The Effectiveness of Counterterrorism in Spain: A New Approach

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Scholars have recently renewed their interest in the effectiveness of government counterterrorism policies.[1] Although research tends to examine the efficacy of either repressive counterterrorist tactics or more conciliatory policies, the relative effectiveness of these tactics has yet to be fully examined. In this study, we develop an original data set to explore which counterterrorism tactics have been effective against ETA in Spain over a five-year period (1988-1992). The data set is unique in its use of machine-coding software to develop granular data on tactical-level government actions. A secondary goal of the paper is thus to develop a framework that can be exported to other cases.

When we assess the impact of 55 specific counterterrorism actions on ETA terrorist attacks, we find that discriminate policies, such as arrests, have the strongest effect on the reduction of terrorist attacks over time. When combined with other policies, such as security cooperation, the effects are even stronger. The findings are relevant to developing and implementing more effective counterterrorist policies, and also identifying ways that scholars can leverage local sources and new technologies for terrorism research.

Extant Findings and Two Critiques

Which counterterrorism policies are the most effective in reducing terrorist attacks? Multiple studies compare the effects of specific counterterrorism policies, such as the installation of metal detectors (Cauley and Im 1988; Landes 1978), target hardening and defensive fortification (Makovsky 2004), terrorist apprehension and extended prison sentencing (Landes 1978), the passage of anti-terrorism laws (Enders and Sandler 1993), negotiation (Sederberg 1995; Bapat 2006; Neumann 2007), limited repression, such as targeted assassination (Byman 2006; Zussmann and Zussman 2006; Hafez and Hatfield 2006; Plaw

[1] Although the primary interest of this article is counterterrorism, we frequently refer to studies of counterinsurgency, civil conflict, and repression, on the assumption that their insights may shed light on the effectiveness of counterterrorism.

2008), curfews and containment strategies (Dugan, LaFree, and Korte 2009), violent repression or military retaliation (Enders and Sandler 1993; Brophy-Baermann and Conybeare 1994; Brauer 2002; Testas 2004; Dugan, LaFree, and Korte 2009), and indiscriminate repression (Lyall 2009), among others.

Much of the literature possesses two key weaknesses, however. First, when researching the effectiveness of counterterrorism, scholars often consider whether a single strategy works, such as negotiations. But we know that states rarely choose solely between negotiating and not negotiating. Usually they are considering a wide array of policy choices; they are considering negotiating against many other strategic choices, such as repression, blockades, limited political concessions, appealing to international partners, etc.

Thus, when scholars ask questions like, "Do negotiations work?", they often neglect to compare negotiations with this array of other potential strategies, following a common trend in the conflict literature (Chenoweth and Lawrence 2010). Because of this tendency, it is difficult to evaluate the value of particular strategies relative to other choices that might have been more effective. A more informative question might be, "Do negotiations work compared with all of the other potential strategies that states have at their disposal?" or "Under what conditions do negotiations work, relative to other alternatives?"

Second, most existing studies overaggregate the independent variable. That is, many studies operationalize counterterrorism policies in the aggregate (i.e. the policy level), such as a government decision to implement metal detectors, or a government decision to build a security barrier, rather than as individual counterterrorism tactics on the ground. Dugan, LaFree, and Korte, for example, provide a useful analysis of how different counterterrorism campaigns (such as Operation Motorman, internment, detention, etc.) affected the trajectory of terrorist attacks in

Northern Ireland (2009). In their study, however, we cannot assess how ground-level implementation of these campaigns on a daily basis affected terrorist attacks. On this basis, we cannot know how specific counterterrorism tactics (as opposed to overarching counterterrorism decisions or campaigns) actually affect terrorism.

In this study, we attempt to remedy these shortcomings by developing several hypotheses that emanate from the current literature and test these hypotheses using daily events data on counterterrorism policies against ETA in Spain. We demonstrate that restrictive policies, especially discriminate restrictive policies (i.e. arrests), are the most robust reducers of terrorist activity. The evidence we present in this study represents a series of observations that can be aggregated or disaggregated according to the research question. We conclude with a discussion on how the methodologies employed in this study can contribute to our overall understanding of the effectiveness of counterterrorism policies in different contexts.

The Effectiveness of Counterterrorism Policies

In general, there are two camps within the counterterrorism literature: those that argue that illegitimate counterterrorist actions will ultimately be counterproductive, and those that believe that the perceived legitimacy of the counterterrorism policies is not as important as the successful application of force in subduing the threat, which increases the government's credibility vis-à-vis its capabilities and resolve.

In the short term, governments often thwart terrorist activities by erecting security barriers, violently repressing the terrorists' constituents, or implementing policies that reduce the ability to conduct certain types of terrorist activities like airline hijackings. In the medium- to long-term, however, terrorists simply circumvent these barriers and adopt different tactics that exploit different vulnerabilities in their targets. Thus governments must develop policies that

reduce the ability of terrorists to engage in tactical adaptations, more commonly referred to as the substitution effect (Enders and Sandler 1993). And, according to the legitimacy camp, they must balance the temptation of achieving short-term gains against terrorists with the long-term political consequences of their counterterrorism tactics.

According to the legitimacy camp, which emerges out of the literature on civil conflict and repression, violent repression does reduce terrorist attacks in the short term, but the effects wear off after a few months, or the repression leads to more attacks over the long term (White 1987). In her seminal study on protest events during the Iranian Revolution, for instance, Karen Rasler finds that repression decreased protests in the short run but increased them in long run, and concessions consistently increased protests, leading to more state concessions (1996).

For those in the credibility camp, however, the legitimacy of the repression is not as important as the resolve the government conveys through repression. Jason Lyall, for instance, finds that indiscriminate violent repression reduced the number of insurgent attacks in Chechnya by about 24% (2009), a case that may contain relevant lessons for other separatist conflicts such as the Basque campaign. Lichbach has posited that inconsistent state policies lead to increased mobilization, (1987), as do Kathleen Cunningham and Emily Beaulieu (2010). They find that inconsistent state policies, which unpredictably shift between repressive and conciliatory actions, are likelier to increase protest events over the long term.

Informational constraints are also problematic from the government's perspective. The primary strategic constraint is an information asymmetry (Lyall and Wilson 2008). Whereas a small group of terrorists expends few resources and knows when and where the next attack will occur, the government must expend vast resources with little chance of obtaining this privileged information (Sandler 2003).

The government can only resolve information asymmetries through increased intelligence, which involves direct contact with terrorists and members of society in which the terrorists operate (Lyall and Wilson 2008). The can do this through methods that increase the perceived legitimacy of government actions, or they may do this through methods that force civilian compliance. When governments effectively separate the terrorists from their host populations, such that the population sympathizes more with the government than with the terrorists, the probability that the population will be willing to share relevant information increases. Moreover, the probability that the population will punish the governments for invasive counterterrorism policies decreases. Governments can win the allegiance of the population by providing them with security, making visible efforts to thwart terrorism, or restraining their policies in a way that makes them appear legitimate.

Both the legitimacy and the credibility approaches agree that the information asymmetry may be exacerbated by counterterrorism policies that isolate the government from the population. Such policies may include actions that do not discriminate between the population and the terrorists themselves, which may force the population to choose between sympathizing with the government and sympathizing with the terrorists.

According to the legitimacy perspective, however, the problem is that governments face problems of legitimacy and loss of support when they target specific communities for repression as part of wide-reaching counterterrorist strategies, an effect amplified in nationalist conflicts. Repressive tactics may contribute to popular sympathy for terrorists and increased recruits and attacks. For example, in their study of 648 terrorist groups, Jones and Libicki find that only 7% of terrorist groups are destroyed by military force (Jones and Libicki 2008).[2]

[2] Much more common endings are through policing efforts (40%), joining the political process (43%), or the achievement of objectives (10%).

For those that argue that government credibility is the issue at stake, however, the problem is whether governments can credibly protect their constituents from insurgent reprisals. As Kalyvas and Kocher (2007) demonstrate, under repressive conditions, populations regularly side with insurgents, since the probability that they will suffer reprisals at the hands of local insurgents are higher than the probability that they will suffer reprisals from the government. Terrorists can win the allegiance of some members of society by providing security to their constituents relative to the government or other terrorist groups or by making credible claims about the validity of their grievances. Thus government policies that threaten members of the society at large, exacerbate existing social grievances, or encourage inter-group outbidding may force the population to remain close-mouthed with regard to useful information about terrorist plots.

Democracies may have more limitations on counterterrorist strategies than authoritarian regimes. Gurr (1990) argues that authoritarian states have more options available to them, and that democracies must balance the use of violent repression with accommodations for people sympathetic to terrorist's positions. Using Spain as an example, Shabad and Llera Ramo (1995) argue that authoritarian regimes "are by their very nature far less inhibited by legal and normative constraints from countering the violence directed against them" (467), and may implement repressive policies that affect civilian as well as terrorist organization. Democratic regimes, which enjoy greater loyalty and legitimacy, may have to choose between acting within constitutional boundaries at the risk of failing and appearing weak, or use illegal repressive tactics that compromise the quality of democracy.[3] In our study, we attempt to control for the

[3] Also, as Bueno de Mesquita (2007) proposes, electoral pressures in democracies often lead governments to eschew unobservable counterterrorism policies (such as intelligence gathering, financial disruption, covert sabotage, etc.) in favor of more observable and tactic-specific policies, such as target hardening or repression. Even though the unobservable policies are generally more effective than tactic-specific observable policies, the latter generally lead

confounding effects of democracy by examining a 5-year period within a democracy, although comparative studies would be extremely useful.

Hypotheses

The previous discussion allows us to generate several hypotheses. First, the most effective policies may be those that distinguish clearly between terrorists and non-terrorists, such that the governments do not alienate neutral constituents by repressing innocents. Peroff and Hewitt's analysis of Northern Ireland, for example, indicates that between 1968 and 1973, only internment policies (a discriminate tactic) significantly reduced the level of rioting, while an increased British troop presence (an indiscriminate tactics) increased rioting (1988). Kalyvas and Kocher find that when populations expect indiscriminate repression from a government, they are more likely to seek security by aligning with local insurgents (2007).

H_1: Discriminate counterterrorism actions reduce terrorist attacks, whereas indiscriminate counterterrorism actions increase terrorist attacks.

Other scholars have found, however, that using indiscriminate repression may succeed in eliminating violent acts by insurgents (Lyall 2009). This suggests the converse of H_1:

H_2: Indiscriminate counterterrorism actions reduce terrorist attacks, whereas discriminate counterterrorism actions increase or have no effect on terrorist attacks.

According to Bueno de Mesquita (2005), concessions can be effective policy tools since they can be used to extract intelligence and cooperative action from moderates that are willing to bargain with the government. Although increased violence may immediately occur as a result of concessions, improved information and cooperation from moderates and the sympathetic members of the terrorists' constituents increases the chances that the government will defeat the

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to a substitution effect rather than an overall reduction in terrorism. This is true, unless the government is able to achieve the optimal counterterrorism strategy, in which it overtly pursues intelligence-gathering activities—hardly practical, but theoretically possible nonetheless.

terrorists. Bueno de Mesquita's model points to the following observable implication:

H_3: Conciliatory policies increase terrorist attacks in the short term, but decrease terrorist attacks in the long term.

Skeptics, however, often argue that conceding to terrorists will always embolden them, leading to more violence (Dershowitz 2003, Monten and Iyengar 2009).

H_4: Conciliatory policies increase terrorist attacks in the short and long term.

Others argue that repressive policies are effective in the short term, but lose their effectiveness over time as terrorists refuse to concede useful information and the population begins to doubt the government's legitimacy in the fight.

H_5: Repressive policies decrease terrorist attacks in the short run, but increase terrorist attacks in the long run.

Others might argue that repressive policies, when properly executed, can be successful in deterring future terrorist attacks.

H_6: Repressive policies decrease terrorist attacks in the short and long run.

Finally, if counterterrorism is a fight over legitimacy, the nature of the counterterrorism policy may affect whether the public sympathizes with the government, thus providing more information. For instance, if the government pursues counterterrorism strategies through legal means, the population may view the government as admirably self-restrained. Counterterrorism tactics that appear extralegal, such as the use of military and secret police within a country's borders, may reduce public sympathy for the government and persuade the population as to the legitimacy of the terrorists' claims.

H_7: Legal, nonviolent counterterrorism tactics decrease terrorist attacks, whereas extralegal, violent counterterrorism tactics increase terrorist attacks.

On the other hand, terrorists operating within the borders may see self-restrained government responses as weak, and thus seek to exploit this restraint by ramping up their activities. Covert, extralegal activities may signal to the terrorists that the government has considerable capabilities and resolve in crushing the groups.

H_8: Legal, nonviolent counterterrorism tactics increase terrorist attacks, whereas extralegal, violent counterterrorism tactics decrease terrorist attacks.

Our hypotheses account for both the qualitative aspects of counterterrorism and their temporal dynamics. Thus not only do we consider the different dimensions of counterterrorism (discriminate/indiscriminate, conciliatory/repressive, and nonviolent/violent), but also we consider how the effects of these dimensions shift over time as the government develops its reputation vis-à-vis the population.

Existing Counterterrorism Data

Publicly available datasets on counterterrorism are scarce, although several available data sources may be usefully adapted to the study of counterterrorism. The Cingranelli-Richards Human Rights Dataset (2008) and Political Terror Scale (2007) both measure the yearly repression levels in all the world's states based on State Department and Amnesty International annual reports. The Minorities at Risk-Organizational Behavior data set (MAROB) dataset provides extensive information on the interactions between governments and minority organizations in the Middle East from 1980-2004, although specific information on counterterrorism actions is lacking. Alex Schmid's Nemesis Dataset (2003) offers a more comprehensive view, one that deals specifically with counterterrorism across the dimensions we outlined above. The dataset is global in scope, each counterterrorist action is coded along a range of variables, and contextual qualitative information is included with each action. The data,

however, includes only three years (2000-2003), and was hand-coded by researchers.

Although extremely useful, all of these data sets possess a common flaw, which is overaggregation. Most of the data sets are organized with a country-year unit of analysis appropriate for annual time series analysis. But such aggregation is problematic, because "as we aggregate data, we lose many of the statistical properties and dynamics of the raw series" (Shellman 2004). When one aggregates data, especially at high levels such as years, statistical nuances and important interaction effects are lost (Goldstein and Pevehouse 1997). Similarly, coefficients may be skewed and misrepresented when values are averaged or otherwise combined into time aggregates. This could lead to an even worse problem where different conclusions are generated from varying temporal aggregations. Shellman notes that with temporal aggregation, it is nearly impossible to predict the unit of time that could accurately reflect the time needed for states and substate actors to respond to one another (Shellman 2004). Therefore, with current data, it would be less useful to analyze aggregated data when event-specific information is available.

The solution to this problem is to disaggregate data at the most granular level possible. In the next section, we outline a research strategy that allows for the coding of numerous types of counterterrorism policies disaggregated at the daily level.

Research Strategy

We test our hypotheses on daily events data in Spain from 1988-1992. Because Spain was a democracy during the entire period, we are able to isolate potential confounding factors, such as regime type, which might influence the effectiveness of different tactics. Our focus is on domestic terrorist incidents, particularly on ETA attacks.

Data Collection Strategy

In order to test the impact of individual counterterrorist actions, approximately one thousand Reuters news articles originating between 1988 and 1992 were coded using TABARI. These news stories were first downloaded from Factiva, and the sole criterion was that each story reference Spain and ETA. From these stories TABARI ultimately coded 120 dyadic events. However, further examination of these events showed that nearly half were irrelevant; although a story may have referenced ETA and Spain, it could, for example, actually be discussing diplomatic relations with another country. In order to solve this problem, events were only kept if the event actor was Spain and the target was ETA.

During this process, we found that France was responsible for a significant portion of ETA arrests, and if one were to follow the previous rules then these events would be discarded. We decided it would unwise to limit this study to arrests only made in Spain, though, as ETA has often operated in both countries precisely to circumvent Spanish counterterrorism efforts. As the goal of this study is to assess the effectiveness of counterterrorism against ETA, failing to include France's efforts would impair the results. Therefore, events where France was the main actor and ETA the target were included. After reviewing the output and eliminating erroneous events, 55 dyadic events remained.

Dependent Variable: Hazard of Recurrence of ETA Terrorist Incidents

Developing metrics of success can be difficult for any type of policy. Counterterrorism policies are especially complex. Morag (2005) identifies numerous dimensions with which to evaluate the effectiveness of different counterterrorism policies, including reduction in civilian casualties (on both sides of the conflict), effects on the economy, social cohesion, domestic and international support for the targeted government, and domestic and international condemnation of the terrorist group. While these dimensions illuminate the political dynamics of terrorist

activity, our immediate interest is in the reduction of terrorist attacks and fatalities due to terrorist attacks. One assumes that success in these two domains will naturally lead to social cohesion, support for the government, and economic gains.

We obtained ETA attack data from the Global Terrorist Database (GTD). The GTD was created by hand-coding events from major newspapers and other open-source documents from around the world. Its transparent coding techniques and reliability make it preferable to other databases. In total, this analysis examines 394 ETA terrorist incidents over the 5-year period between 1988 and 1992.

Because we are studying the effects of different counterterrorism interventions, we are primarily interested in the period of time that elapses between a counterterrorism tactic and the next ETA attack. Thus the dependent variable is the duration of days that go by without a terrorist attack. When the next ETA attack occurs, the counterterrorism policy has effectively "failed."

Independent Variable: Counterterrorist Action

The main independent variable of concern is the *Counterterrorist Action*. As Table 1 demonstrates, the 55 counterterrorist actions contained in the data set possess considerable variation across our dimensions of interest. The ability to aggregate and disaggregate the data according to the research questions is beneficial, and it allows us to manipulate the data in order to provide a more comprehensive analysis.

Table 1: Counterterrorist Actions in Spain, 1988-1992

	Disc.	Indisc.	Conc.	Repr.	NV	Viol.
Condemnations		X		X	X	
Arrests	X			X		X
Deportations	X			X	X	
Killings	X			X		X
Allowing Basque Political Representation		X	X		X	
Security Legislation		X		X	X	
Banning Basque Political Representation		X		X	X	

Note: Disc.=discriminate; Indisc.=indiscriminate; Conc.=conciliatory; Repr.=repressive; NV=nonviolent; Viol.=violent.

To test the impact of each specific action, we analyzed both granular and aggregate action categories. Our first analysis was run on the raw data; we tested the impact of every action such as arrests, killings, new security legislation, banning and political representation, and condemnations for up to two months after its occurrence. The two-month duration is chosen because most researchers agree that the impacts of counterterrorism or counterinsurgency tactics are fairly immediate, though there is some variation across types of policies (Lyall 2010).

For our second and third analyses, we combined similar actions into categories in order to gauge the total impact of different policies. These categories consisted of security legislation, arrests, violent repression, and other nonviolent methods (condemnations, banning and allowing political representation).

Control Variables

Relevant controls were included in the analysis to account for factors beyond counterterrorism that could impact the likelihood of a terrorist attack. The number of failed ETA attacks in the previous month was calculated to control for more attacks as a result of increased

failures and frustration. This number was obtained from the Global Terrorism Database and it is aggregated by month. In order to control for terrorist group outbidding within Spain, the number of casualties by non-ETA domestic terrorists was included. Scholars argue that outbidding could lead to increased attacks as groups vie for power, influence, and notoriety within their country of operation, which could affect the trajectory of terrorist attacks independently of government counterterrorism interventions (Bloom 2004). We also included a variable to control for the Spanish government's military expenditure and total military personnel, a proxy measure for the government's anti-terrorism resources and capabilities. This indicator can be used to control for Spanish military presence that could possibly deter terrorism (Singer 1987). Lastly, we decided to control for attack density as terrorists may launch a series of pre-planned attacks as part of a campaign, and the success of these attacks may lead to continued action. Therefore, for each attack we calculated the amount of time that has elapsed since the third previous attack.

Method of Estimation

An alternative to event count models, which rely on aggregate data, is series hazard modeling. In her work on hazard modeling and measuring intervention effects, Dugan discusses the benefits of this approach (more specifically, the Cox proportional hazard model) and how it can be applied to event data such as the Global Terrorism Database (Dugan 2009). The GTD is appropriate for series hazard modeling as it provides accurate event-specific information such as the day, month, and year of each attack. Unlike time series modeling, hazard modeling analyzes the time between attacks – whether it is days, weeks, or months. This form of analysis is a useful approach to counterterrorist policy studies as successful policies will increase the time between attacks, and less effective policies will either have no impact or decrease the time between attacks.

For this study, we use the Cox Proportional Hazard Model. Introduced by David Cox in 1972, it is a semi-parametric model that assumes no nature or shape of the hazard function (Dugan 2009). The dependent variable using this model is the time between ETA attacks in Spain. Similar specifications of the Cox model have been employed in the past to study counterterrorism in Northern Ireland (Dugan, LaFree, and Korte 2009).

The Cox model will undertake a slightly different specification in our analysis:

$$h(t) = \lambda_0(t)\, e^{(\beta_1 Counterterrorist\ Action + \beta_2 Controls)}$$

Using this model, we calculate the coefficient for each intervention and control. A negative coefficient indicates a reduced hazard of a terrorist attack, indicating an increased number of days elapsed between the counterterrorism policy and the terrorist event. Thus, a negative coefficient represents a desirable action, as it indicates a decreased chance of another attack. The counterterrorist actions and controls specified in the model are time specific, and refer to their measurements at the occurrence of an attack.

Results

Table 2 shows the results of the hazard model analysis using the lowest aggregation possible. Events were grouped according to their specific action – condemnations, arrests, deportations, killings, allowing Basque political representation, enacting new security policies, and banning Basque political representation. The model found that both condemnations and killings were the only significant actions at one month, and both reduced the chance of a future terrorist attack. At two months, all actions proved to be significant; arrests and security legislation reduced the hazard of an attack, while condemnations, deportations, violence, and banning and allowing Basque political representation were all positively correlated with attacks. With regard to the controls, an increase in non-ETA terrorist casualties in Spain was found to

increase the hazard of an ETA attack. Attack density was also negatively associated with attacks, meaning that more time in between attacks decreases the hazard of another attack. Lastly, Spain's military personnel and expenditure was significant but failed to generate a statistically meaningful coefficient.

Table 2: Counterterrorism Tactics and ETA Attack Hazard, One & Two Month Intervals

	Coefficient Estimate	Standard Error
Counterterrorist Actions, One Month		
Condemnations	-1.690***	.650
Arrests	-.208	.146
Deportations	-.786	.559
Violence	-.525*	.279
Allowing Basque Political Representation	-.496	.522
Security Legislation	.327	.322
Banning Basque Political Representation	-.155	.556
Counterterrorist Actions, Two Months		
Condemnations	2.051***	.599
Arrests	-.349**	.160
Deportations	1.250***	.403
Violence	.509**	.233
Allowing Basque Political Representation	2.493***	.411
Security Legislation	-1.406***	.250
Banning Basque Political Representation	2.274***	.389
Controls		
Failures (lagged)	.021	.018
Attack Density	-.034***	.007
Civilian Casualties, Non-ETA terrorism	.022*	.011
Military Personnel and Expenditure	-.000***	.000

*p<.1 **p<.05 ***p<.01

In Table 3, the results of the hazard model using aggregated actions are shown. In this model, the same controls were included but actions were grouped into four categories: arrests, security legislation, violence, and political action. As one can see, violence and political action both reduced the hazard of an attack at one month. At two months, arrests and security legislation were similarly associated with fewer attacks, while political action and violence

increased the likelihood of another attack. The controls were found to have the same effect as in model one, wherein attack density and military personnel and expenditure lowered the hazard of an attack, and increases in non-ETA terrorist casualties increased the hazard.

Table 3: Aggregate Counterterrorism Actions and ETA Attack Hazard, One & Two Month Intervals

	Coefficient Estimate	Standard Error
Aggregate Counterterrorist Actions, One Month		
Arrests	-.217	.143
Security Legislation	.313	.321
Violence	-.494*	.276
Political Action	-1.054***	.266
Aggregate Counterterrorist Actions, Two Months		
Arrests	-.356**	.156
Security Legislation	-1.340***	.249
Violence	.457**	.232
Political Action	1.795***	.237
Controls		
Failures (lagged)	.023	.018
Attack Density	-.039***	.005
Civilian Casualties, Non-ETA terrorism	.033***	.009
Military Personnel and Expenditure	-.000***	.000

*p<.1 **p<.05 ***p<.01

In our third model, we attempt to identify which combination of policies is most effective at reducing terrorist incidents. To achieve this, we created a categorical variable that designates which policy or combination of policies was in effect at the time of each attack. As before, we measured their impact at one and two months following the implementation of each policy. For example, if an attack occurred within one month of an arrest, but not any other policy, then it would receive a 1. However, if it occurred within one month of an arrest and the enactment of new security legislation, it received a 4. By using this method, we are able to better understand which policy, or combination of policies, was most effective.

The model found that only arrests were able to reduce the hazard of an attack at one month. At two months, however, arrests and security legislation were correlated with fewer attacks. Similarly, the combination of arrests and security legislation, and arrests and discriminate violence, were both able to reduce terrorism at two months.

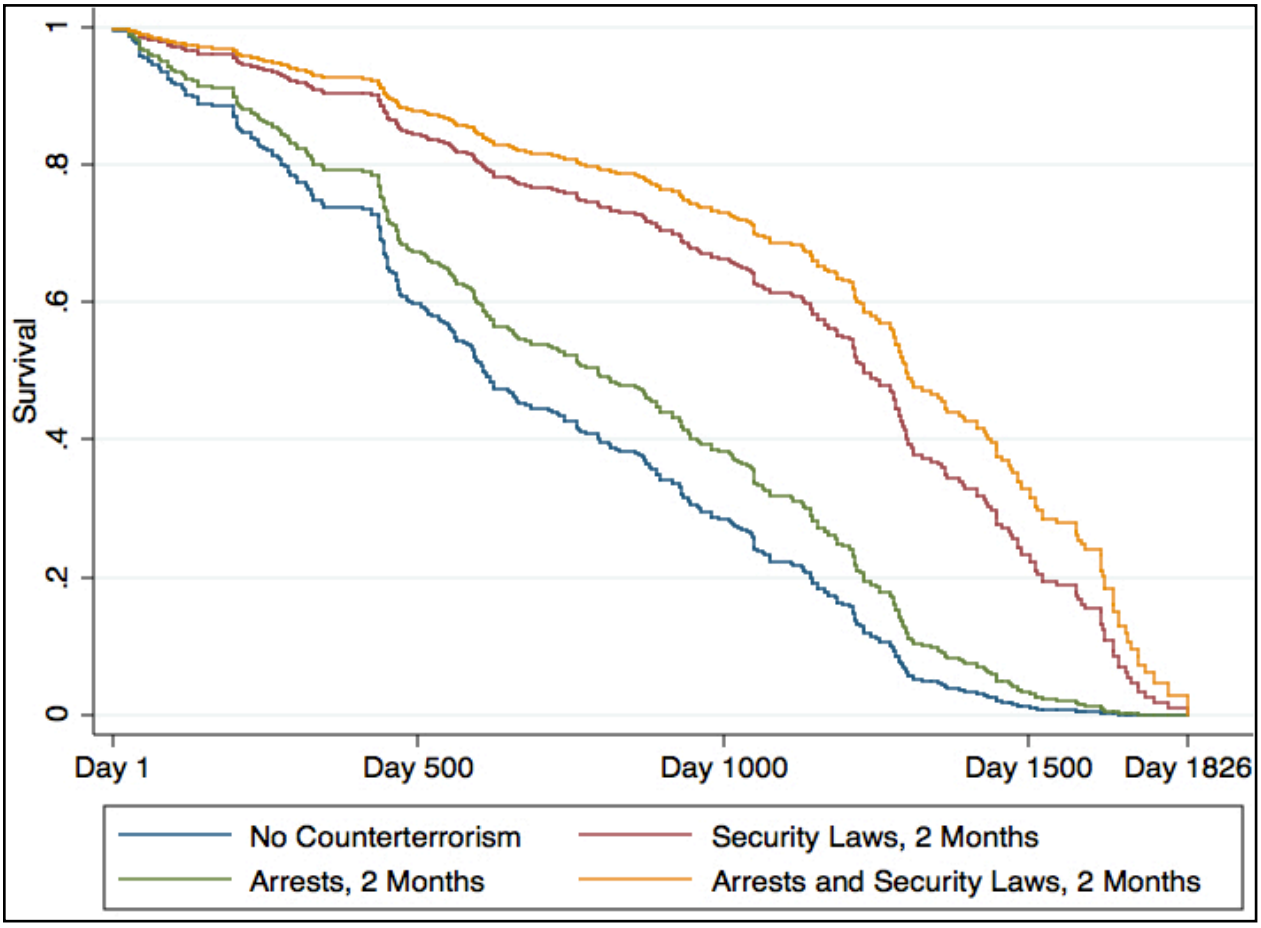
Table 4: Counterterrorism Action Combinations and ETA Attack Hazard, One & Two Month Intervals

	Coefficient Estimate	Standard Error
Aggregate Counterterrorist Actions, One Month		
Arrests Only	-.321**	.156
Security Legislation Only	-.727	.474
Violence Only	-.203	.329
Arrests + Security	.362	.550
Arrests + Violence	.390	.515
Security + Violence	.105	.634
Arrests + Security + Violence	.282	.839
Aggregate Counterterrorist Actions, Two Months		
Arrests Only	-.611***	.176
Security Legislation Only	-2.802***	.475
Violence Only	-.526	.334
Arrests + Security	-1.739***	.389
Arrests + Violence	-.657**	.314
Security + Violence	.089	.728
Arrests + Security + Violence	.142	.481
Controls		
Failures (lagged)	.042**	.017
Attack Density	-.026***	.005
Civilian Casualties, Non-ETA terrorism	.045***	.008
Military Personnel and Expenditure	-.000***	.000

*p<.1 **p<.05 ***p<.01

How effective are these policies, relative to one another? Stated another way, which policies or combinations of policies make the most difference over time? Figure 1 estimates the predicted values of the model in Table 3. We include only the policies that are statistically significant in the model.

Figure 1: The Effects of Individual and Combined Counterterrorism Policies on the Days without an ETA Attack



Note: The x-axis depicts the probability that a terrorist attack will not occur. Y-axis observations begin on Jan. 1, 1988 (Day 1) and persist through Dec. 31, 1992 (Day 1826).

As one can see from Figure 1, when no counterterrorism policy exists, the chance of a terrorist attack increases from 0% on Jan. 1, 1988 to 20% at the end of 1988, all else being equal. Thus the probability of a terrorist attack occurring is 20% when the government does nothing, and increases dramatically after one year. When the government performed an arrest of a suspected terrorist, however, it was about nine more months before the attack probability reached 20% again.

Interestingly, when Spain had a combined counterterrorism policy of security legislation and arrests, it took nearly three years for the probability of a terrorist attack to move from 0% to

20%. In fact, the likelihood of a terrorist attack remained well below 20% for over two years when these combined policies were in place.

These values tell us that while discriminate actions, such as arrests, are highly effective on their own, a combination of discriminate arrests and nonviolent, indiscriminate policies such as the expansion of security laws seem to decrease the chances of recurrent terrorist attacks by several orders of magnitude.

Discussion

We examined a total of 55 Spanish counterterrorist actions over a 5-year period during which 394 ETA terrorist attacks were perpetrated. Using the Cox proportional hazard model, we analyzed these actions at different levels of aggregation to determine their impact on the likelihood of a future attack.

We originally hypothesized that repressive actions would reduce terrorism in the short-term, but the effects would wear off over time resulting in increased attacks. In Model 1 and Model 2 we found evidence that discriminate violence decreases the chance of a terrorist attack at one month, but at two months it increased the likelihood of an attack by nearly the same substantive margin. However, when we ran Model 3 using a categorical variable to account for policy interaction, we found purely violent methods to have no effect on terrorist attacks at both one and two months. Consistent with earlier studies on violent repression, the implication of our findings is that violent repression succeeds in reducing terrorism only in the short term. Over the long term, however, violent repression is ineffective at best and counterproductive at worst.

Arrests proved to be the most consistent policy, resulting in decreased hazards of attack at two months in every model. Only in Model 1 when tested at one month were arrests insignificant. This is consistent with our first hypothesis, in which we theorized that discriminate

counterterrorism would be effective. Also, as an example of a legal, nonviolent policy, it supports the hypothesis that such measures would reduce the hazard of a terrorist attack.

Taken alone, though, purely nonviolent counterterrorism actions proved to be the most ineffective strategy. Hypothesis 3 expects that conciliatory actions, such as allowing Basque political representation, would increase terrorism at first but decrease terrorism over time, but conciliation consistently increases terrorism at two months. Only condemnations were significant at one month, where they decreased terrorism. But condemnations, deportations, and allowing and banning Basque political representation all increased the hazard of a terrorist attack at two months in all three models. It is possible that in time this policy could have a deterrent effect with longer time horizons, but even at two months, the effects were insignificant.

Security legislation such as border agreements and increased police powers were negatively correlated with terrorist incidents at two months in every model. Interestingly, security legislation failed to be significant at one month in each of the three models, possibly signifying that there was a lag between the government's approval of the legislation and the legislation actually taking effect. The benefits of security legislation are clear: while it is overt and clearly visible to the general population, it also functions as a discriminate legal apparatus to restrict terrorist movement and operations.

With regard to policy combinations, we found that combining arrests and security, or arrests and discriminate repression, were both effective at reducing the hazard of a terrorist attack at two months. Interestingly, no combination of policies was effective at one month. But when combined with ongoing efforts at arrests, the effectiveness of new security legislation considerably decreases the hazard of terrorist attacks over time. This is consistent with our hypothesis that legal and discriminate forms of counterterrorism will be most effective.

Conclusion and Implications

Overall, our study found stronger evidence for the legitimacy approach than the credibility approach. Strong evidence supports the hypothesis that discriminate counterterrorism is likely to be successful, especially when it involves restricting terrorists through arrests. In all three models, arrests generated a consistent deterrent effect on the hazard of an ETA attack. Legal, overt restrictive policies were also consistency successful, as security legislation produced a deterrent effect in every model tested. Conciliatory and other political counterterrorism strategies were the most ineffective strategies tested. Although two models found that political action deterred attacks at one month, they conversely were associated with increased attacks at two months. While it is possible that these policies are more successful if given more time, our study nonetheless shows that they are ineffective strategies of reducing terrorism in the short-term.

There are several limitations to this study. Most notably, the study is limited to a five-year period in a single country against a single terrorist group and by the fact that only 55 counterterrorist events are examined in this time period. The exercise of performing a focused study on a singular domestic terrorist organization is useful, but it would be beneficial to expand the analysis to include more cases. Therefore, the first order of business is to expand the number of observations across time and space, a task that is currently underway (Dugan and Chenoweth 2010).

Second, it is possible that our study failed to include a number of counterterrorist actions. We relied on TABARI to code events from news articles, but the limitations of TABARI – its inability to code complex sentences with multiple verbs and actors – mean that some actions may

have been missed. However, studies performed by the developers of TABARI repeatedly demonstrate that it is nearly as accurate as human coders (Schrodt, n.d.).

A final limitation has to do with the nature of the study as a microlevel test of counterterrorism. By employing TABARI to code individual, dyadic events between the Spanish government and ETA, we fail to include larger governmental policies—or overall counterterrorism doctrines—that may be relevant. Combining both micro and macrolevel studies of counterterrorism may be a fruitful area for continued research.

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