No	Yes	Yes	Yes	Yes
District-specific linear time trends	No	No	No	No	No	Yes	No
Number of observations	1,008	1,008	1,008	1,008	1,008	1,008	704

Source—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.

Note—Estimated via panel Poisson regression model. Dependent variable is the number of suicide terror attacks originating in district i at month t. Robust standard errors, adjusted for clustering at the district level, in brackets.

* indicates statistically significant at 5% level.

number of suicide terrorists who originate from that district. This effect is statistically significant and of an important magnitude. The estimated rate ratio implies that the marginal punitive house demolition lowers the number of suicide terrorists originating from a district in the following month by a factor of 0.941. This effect implies that a standard deviation increase in the number of punitive house demolitions (which is equal to 2.04) causes a decrease of 11.7% in the number of suicide terrorists originating from an average district-month cell.

The negative effect of punitive house demolitions on the number of subsequent suicide terrorists is qualitatively and quantitatively robust when we control for demographic and economic characteristics (Column 5), as well as other proxies for the security situation at the district level (Column 7). Moreover, when we include district-specific time trends, we observe that the estimated coefficient (Column 6) is also robust to different identifying assumptions that are based on deviations of house demolitions and the number of suicide terrorists from districts' specific trends (and not only the districts' averages, as in the other columns). The fact that our point estimates are not sensitive to the inclusion of a battery of control variables alleviates concerns related to omitted variable bias.

This table also shows that targeted killings do not have a clear effect on the number of suicide terror attacks. Whether we look specifically at the object of targeted killings or add to the analysis other types of fatalities, the effect of this policy is not statistically significant.[12] On the contrary, we observe that curfews are associated with a significant increase in the number of suicide terror attacks.[13]

In Table A.4 of the online appendix, we repeat the specifications of Columns 4 to 7 in Table 2 but focus on the other available measures for the severity of house demolitions. The results confirm that punitive house demolitions have a significant deterrent effect on suicide terrorism regardless of whether we focus on the number of apartment units, the number of residents, or the size of the houses being demolished. Moreover, the point estimates for each measure are robust across different specifications and to the inclusion of district-specific time trends.

Tables 3 and A.5 (in the appendix) repeat the regressions in Tables 2 and A.4, respectively, focusing on locality-month cells instead of district-month cells. Since this data set is more refined and detailed, it renders a more precise estimation compared to the estimation based on district-level data. Once we introduce locality fixed effects, however, the estimates rely only on the 43 localities from which at least one suicide terrorist originated (out of 683 localities). Hence, by comparing the results from both district-month and locality-month aggregations, we make sure that the results are not unduly affected by the elimination from the sample of localities in which suicide attacks did not originate.

The findings in Tables 3 and A.5 are qualitatively similar to those using data at the district level. That is, punitive house demolitions are shown to have a significant deterrent effect on suicide terrorists also when using data at the locality level. Remarkably, even the point estimates are of almost the same magnitude as those in Tables 2 and A.4. While measured at the locality level, a one standard deviation increase in punitive house demolitions causes a decrease of 14.9% on the odds that a suicide terrorist originated from that locality within a month of the demolitions. This effect is higher than the one observed when data are aggregated at the district level (11.7%). As we show below, the difference is explained by the spatial dissipation of the deterrent effect of punitive house demolitions. In addition, these tables ratify that fatalities from targeted killings do not have a significant effect on suicide terrorism. In contrast, curfews lead to more suicide terror attacks.

In sum, we observe that punitive house demolitions have an immediate deterrent effect on suicide terrorism. This effect is robust to different specifications and for different measures of punitive house demolitions. Table A.6 in the appendix shows that the effects of punitive house demolitions are the same when use a Negative Binomial model instead of a Poisson model. The deterrent effect of house demolitions on suicide terrorism is even larger when we eliminate from the sample the first year of the second Intifada, in which the IDF did not conduct punitive house demolitions (Table A.7).

Dynamic Effects of Punitive House Demolitions

This section examines the persistency of the deterrence induced by house demolitions over six months using a series of six Poisson regressions. For each of the four available measures for house demolitions, we use the specification in Column 5 of Table 2, but with a different lag of house demolitions, which varies from one to six months. Figure 2 presents the estimated coefficients as well as 90% confidence bands (the estimated coefficients appear in Table A.8 of the online appendix). The estimated coefficients consistently show for the four available measures a negative and significant effect of house demolitions within a one-month lag and an almost monotonic convergence to zero for higher-order lags. Simply put, the effect of punitive house demolitions, though significant a month after their occurrence, fades away over time.[14]

Geographic Effects of Punitive House Demolitions

We now analyze the geographic dispersion of the effect of punitive house demolitions on suicide terrorism. To that end, we study whether house demolitions in a neighboring district have an effect on local suicide terrorism by adding as a covariate to the specifications in Columns 6 and 7 of Table 2 the number of punitive house demolitions in the rest of the districts in the same region.[15]

We find that the effects of house demolitions dissipate not only over time but also across geographic distance (Table A.9 in the online appendix). Accordingly, the effects

12. Jaeger and Paserman (2009) and Kaplan et al. (2005) also find that targeted killings do not cause a decrease of suicide terror attacks. The fifth section discusses the effects of targeted killings and other counterterrorism policies on suicide attacks in more detail.

13. The inclusion of days with a curfew into the model considerably lowers the number of observations from 1,008 district-month observations to 704 because this variable is available only from May 2002 onwards.

14. This is consistent with the findings of Jaeger et al. (2012). They found that Israeli-induced Palestinian fatalities radicalize the preferences of the Palestinian population within one month of their occurrence but that the effect dissipates within three months.

15. We use the standard division of the 16 districts under the Palestinian Authority into West Bank (11 districts) and Gaza Strip (five districts) as depicted in Figure 1.

Table 3. The Effect of Punitive House Demolitions on the Number of Suicide Attacks

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Punitive House Demolitions	−0.0136	−0.0505	−0.0213	−0.0608*	−0.0609*	−0.0545*	−0.0564
	[0.0438]	[0.0396]	[0.0294]	[0.0239]	[0.0254]	[0.0251]	[0.0302]
Districts' Economic and Demographic Characteristics							
Unemployment					−1.9330	−8.1353	−8.4726
					[3.598]	[4.376]	[7.055]
Percentage employed in Israel					1.6018	0.589	−11.385
					[5.288]	[5.182]	[12.035]
Years of schooling					−0.2519	0.2491	−0.1180
					[0.4957]	[0.6114]	[0.8710]
Age					0.2953	0.5645*	0.0228
					[0.1720]	[0.1935]	[0.3898]
Married					−0.1299	−2.0385	2.0944
					[5.572]	[6.165]	[7.959]
Male					11.116	8.2780	−7.7607
					[9.451]	[9.059]	[10.691]
Other Security-Related Variables							
Palestinian fatalities							
Object of targeted killings						−0.139	−0.1776
						[0.262]	[0.4250]
Other fatalities from targeted killings						−0.117	−0.0105
						[0.102]	[0.1227]
Fatalities not in targeted killings						0.009	−0.0301
						[0.013]	[0.0887]
Days with curfews							0.0592*
							[0.0266]
Locality fixed effects	No	No	Yes	Yes	Yes	Yes	Yes
Year fixed effects	No	Yes	No	Yes	Yes	Yes	Yes
District-specific linear time trends	No	No	No	No	No	Yes	No
Number of observations	42,346	42,346	2,666	2,666	2,666	2,666	1,849

Source—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.

Note—Estimated via panel Poisson regression model. Dependent variable is the number of suicide terror attacks originating in locality i at month t. Robust standard errors, adjusted for clustering at the locality level, in brackets.

* indicates statistically significant at 5% level.

of local punitive house demolitions on the number of local suicide terrorists are still negative and statistically significant. However, punitive house demolitions in other districts in the same region do not have a significant impact on the number of suicide terrorists. A possible interpretation of these results is that suicide terrorists (and terror operatives) are myopic, since the policy of house demolitions, once in place, is universally implemented across all districts. That said, the results are consistent with the view that house demolitions heighten the experienced humiliation of individuals that walk by the demolished house on a regular basis. For example, according to Ginges and Atran (2008), this effect leads individuals to an "inertia effect" whereby they suffer from a tendency towards inaction and the suppression of violent actions against Israel.[16]

Identification Concerns

In this subsection, we address several concerns regarding our identification strategy. The first concern is that the short-lived effect of house demolitions is caused by other coun-

16. See Callen et al. (2014) and Shayo and Zussman (2011) for additional studies showing that proximity to violence leads to forms of myopia on individuals' behavior.

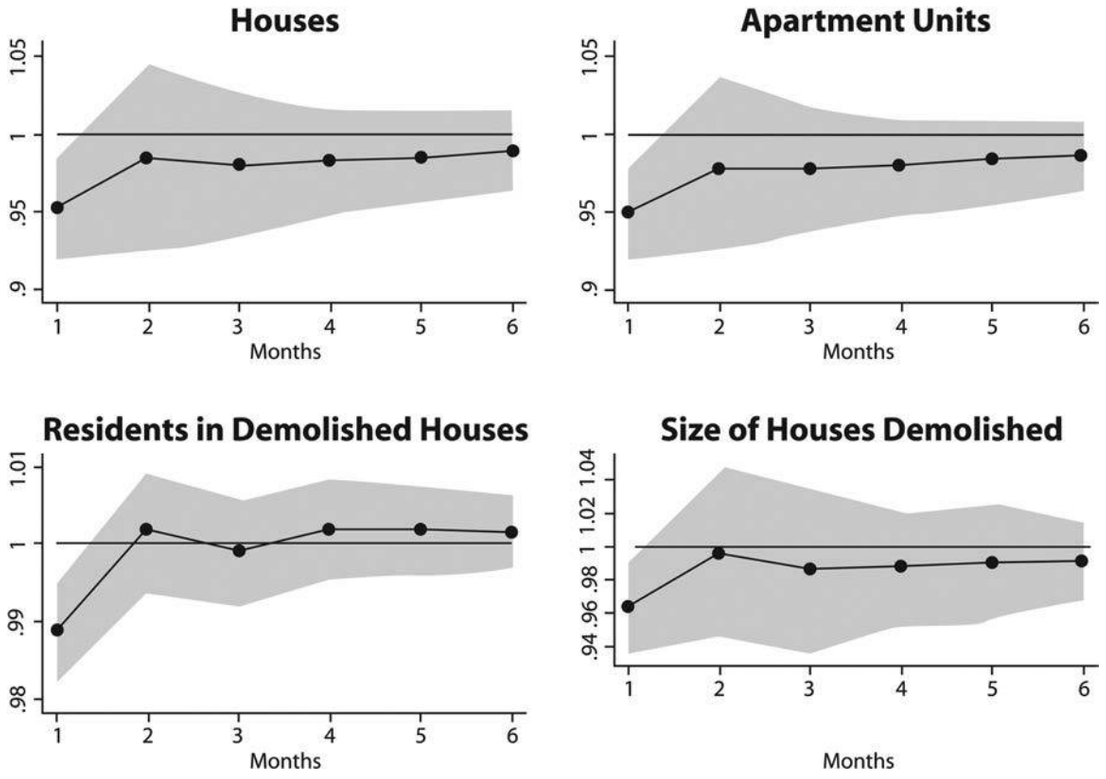

Figure 2. The dynamic effects of punitive demolitions on the number of suicide attacks. Ninety percent confidence interval in shaded area.

terterrorism measures imposed on terrorists' localities of origin following a suicide attack. For example, after a suicide attack, the IDF may choose not only to demolish the house of the perpetrator but also to conduct targeted killing operations, impose curfews, closures, and roadblocks, thus increasing the military presence in the area. Although we are able to control for curfews and different types of Israeli-induced Palestinian fatalities, we do not have information on all other possible counterterrorism measures.

The analysis in Table 4 directly addresses the concern that confounding factors prevalent in the aftermath of a terror attack are behind the observed impact of punitive house demolitions on suicide terrorism. In this analysis, we eliminate from the dataset all locality-month observations in which the IDF demolishes a house within a month of a suicide attack in direct retaliation for the attack.[17] These observations, which we eliminate from the analysis in Table 4, exhibit high correlation between house demolitions and other measures of counterterrorism. For example, within these observations, the correlation between punitive house demolitions and Israeli-induced Palestinian fatalities is 0.45 (with a p-value of 0.0546). In contrast, the correlation between house demolitions and Palestinian fatalities in the rest of the sample is 0.0179 with an associated p-value of 0.4392. Therefore, by focusing only on those observations where the correlation between house demolitions and other counterterrorism measures is low, we alleviate the concern that the observed effects of house demolitions on suicide terrorism are due to omitted variables (Altonji, Elder, and Taber 2005).

The results show that the estimated coefficients of the effects of house demolitions on suicide terrorism remain statistically significant and are only slightly lower in magnitude when compared to the coefficients estimated using the entire sample of terrorists (Tables 3 and A.5 in the online appendix). This establishes that the significant negative effect of house demolitions on the number of suicide terrorists cannot be attributed exclusively to house demolitions in the immediate aftermath of some terror attacks. These results also provide support for the interpretation that the observed effects of house demolitions on suicide attacks are due to deterrence and not to incapacitation. That is, if house demolitions occur simultaneously with the detention or killing of the members of a local terror cell, the observed temporary effect of house demolitions could be due to in-

17. This occurred after 20 suicide attacks, with 17 cases in which the suicide terrorist's house was demolished within four days of the attack.

Table 4. The Effect of Punitive House of Demolitions on the Number of Suicide Attacks (excluding localities-month cells with suicide attacks and house demolitions)

Variable	(1)	(2)	(3)	(4)
Number of houses demolished	−0.0563*	−0.0573*	−0.0495	−0.0533
	[0.0248]	[0.0269]	[0.0262]	[0.0317]
Number of apartment units demolished	−0.0593*	−0.0609*	−0.0529*	−0.0579
	[0.0252]	[0.0274]	[0.0263]	[0.0326]
Number of residents in demolished houses	−0.0122*	−0.0126*	−0.0115*	−0.0116*
	[0.0040]	[0.0043]	[0.0044]	[0.0048]
Size of house demolished (hundred square meters)	−0.0460*	−0.0468*	−0.0430	−0.0478
	[0.0203]	[0.0219]	[0.0224]	[0.0286]
Locality fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Economic and demographic controls	No	Yes	Yes	Yes
Other proxies for counterterrorism	No	No	No	Yes
District specific linear time trends	No	No	Yes	No
Number of observations	2,646	2,646	2,646	1,830

Source—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.

Note—Each column in each panel presents the results of a different regression estimated via panel Poisson regression model. Dependent variable is the suicide terror attacks originating in district i at month t. The economic and demographic controls are the same ones used in specification 5 in Table 4. Other proxies for counterterrorism are Israeli-induced Palestinian fatalities and curfews, as used in specifications 6 and 7 in Table 4. Robust standard errors, adjusted for clustering at the district level, in brackets.

* indicates statistically significant at 5% level.

capacitation. Simply put, once a terror cell is dismantled, it takes time for an organization to build another terror cell to carry attacks. That said, the results of Table 4 lead us to the conclusion that the effect of house demolition on suicide terrorism is due to deterrence, since the estimated coefficients do not change even when we focus exclusively on cells with low correlations between house demolitions and other measures of counterterrorism.

Another concern is that strategic considerations of terror cells may cause a decrease in suicide terrorism after a suicide attack. For example, the dynamics of suicide terrorism may be such that a terror cell imposes a period of relative calm, a strategy of "laying low," after a successful terror attack. Table 5 addresses this possibility by adding to the regressions the number of contemporaneous suicide attacks from each locality. The first four columns in Table 5 present the usual results based on Poisson panel models with localities fixed effects. Once we include the contemporaneous number of suicide attacks, however, we are estimating dynamic panel models. The estimates of these models may be biased because the contemporaneous number of suicide attacks may be correlated with the error term. In column 5, we use the Arellano-Bond instrumental variable estimation to obtain unbiased estimators (Arellano and Bond 1991). Column 6 relies on additional moment conditions following Arellano and Bover (1995) and Blundell and Bond (1998).

The results show that recent suicide terror attacks do not systematically affect future attacks since the coefficients on contemporaneous suicide attacks are not consistently significant across different specifications. Importantly, the coefficients on house demolitions remain highly statistically significant and of the same magnitude to those estimated in Tables 3 and A.5 of the online appendix.[18] Hence, the message that emerges from Tables A.9 (online appendix), 4, and 5 and Figure 2 is that punitive house demolitions have a significant, albeit short-lived, negative impact on the number of suicide terrorists.

The final concern is about reverse causality. Given that the IDF usually demolishes the house of the suicide terrorist, it seems reasonable to expect a positive correlation between the current number of suicide attacks from any given locality and the number of future house demolitions from that locality. If this is indeed the case, and the correlation is posi-

18. Note that the coefficients of the Arellano-Bond estimation and the System Dynamic Panel estimation represent the marginal effect of the control variable on the output variable. Therefore, they are not directly comparable to the Poisson's coefficients, which represent odds ratios.

Table 5. The Effect of Punitive House Demolitions on the Number of Suicide Attacks, Controlling for Terror Dynamics

	Poisson Estimation				Arellano-Bond Estimation	System Dynamic Panel Estimation
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Number of houses demolished	−0.0612*	−0.0622*	−0.0555*	−0.0545	−0.0058*	−0.0056*
	[0.0238]	[0.0254]	[0.0248]	[0.0300]	[0.0022]	[0.0020]
Contemporaneous suicide attacks	0.1317	0.1209	0.0507	0.0344	0.0735*	0.0564
	[0.0899]	[0.0873]	[0.0782]	[0.1607]	[0.0365]	[0.0317]
Number of apartment units demolished	−0.0636*	−0.0653*	−0.0589*	−0.0613	−0.0060*	−0.0057*
	[0.0235]	[0.0254]	[0.0247]	[0.0310]	[0.0022]	[0.0021]
Contemporaneous suicide attacks	0.1341	0.1236	0.0457	0.0509	0.0737*	0.0566
	[0.0899]	[0.0871]	[0.0744]	[0.1609]	[0.0365]	[0.0318]
Number of residents in demolished houses	−0.0132*	−0.0138*	−0.0130*	−0.0128*	−0.0009*	−0.0009*
	[0.0039]	[0.0042]	[0.0042]	[0.0050]	[0.0003]	[0.0003]
Contemporaneous suicide attacks	0.1317	0.1234	0.0459	0.0477	0.0741*	0.0564
	[0.0900]	[0.0873]	[0.0745]	[0.1536]	[0.0366]	[0.0319]
Size of house demolished (hundred square meters)	−0.0464*	−0.0473*	−0.0446*	−0.0475	−0.0043*	−0.0039*
	[0.0198]	[0.0210]	[0.0218]	[0.0281]	[0.0015]	[0.0014]
Contemporaneous suicide attacks	0.1282	0.1166	0.0387	0.0490	0.0741*	0.0544
	[0.0903]	[0.0889]	[0.0764]	[0.1568]	[0.0363]	[0.0312]
Locality fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Economic and demographic controls	No	Yes	Yes	Yes	Yes	Yes
Other proxies for counterterrorism	No	No	No	Yes	No	No
District-specific linear time trends	No	No	Yes	No	Yes	Yes
Number of observations	2,666	2,666	2,666	1,849	2,580	2,623

Source—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.

Note—Each column in each panel presents the results of a different regression model. Dependent variable is the suicide terror attacks originating in district i at month t. The economic and demographic controls are the same ones used in specification 5 in Table 4. Other proxies for counterterrorism are Israeli-induced Palestinian fatalities and curfews, as used in specifications 6 and 7 in Table 4. Robust standard errors, adjusted for clustering at the district level, in brackets.

* indicates statistically significant at 5% level.

tive, our estimates of the effects of house demolitions on suicide terrorism would be biased downwards, and the reported coefficients would in fact describe lower bounds of the actual effects.

We test for this possibility in Table A.10 of the online appendix.[19] In this table, we regress house demolitions on the previous month number of suicide attacks. The table also includes additional specifications that control for a more complex dynamic relationship between the two variables, similar to the specifications in Table 5. The results unambiguously show that the number of suicide attacks in the previous month is not significantly correlated with the number of house demolitions. While we observe more house demolitions in more violent districts (see Figure 1), only 20 out of the 628 demolitions occurred in the immediate aftermath of an attack. The timing of the rest of the demolitions is somewhat random. It is mostly determined by the time it takes the IDF to determine that a given suspect plays a significant role in a terrorist cell and to obtain the authorization from the Supreme Court to demolish his house. This fact, together with the lack of any evidence of reverse causality, omitted variable bias, and dynamic strategic effects, implies that the coefficients on the effects of punitive house demolitions on suicide terrorism are precisely estimated.

19. The table shows only the regressions for house demolitions. The results for the other proxies for house demolitions are basically the same. They are available upon request.

THE EFFECTS OF OTHER MEASURES OF COUNTERTERRORISM

The IDF resorted to a variety of measures to combat terrorism during the period at issue. These measures included not only house demolitions, but also intelligence collection that lead to the preventive arrest of individuals suspected of involvement on terror factions, as well as targeted killings of political and military leaders. The IDF also resorted to the imposition of curfews, closures, and roadblocks and the construction of a separation fence, to name the most prominent measures of counterterrorism employed during the period at issue.

Our study pays particular attention to the effects of house demolitions because punitive house demolitions were especially promoted by the IDF as a counterterror policy intended to deter suicide terrorists, whereas most of the other measures were promoted to stop also other types of terror attacks. That said, in all the estimated models we control for all the other measures of counterterrorism for which there are available data with geographic and time variation. The inclusion of other measures of counterterrorism in the estimated models not only helps us avoid reaching spurious results due to omitted variable bias, but their estimated effects are important in their own right. This subsection discusses the effect of Palestinian fatalities, curfews, and precautionary house demolitions on the number of suicide terrorists.

The Effects of Palestinian Fatalities and Days with Curfews

Our results regarding the effects of Palestinian fatalities and days with curfews on suicide terrorism are consistent with those reported in the related literature. Tables 2 and 3 show that there is not a clear and robust effect of Palestinian fatalities on the subsequent number of suicide terrorists, regardless of whether the fatalities occurred during a targeted killing operation or not. Jaeger and Paserman (2008 2009) reach a similar conclusion. They report that targeted killings (and Palestinian fatalities in general) increase after suicide terror attacks, but the timing of terror attacks is not particularly responsive to previous Palestinian fatalities.[20] With regards to curfews, we observe a positive and significant effect of this measure on the subsequent number of suicide terrorists. This result is consistent with analyses showing that restrictions of movement and employment of Palestinians in Israel caused a significant increase in the level of violence (Miaari, Zussman, and Zussman 2012) and the political radicalization of the Palestinian population (Longo, Canetti, and Hite 2014).

Clearly, curfews are an indiscriminate policy of counterterrorism that affects mainly individuals who have not broken the law. Therefore, the positive effect of this policy on the number of suicide terror attacks is consistent with the theory that states that indiscriminate policies backfire and bring about an increase of violence. If we define targeted killings as a selective policy of counterterrorism, its estimated effect would not support the theoretical predictions. Such a definition, however, is problematic for a number of reasons. First, the leaders of Palestinian factions place particular emphasis on perpetrating terror attacks in the immediate aftermath of targeted killings (Bloom 2005; Byman 2006; Jaeger et al., N.d.). In addition, while the object of a targeted killing is carefully selected by the IDF, the outcome of the operation is not deterministic. In some cases, the operation is successful and only the object of the targeted killing dies; in other cases the operation fails in that the object of the targeted killing is not assassinated and/or innocent bystander are killed on the operation. The outcome of the operation affects its efficacy, with failed operations leading to worldwide condemnation and Palestinian anger (Byman 2006). Worldwide condemnations and violent Palestinian retaliations also follow successful targeted killings of Palestinian political leaders. Hence, although all targeted killings that do not result in collateral fatalities are defined as selective violence, their effectiveness depends on whether a political or military leader is targeted.[21] Due to all the reasons mentioned above, the IDF prefers to use other forms of counterterrorism that are more efficient than targeted killings. The IDF resorts to targeted killings as a tactic of last resort during particularly violent periods when the IDF does not have strong territorial control over Palestinian areas.[22]

20. In a related study based exclusively on variation over time, Kaplan et al. (2005) report that targeted killings are associated with an increase in suicide terror attacks, whereas arrests are associated with a significant decrease in the number of suicide attacks.

21. Zussman and Zussman (2006) find that the assassination of Palestinian political leaders leads to expectations of an increase in future levels of violence, whereas the assassination of Palestinian military leaders has the opposite effect. Condra and Shapiro (2012) reach a similar conclusion by showing that the killing of civilians by coalition forces in Iraq leads to an increase in the level of violence. Johnston and Sarbahi (2012) provide additional evidence along these lines, showing that US drone strikes targeting senior al Qaeda leaders in Pakistan are associated with a decrease in the level of terrorism.

22. Table A.10 shows that there is a strong negative correlation between house demolitions and targeted killings. This provides additional support to the notion that targeted killings are used as a substitute to arrests and to house demolitions when the former policies cannot be carried out.

Table 6. The Effect of Precautionary House Demolitions on the Number of Suicide Attacks

	A. Data Aggregated at District Level		B. Terror Data at Locality Level	
Variable	Entire Sample	Excluding Rafah	Entire Sample	Excluding Rafah
Number of houses demolished	0.0179	0.0509*	0.0056	0.0211
	[0.0129]	[0.0201]	[0.0111]	[0.0118]
Number of apartment units demolished	0.0094	0.0404*	0.0012	0.0178
	[0.0094]	[0.0154]	[0.0070]	[0.0124]
Number of residents in demolished houses	0.0017	0.0038*	0.0006	0.0013
	[0.0017]	[0.0018]	[0.0017]	[0.0014]
Size of house demolished (hundred square meters)	0.0060	0.0350*	0.0007	0.0135
	[0.0053]	[0.0141]	[0.0041]	[0.0079]
Number of observations	384	360	989	966

Source—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period March 2004 to December 2005.

Note—Each column in each panel presents the results of a different regression estimated via panel Poisson regression model. Dependent variable in panel A is the number of suicide terror attacks originating in district i at month t. Dependent variable in panel B is the number of suicide terror attacks originating in locality i at month t. All specifications control for economic and demographic conditions, other proxies for counterterrorism, district fixed effects and years fixed effects as in specification 7 in Table 4. Robust standard errors, adjusted for clustering at the district level, in brackets.

* indicates statistically significant at 5% level.

The Effects of Precautionary House Demolitions

This subsection studies the effects of precautionary house demolitions on suicide terrorism. As mentioned in the second section, precautionary house demolitions refer to houses demolished in "clearing operations" intended to meet military needs. The IDF does not claim an existing connection between the house's occupant and terror activity when houses are demolished because of precautionary reasons. This leads us to classify this type of demolitions as an indiscriminate measure of counterterrorism. In fact, the main determinant of precautionary house demolitions is whether the house is located near the Egyptian border, near an Israeli settlement, or overlooking roads used by settlers.

We test the effectiveness of precautionary house demolitions in Table 6. The models estimated include, in addition to precautionary house demolitions, the same controls used in Column 7 in Table 2.[23] The table shows results with the data aggregated at the district and at the locality level. In addition, we present results both for the entire sample and excluding Rafah from the sample since Rafah is a clear outlier during this period (see the third section).

Interestingly, the results show that precautionary demolitions have a positive effect on the number of suicide terrorists. The estimated coefficients are statistically significant (when excluding Rafah from the sample) and of an important magnitude. The estimated rate ratio implies that the marginal precautionary house demolition increases the number of suicide terrorists originating from a district in the following month by a factor of 1.051. This effect implies that a standard deviation increase in the number of precautionary house demolitions (which is equal to 7.99) causes an increase of 48.7% on the number of suicide terrorists originating from an average district-month cell.

These results provide strong support to the hypothesis that indiscriminate violence is counterproductive. As argued by Rosendorff and Sandler (2004) and Bueno de Mesquita and Dickson (2007) in related studies of terrorism and by Kalyvas (2006) in his comprehensive study on the use of violence in civil wars, indiscriminate violence against civilians creates new grievances and affects individuals' incentives, leading to an increase in popular support for terrorist and insurgent groups. Terrorists and insurgents usually translate this increase in support into bigger cadres and increased violence against their political opponents.[24]

23. The data on precautionary house demolitions do not have enough within-district or within-locality variation because they are available only for the years 2004 and 2005. Consequently, the regressions do not converge when we include district or locality-specific linear time trends.

24. Condra and Shapiro (2012) also show that indiscriminate violence backfires based on an analysis of civilian fatalities in Iraq between 2004 and 2009. Kocher, Pepinsky, and Kalyvas (2011) obtain similar results

CONCLUSIONS

This article presents the first systematic examination of the effectiveness of house demolitions using a novel microlevel data set. Our analysis shows that punitive house demolitions, a selective policy of counterterrorism, leads to an immediate decrease in the number of suicide terrorists. This effect dissipates over time and space. In contrast, precautionary house demolitions, which can be likened to an indiscriminate policy of counterterrorism, leads to a significant increase in the number of suicide terror attacks.

The analysis of this article addresses the short-term effects of counterterrorism measures on the subsequent number of suicide terror attacks during the Second Intifada. Resorting to a longer-term perspective, we can't help but highlight that the Second Intifada ended and with it the number of suicide attacks against Israelis came to a complete stop. But, were the counterterrorism measures we analyzed in this article one of the main causes behind the cessation of suicide terror attacks? Our results show that counterterror measures, even if they are effective, have only a limited effect on fluctuations on suicide terrorism. This leads us to the conclusion that the main factors bringing about the beginning or the complete ending of terror campaigns belong to the political rather than the military realm.

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Appendix from Efraim Benmelech, Claude Berrebi and Esteban F. Klor, "Counter-Suicide-Terrorism: Evidence from House Demolitions" (JOP, vol. 77, no. 1, p. 000)

Table A.1. Summary Statistics on Localities number of Suicide Terrorists, Palestinian Fatalities, and House Demolitions (using all 683 localities in the Palestinian Census of 1997)

	Mean	Standard Deviation	Minimum	Maximum
Suicide Terrorists Originating from Locality	0.218	1.57	0	30
Israeli-Induced Palestinian Fatalities	4.886	29.97	0	490
Object of Targeted Killings	0.280	2.74	0	64
Other Fatalities from Targeted Killings Operations	0.170	2.51	0	64
House Demolitions				
Punitive	0.919	4.55	0	88
Precautionary	1.716	26.59	0	605
Units Demolished				
Punitive	0.944	4.59	0	88
Precautionary	2.081	32.14	0	756
Number of Residents in Demolished Houses				
Punitive	5.96	34.54	0	765
Precautionary	15.78	264.11	0	6,325
Size of Houses Demolished (in square meters)				
Punitive	122.71	565	0	9,755
Precautionary	319.55	4,969	0	117,156

Notes—Entries reflect the respective statistic for the total variable of interest for each locality between October 2000 and December 2005. The data on suicide terrorists come from Israeli Security Agency reports. The data for the rest of the variables come from Btselem. All the calculations are based on the extant 683 Palestinian localities surveyed in the 1997 Palestinian Census conducted by the Palestinian Central Bureau of Statistics.

Table A.2. Summary Statistics on Localities' Number of Suicide Terrorists, Palestinian Fatalities, and House Demolitions (using only the 43 localities in which a suicide terrorist originated)

	Mean	Standard Deviation	Median	Minimum	Maximum
Suicide Terrorists Originating from Locality	3.47	5.329	2.0	1	30
Israeli-Induced Palestinian Fatalities	63.5	103.44	14	0	490
Object of Targeted Killings	3.98	10.32	0	0	64
Other Fatalities from Targeted Killing Operations	2.53	9.78	0	0	64
House Demolitions					
Punitive	10.63	14.55	6	0	88
Precautionary	25.58	103.82	0	0	605
Units Demolished					
Punitive	11.00	14.52	6	0	88
Precautionary	31.09	125.52	0	0	756
Number of Residents in Demolished Houses					
Punitive	69.93	118.9	36	0	765
Precautionary	239.53	1,037	0	0	6,325
Size of Houses Demolished (in square meters)					
Punitive	1,360	1,744	750	0	9,755
Precautionary	4,757	19,401	0	0	117,156

Notes—Entries reflect the respective statistic for the total variable of interest for each locality between October 2000 and December 2005. The data on suicide terrorists come from Israeli Security Agency reports. The data for the rest of the variables come from B'tselem.

Table A.3. Summary Statistics on Curfews, Economic, and Demographic Characteristics

	Mean	Standard Deviation	Median	Minimum	Maximum
Age	33.6	0.840	33.9	32.2	34.7
Share of Males in Population	0.502	0.008	0.501	0.478	0.512
Married Population	0.569	0.023	0.561	0.532	0.609
Years of Schooling	9.18	0.398	9.20	8.26	9.83
Unemployment	0.106	0.024	0.113	0.056	0.153
Share of Population Working in Israel	0.045	0.029	0.044	0.013	0.118
Days with Curfews	1.341	1.712	0.057	0	4.596

Notes—Entries reflect the respective statistic for the districts' averages between October 2000 and December 2005 for all variables except curfews (available only from May 2002 onward). The data on curfews come from the UN Office for the Coordination of Humanitarian Affairs. The data for the rest of the variables come from the Palestinian Labor Force Survey, conducted by the Palestinian Central Bureau of Statistics.

Table A.4. The Effect Punitive House Demolitions on the Number of Suicide Attacks (all data aggregated at the district level)

Variable	(1)	(2)	(3)	(4)
Number of Apartment Units Demolished	−0.0632 *	−0.0640 *	−0.0586 *	−0.0513 *
	[0.0173]	[0.0194]	[0.0176]	[0.0238]
Number of Residents in Demolished Houses	−0.0131 *	−0.0135 *	−0.0130 *	−0.0111 *
	[0.0039]	[0.0043]	[0.0043]	[0.0045]
Size of House Demolished (hundred square meters)	−0.0463 *	−0.0467 *	−0.0445 *	−0.0380
	[0.0153]	[0.0167]	[0.0175]	[0.0234]
District Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Economic and Demographic Controls	No	Yes	Yes	Yes
Other Proxies for Counter-terrorism	No	No	No	Yes
District-Specific Linear Time Trends	No	No	Yes	No
Number of Observations	1,008	1,008	1,008	704

Sources—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.
Notes—Each column in each panel presents the results of a different regression estimated via panel Poisson regression model. Dependent variable is the suicide terror attacks originating in district i at month t. The economic and demographic controls are the same ones used in specification 5 in Table 3. Other proxies for counterterrorism are Israeli-induced Palestinian fatalities and curfews, as used in specifications 6 and 7 in Table 3. Robust standard errors, adjusted for clustering at the district level, in brackets;
* indicates statistically significant at 5% level.

Table A.5. The Effect of Punitive House Demolitions on the Number of Suicide Attacks

Variable	(1)	(2)	(3)	(4)
Number of Apartment Units Demolished	−0.0632 *	−0.0640 *	−0.0585 *	−0.0609 *
	[0.0238]	[0.0254]	[0.0247]	[0.0303]
Number of Residents in Demolished Houses	−0.0132 *	−0.0135 *	−0.0129 *	−0.0127 *
	[0.0039]	[0.0042]	[0.0042]	[0.0049]
Size of House Demolished (hundred square meters)	−0.0464 *	−0.0467 *	−0.0445 *	−0.0471
	[0.0198]	[0.0208]	[0.0217]	[0.0275]
Locality Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Economic and Demographic Controls	No	Yes	Yes	Yes
Other Proxies for Counter-terrorism	No	No	Yes	Yes
District-Specific Linear Time Trends	No	No	Yes	No
Number of Observations	2,666	2,666	2,666	1,849

Sources—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from OCHA. The data set covers the period October 2000 to December 2005.
Notes—Each column in each panel presents the results of a different regression estimated via panel Poisson regression model. Dependent variable is the suicide terror attacks originating in district i at month t. The economic and demographic controls are the same ones used in specification 5 in Table 4. Other proxies for counterterrorism are Israeli-induced Palestinian fatalities and curfews, as used in specifications 6 and 7 in Table 4. Robust standard errors, adjusted for clustering at the district level, in brackets;
* indicates statistically significant at 5% level.

Table A.6. The Effect of Punitive House Demolitions on the Number of Suicide Attacks using a Negative Binomial Model

	All data aggregated at the district level				Using data at the locality level			
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of Houses Demolished	−0.0559 *	−0.0579 *	−0.0493 *	−0.0586	−0.0633 *	−0.0649 *	−0.0573 *	−0.0621
	[0.0212]	[0.0228]	[0.0201]	[0.0320]	[0.0268]	[0.0282]	[0.0270]	[0.0340]
Number of Apartment Units Demolished	−0.0593 *	−0.0614 *	−0.0545 *	−0.0629 *	−0.0662 *	−0.0681 *	−0.0608 *	−0.0664
	[0.0205]	[0.0218]	[0.0190]	[0.0291]	[0.0269]	[0.0285]	[0.0269]	[0.0342]
Number of Residents in Demolished Houses	−0.0121 *	−0.0126 *	−0.0121 *	−0.0126 *	−0.0136 *	−0.0141 *	−0.0133 *	−0.0136 *
	[0.0047]	[0.0050]	[0.0050]	[0.0051]	[0.0044]	[0.0046]	[0.0046]	[0.0053]
Size of House Demolished (hundred square meters)	−0.0417 *	−0.0453 *	−0.0414 *	−0.0486	−0.0483 *	−0.0504 *	−0.0468 *	−0.0524
	[0.0174]	[0.0193]	[0.0192]	[0.0274]	[0.0217]	[0.0233]	[0.0238]	[0.0303]
Locality Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Economic and Demographic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Other Proxies for Counter-terrorism	No	No	No	Yes	No	No	No	Yes
District Specific Linear Time Trends	No	No	Yes	No	No	No	Yes	No
Number of Observations	1,008	1,008	1,008	704	2,666	2,666	2,666	1,849

Sources—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.

Notes—Each column in each panel presents the results of a different regression estimated via panel Negative Binomial regression model. Dependent variable is the suicide terror attacks originating in district i at month t. The economic and demographic controls are the same ones used in specification 5 in Table 4. Other proxies for counterterrorism are Israeli-induced Palestinian fatalities and curfews, as used in specifications 6 and 7 in Table 4. Robust standard errors, adjusted for clustering at the district level, in brackets;

* indicates statistically significant at 5% level.

Table A.7. The Effect of Punitive House Demolitions on the Number of Suicide Attacks (from September 2001 to December 2005)

	All data aggregated at the district level				Using data at the locality level			
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of Houses Demolished	−0.0701 *	−0.0714 *	−0.0554 *	−0.0492 *	−0.0702 *	−0.0714 *	−0.0577 *	−0.0560 *
	[0.0174]	[0.0230]	[0.0208]	[0.0230]	[0.0245]	[0.0267]	[0.0264]	[0.0284]
Number of Apartment Units Demolished	−0.0725 *	−0.0745 *	−0.0618 *	−0.0539 *	−0.0725 *	−0.0745 *	−0.0616 *	−0.0604 *
	[0.0167]	[0.0223]	[0.0202]	[0.0207]	[0.0247]	[0.0270]	[0.0265]	[0.0292]
Number of Residents in Demolished Houses	−0.0149 *	−0.0158 *	−0.0138 *	−0.0115 *	−0.0149 *	−0.0158 *	−0.0138 *	−0.0126 *
	[0.0039]	[0.0050]	[0.0048]	[0.0042]	[0.0040]	[0.0046]	[0.0046]	[0.0047]
Size of House Demolished (hundred square meters)	−0.0539 *	−0.0548 *	−0.0460 *	−0.0410 *	−0.0539 *	−0.0548 *	−0.0459 *	−0.0465
	[0.0152]	[0.0188]	[0.0194]	[0.0204]	[0.0206]	[0.0221]	[0.0230]	[0.0260]
Locality Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Economic and Demographic Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Other Proxies for Counter-terrorism	No	No	No	Yes	No	No	No	Yes
District-Specific Linear Time Trends	No	No	Yes	No	No	No	Yes	No
Number of Observations	832	832	832	704	2,193	2,193	2,193	1,849

Sources—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period September 2001 to December 2005.

Notes—Each column in each panel presents the results of a different regression estimated via panel Poisson regression model. Dependent variable is the suicide terror attacks originating in district i at month t. The economic and demographic controls are the same ones used in specification 5 in Table 4. Other proxies for counterterrorism are Israeli-induced Palestinian fatalities and curfews, as used in specifications 6 and 7 in Table 4. Robust standard errors, adjusted for clustering at the district level, in brackets;

* indicates statistically significant at 5% level.

Table A.8. The Dynamic Effect of Punitive House Demolitions on the Number of Suicide Attacks

Variable	Number of Houses Demolished	Number of Apartment Units Demolished	Number of Residents in Demolished Houses	Size of Houses Demolished (hundred square meters)
Punitive House Demolitions				
− One Month Lag	0.9519 *	0.9483 *	0.9887 *	0.9638 *
	[−2.48]	[−2.81]	[−2.84]	[−2.24]
− Two Months Lag	0.9837	0.9780	1.0014	0.9965
	[−0.46]	[−0.67]	[0.31]	[−0.11]
− Three Months Lag	0.9799	0.9773	0.9991	0.9859
	[−0.76]	[−0.96]	[−0.22]	[−0.47]
− Four Months Lag	0.9822	0.9796	1.0018	0.9873
	[−0.89]	[−115]	[0.46]	[−0.61]
− Five Months Lag	0.9852	0.9829	1.0020	0.9905
	[−0.77]	[−1.00]	[0.56]	[−0.48]
− Six Months Lag	0.9889	0.9858	1.0014	0.9912
	[−0.71]	[−1.02]	[0.47]	[−0.59]

Sources—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.

Notes—Every cell presents the estimated coefficient of a separate regression. All regressions are estimated via panel Poisson regression model. Dependent variable is the number of suicide terror attacks originating in district i at month t. All regressions include district and year fixed effects as well as controls for district's economic and demographic characteristics and other security related measures as listed in Table 3. Z-statistics, based on robust standard errors, adjusted for clustering at the district level, in brackets;

* indicates statistically significant at 5% level.

Table A.9. The Geographic Effect of Punitive Demolitions on the Number of Suicide Attacks

Variable	(1)	(2)	(3)	(4)
	Number of Houses Demolished		**Number of Apartment Units Demolished**	
− Demolitions in the District	−0.0413 *	−0.0469	−0.0435 *	−0.0513 *
	[0.0187]	[0.0284]	[0.0179]	[0.0247]
− Other Demolitions in the Region	−0.0177	0.0008	−0.0174	−0.00009
	[0.0165]	[0.0194]	[0.0149]	[0.0183]
	Number of Residents in Demolished Houses		**Size of Houses Demolished (hundred square meters)**	
− Demolitions in the District	−0.0103 *	−0.0105 *	−0.0381	−0.0387
	[0.0042]	[0.0053]	[0.0214]	[0.0232]
− Other Demolitions in the Region	−0.0026	−0.0008	−0.00979	0.00472
	[0.0026]	[0.0028]	[0.0145]	[0.0178]
District Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Economic and Demographic Controls	Yes	Yes	Yes	Yes
Other Proxies for Counter-terrorism	No	Yes	No	Yes
District Specific Linear Time Trends	Yes	No	Yes	No
Number of Observations	1,008	704	1,008	704

Sources—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.

Notes—Each column in each panel presents the results of a different regression estimated via panel poisson regression model. Dependent variable is the suicide terror attacks originating in district i at month t. The economic and demographic controls are the same ones used in specification 5 in Table 4. Other proxies for counterterrorism are Israeli-induced Palestinian fatalities and curfews, as used in specifications 6 and 7 in Table 4. Robust standard errors, adjusted for clustering at the district level, in brackets;

* indicates statistically significant at 5% level.

Table A.10. Testing for Reverse Causality: The Effect of Suicide Terror Attacks on House Demolitions

	Poisson Estimation			Arellano-Bond Estimation	System Dynamic Panel Estimation
Variable	(1)	(2)	(3)	(4)	(5)
Number of Suicide Terror Attacks	0.1916	0.2435	0.2806	0.2964	0.2907
	[0.1459]	[0.1725]	[0.1850]	[0.1525]	[0.1525]
Contemporaneous Houses Demolished			−0.0849	−0.0108	−0.0219
			[0.0466]	[0.0374]	[0.0456]
Other-Security Related Variables					
Palestinian Fatalities					
− Object of Targeted Killings		−0.5074	−0.5175	−0.0748 *	−0.0703 *
		[0.3815]	[0.3994]	[0.0230]	[0.0192]
− Other fatalities from TK		−14.3106 *	−14.4853 *	−0.0174 *	−0.0195 *
		[0.5729]	[0.5566]	[0.0070]	[0.0074]
− Fatalities not in TK		−0.0006	0.0095	−0.0022	−0.0025
		[0.0256]	[0.0161]	[0.0087]	[0.0083]
Days with curfews		0.0205	0.0253	0.0332 *	0.0332 *
		[0.0183]	[0.0187]	[0.0117]	[0.0118]
Locality Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Economic and Demographic Controls	Yes	Yes	Yes	Yes	Yes
Number of Observations	2,666	1,849	1,849	1,806	1,849

Sources—Authors' calculations using house demolition and fatality data from B'Tselem, suicide terrorism data from ISA, economic and demographic characteristics data from the Palestinian Labor Force Survey, and curfews data from UN OCHA. The data set covers the period October 2000 to December 2005.

Notes—Each column presents the results of a different regression model. The dependent variable is the number of punitive house demolitions in district i at month t+1. The economic and demographic controls are the same ones used in specification 5 in Table 4. Other proxies for counterterrorism are Israeli-induced Palestinian fatalities and curfews, as used in specifications 6 and 7 in Table 4. Robust standard errors, adjusted for clustering at the district level, in brackets;

* indicates statistically significant at 5% level.