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Terrorism, Insurgency, State Repression, and Cycles of Violence

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Terrorism, Insurgency, State Repression, and Cycles of Violence*

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Abstract

Over the last half century, violent conflicts between ethno-religious organizations and states have shaped the political and economic development context in developing countries. However, global empirical evidence on the dynamic and strategic underpinnings of these phenomena is lacking. Here, we investigate the dynamic violent relationships between the organizations that represent minorities at risk and the governments in Middle-Eastern and North African countries. Our estimates of dynamic panel data models of discrete strategic responses reveal dampened cycles of violence between states and insurgent politico-ethnic organizations due to violent mutual responses. However, such cycles are absent when the organizations target civilians instead, which is more likely after an insurgency spell. Finally, we provide an original game-theoretical interpretative framework for our results, which allows us to identify, on average and under sensible restrictions, the Stag Hunt game as an appropriate representation of the (possibly reduced-form) general strategic situations that link states and minority organizations in MENA.This is at odds with the frequent use of the prisoner's dilemma setting in the literature, or of other ad hoc strategic hypotheses, to analyze conflicts.

JEL Classification: C72, D74, H56.

Keywords: Terrorism, Insurgency, Cycles of Violence, Conflict Theory.

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1 Introduction

Over the last half century, ethnic and religious conflicts have shaped the political and economic development context in developing countries. Like many other regions of the world, the Middle East and North Africa region (MENA) is characterized by antagonism among ethnic and religious groups, with, in each country, long periods of dominance by one group. These political circumstances, where leaders tend to favor their constituency to the detriment of the other factions, create disenfranchised groups that suffer from discrimination (Zussman and Shayo, 2011). For example, under the Ba'ath regime, the Shi'i Arabs in Iraq received substantially lower shares of public investment in education, health, and infrastructure than did the other Iraqi ethnic groups.[1]

This context provides fertile ground for the rise of representative organizations for these discriminated populations. Hamas and Hezbollah are instances of organizations that represent Palestinians in Israel and Shi'a in Lebanon, respectively. These organizations fill a political void in deficient democratic contexts and partly respond to the unmet needs of these groups for social services and solidarity mechanisms. They also bolster the political influence of the groups that they represent, which occasionally allows them to function as pseudostates running their own police forces and armies.

In these conditions, the recurrent discrimination against these groups may generate violent reactions from the organizations that represent them. Moreover, these organizations have specific social and political objectives. To achieve them, the organizations may be tempted to use violent strategies. In addition, discrimination by the state may also be enforced using violent means, even when other reasons for state violence may simultaneously exist. For instance, according to the seminal paper by Crenshaw (1981), the ability of the state to respond repressively to violence is the most critical restraint on terrorism. In these conditions, the dynamic antagonism between these organizations and the dominant group who controls the state and the army may give rise to cycles of violence. Indeed, as Kalyvas (2019) emphasizes, political violence, notably between state and nonstate actors, is almost always interactive and related to the former activities of its target. This is consistent with conflict experience being a much stronger determinant of violent conflict than changes in economic growth, as found by Starr (2010) in Sub-Saharan Africa.

However, once violence has started, it might be asked what allows it to persist since it is costly to both sides.[2] This raises questions on the origin of violent strategies by organizations or by the state,

[1] Thus, these populations are not always stricto sensu minorities but rather groups discriminated against by the state. The term 'minority' should be interpreted here in the sense of the 'Minorities at Risk' database that we use, that is, *politically significant communal groups, who collectively suffer or benefit from systematic discriminatory treatment at the hands of other societal groups.* In 1987, 75-80 percent of the population in Iraq was Arab, i.e., 24 million people, of whom 15 million were Shi'a, 9 million were Sunni, 15 percent were Kurds (4 million people) and 5 percent belonged to other groups.

[2] Diverse conjectures have been proposed in the literature. For instance, Peffley, Hutchison, and Shamir (2015) show that terrorism in the Israel-Palestine conflict has reduced the political tolerance of the Israeli, which may diminish the chances for a return to peace. See also the theoretical explanations for violence escalation of Acemoglu and Wolitzky (2014), Berman and Laitin (2008), and Besley and Persson (2011).

which may often be perceived as responses to former violence from their opponent. Thus, one potential explanation for violence is that it arises from violent mutual responses that engender a violent and stable strategic equilibrium.

This is the question we study in this paper, first, by using information on sequences of lethal violence by these organizations and by the state contained in the Minorities at Risk Organizational Behavior dataset (MAROB, Wilkenfeld, Asal, and Pate, 2011) and second, by proposing a new method for identifying parsimonious game structures in dynamic systems of conflict responses.

Our approach is based on the popular use of game theory to describe violent relationships between states and rebel or terrorist groups. Many authors have described violent strategic interactions by relying on more or less basic game theory.[3] Thus, this paper belongs to a relatively small mixed theoretical and empirical literature that studies the political and economic causes and consequences of violence and its strategic roots.[4] More specific to our interests, Bueno de Mesquita (2013) and Carter (2015, 2016) study theoretically the strategic choice between terrorism and insurgency and show that this choice can be strategically and dynamically linked to expectations of a violent state response.[5]

On that account, beyond our focus on strategies as responses to violence, an interesting issue lies in the dynamic pattern of organization-specific violent strategies, notably the choice between civilian and military victims, i.e., terrorism versus insurgency.[6] This is a common theme in the conflict literature. Berman (2009) claims that *"The failed insurgents of today often become the terrorists of tomorrow"*(p.160). Bloom (2005) contends that terrorism is used by nonstate actors only after other strategies have failed. One reason for this is the hardening of military targets, which makes attacks on civilians comparatively easier.[7] Using a country-level approach, Enders and Sandler (1993) estimate a vector

[3]For example, recently: Acemoglu and Wolitzky (2014), Azam and Hoeffler (2002), Baliga and Sjöström (2012), Berman, Shapiro, and Felter (2011), Carter (2015), Enders and Sandler (1995), Jacobson and Kaplan (2007), and Siqueira and Sandler (2006).

[4]See Gaibulloev and Sandler (2019) for a review.

[5]Bueno de Mesquita (2013) features a model of rebel tactical choice between insurgency, terrorism, and peace, with endogenous mobilization under uncertain rebel capacity and economic outside options for the population. By studying these tactics jointly, he shows that terrorism is stimulated by intermediate economic opportunities and that counterinsurgency may lead to terrorism when rebel fighting capacity is low. Carter (2016)'s approach is based on subgame perfect Nash equilibria in sequential games. His model explains the tactical choice of organizations between insurgency and terrorism, with an emphasis on the state's response. Insurgency can be used to provoke violent responses by the state to harness grievances and generate support from the population. In contrast, terrorism can prevent violent responses by the state. In both cases, these hypotheses are consistent with our empirical results at the organization-year level and those of Carter (2016) from a tentative static multinomial logit estimate using Western European data on terror attacks. Carter (2015) provides another theoretical explanation for the choice between insurgency and terrorism based on the possible gains in territory control entailed by insurgency, which involves the future ability to extract resources. Carter claims that the states most capable of fighting territorial opponents face a higher risk of terrorism as an alternative strategy to insurgency.

[6]Condra, Long, Shaver, and Wright (2018), Fortna (2015), Gould and Klor (2010), and Kis-Katos, Liebert, and Schulze (2014) argue and empirically support that each of these tactics can achieve a certain degree of success, which varies with the logistics needed, the risks, the likelihood of a favorable outcome, and the consequences for the image of the organization.

[7]In contrast, vanguard violence is a potential mechanism for the transition from terrorism to insurgency, meant to demonstrate the low fighting capacity of the state and spur increased future mobilization.

autoregression (VAR) model that partly explains the type of attack with the installation of metal detectors and embassy fortification. In this case, transitions between insurgency and terrorism can be interpreted as substitutions due to a change in the relative shadow prices of the two options. Our dynamic empirical framework allows us to detect such shifts between strategies. Terror cycles have also been studied from a pure theoretical viewpoint (Faria, 2003; Das, 2008), which also invites dynamic empirical modeling. Of course, details about individual strategies, for example, by political leaders or militants, should be probed by using microeconomic data on individuals, which is not our vantage point here.

The distinction between terrorism, insurgency, and state violence is essential. In particular, dynamic patterns may be specific to each category of violence and its specific objectives. For instance, rebels may have direct goals, such as the destruction of essential targets or the control of assets and territories. In contrast, the purpose of terrorism may be indirect, such as instilling fear and changing some incentives of the targeted audience.[8] These goals can sometimes be attained through latent threats without actually engaging in violence. Likewise, the optimal response by the state may depend on the chosen strategy of its opponent because the state's response hangs on its capacity to precisely identify the perpetrators of violence or on its anticipation of retaliation by the adversary.[9]

This study addresses these questions by investigating violent dynamic responses between organizations representing minorities at risk and the government in MENA countries. To do this, we estimate dynamic panel data models of the violent responses of organizations and governments and exhibit the relative prevalence of these responses. Violent responses must be apprehended as likelihoods rather than systematic reactions. We find that latent violent responses occur in approximately one-fifth of cases. Moreover, the estimation results are consistent with dampened cycles of violence between the central state and insurgent politico-ethnic organizations. However, when organizations turn to terrorism instead of insurrection, they are no longer found to respond significantly to state violence. Finally, we find that organizations are more likely to engage in terrorism a few years after an insurgency spell.

Our research relates to a small empirical literature about terrorism as violent responses to violence, initiated by Brophy-Baermann and Conybeare (1994), who find that the aggregate time series of terrorist attacks and government reprisals in Israel from 1968 to 1989 support the efficiency of a fixed retaliation rule by governments. Jaeger and Paserman (2006, 2008) estimate violent responses using daily information on fatalities on both the Israeli and Palestinian sides during the 2000-2004 Second Intifada. These authors estimate VAR specifications that link the number and incidence of deaths to past values of own and opposing-side fatalities. On the one hand, they find a positive and significant

[8] For instance, Gould and Klor (2010) highlight the existence of a concave relationship between local terrorist events in Israel and the propensity to grant territorial concessions to Palestinians, as measured by surveys.

[9] Sometimes too strong a use of force by one side triggers increased radicalization, popular grievances, or justifications for violence. The presence of such backlash effects favors provocation strategies. As pointed out by diverse authors such as Arce and Sandler (2010), Bueno de Mesquita and Dickson (2007), Condra et al. (2018), and Jacobson and Kaplan (2007), an organization may stage a terrorist attack to enhance its popularity as a consequence of the expected abusive response of the state.

reaction of Israel to casualties caused by Palestinians. On the other hand, they do not find evidence of a substantial response from the Palestinian faction. Jaeger and Paserman (2009) offer refined estimates of Israeli and Palestinian violent reactions over two weeks by focusing on targeted killings of leaders and suicide attacks. Although they do not use any formal game model, they reject 'Tit-for-Tat' in that case. Durante and Zhuravskaya (2018) confirm the results of Jaeger and Paserman (2008), although with significant responses from the Palestinians in some instances, and show that news pressure in United States affects the timing of the attacks by the Israeli Defense Forces.[10] Bejan and Parkin (2015), who estimate a VAR model of repressive and conciliatory actions by the Israeli government and of terrorist attacks, find that government actions have a deterrent effect. However, beyond the rather special Israel case, there has been no similar empirical investigation for other countries of the MENA area, let alone for a broad sample of MENA countries together. This paper is the first systematic and global investigation of the violent dynamic interactions of the central states with discriminated minority groups in MENA countries. Finally, by focusing on MENA, we avert the inclusion of irrelevant cases such as regions with rare minorities or no violence at all.

A virtue of adopting a global approach to all MENA countries is that we thereby avoid some common pitfalls in conflict studies. First, we eschew the focus on special, although interesting, country cases that may promote a distorted picture of the general phenomena of conflict between states and minorities. In particular, violent contexts may be overrepresented in conflict studies. This may give rise to selectivity bias at the country and minority group levels. Second, by focusing on the MENA region, we ensure a certain homogeneity of geographical and historical backgrounds, which limits the influence of uncontrollable specificities in the analysis.

As a starting point for our empirical investigation, we build on the literature on terrorist organization violence that uses the MAROB database, such as Abrahms and Potter (2015) and Asal, Brown, and Dalton (2012).[11] In these studies, however, the inference rests on the cross-organization variation, neglecting the essential information contained in the panel structure of the data. In particular, this matter not only raises common concerns about the estimation, such as omitted variable bias due to the circumstances of countries in certain years and reverse causality, but also prevents direct investigation of dynamic responses by the state or the organizations. We fill this gap.

In contrast with this literature, our empirical approach relies on numerous strategic pairs obtained by matching central MENA states with each organization representing a discriminated group from the

[10] In agreement with Durante and Zhuravskaya (2018), Asali, Abu-Qarn, and Beenstock (2017) find some evidence of a response by the Palestinians using nonlinear estimation techniques.

[11] Abrahms and Potter (2015) argue that a lack of strong leadership is a decisive element in the use of terrorism. Asal et al. (2012) study the role of the lack of strong leadership in organizational splits, which is assumed to be a step towards the use of violence because splinter groups are less peaceful. Asal, Schulzke, and Pate (2017) concentrate on the use of force and find that organizations that support the exclusion of women from public life and changes in state boundaries and those suffering from state repression are more likely to use violence. In the same vein, Asal, Conrad, and White (2014) show a link between diaspora support and political activities abroad. Conrad and Greene (2015) observe that a multiplicity of organizations in a country correlates with relatively more shocking attacks. Additionally, Asal and Wilkenfeld (2013) note the association between gender inclusiveness and nonviolence.

corresponding country. Preliminary data examinations with transition matrices suggest that current violence may often originate in past violence, from the agent and from its adversary. This setting allows us to control for, on the one hand, a broad range of unobserved fixed and year-specific characteristics at the state×year level, such as civil wars, economic development, the national political conjuncture and other social indicators, and, on the other hand, at the organization level, fixed factors such as its primary type of grievance, religious character, size, or relevant ethnic minority.[12]

The second contribution of this paper is to propose a new method for associating a strategic interpretation with dynamic systems of adverse strategies among opponents. Indeed, a strategic framework is necessary to support an interpretation of the estimated dynamic coefficients in terms of 'strategic responses' and to avoid confusing it with other kinds of joint dynamic changes in the opponent's strategies. This new method is also important because most interpretations of estimates in the literature, notably in the violent conflict literature, are in terms of a priori narratives involving strategic games that include typically unobservable and unidentifiable features, such as beliefs, anticipations, and timing rules. In that case, in the interpretation, it is impossible to separate what comes out of the data from what flows out of the fertile and ingenious imaginations, and sometimes personal convictions, of the researchers. In most empirical cases, only parsimonious game structures should be identifiable.

We deal with this issue by restricting the strategic model to the strategic forms of the game, deliberately stripped down from any other model specification hypotheses. Then, in normal forms, we exploit the information about, first, the location of the Nash equilibrium and, second, the moves consistent with the payoff matrix. As an identification restriction, we associate these two pieces of information with long-term and short-term dynamic responses.

This method leads us to examine the complete class of two-by-two simple strategic forms and identifies the types of games that are consistent with the estimation results of the dynamic system of violent strategies by the state and the organizations. We find that the only game that can satisfactorily represent, on average, the observed conflicts between states and organizations is the Stag Hunt game, invented by Jean-Jacques Rousseau in the XVIIIth century. This finding allows us to draw policy conclusions, not only in terms of the characteristics of the Stag Hunt game but also in terms of policies fostering shifts to another type of game structure.

The rest of the paper is organized as follows. Section 2 presents the data. Section 3 displays the empirical model and discusses the associated econometric issues. The baseline results and a few robustness checks are reported and analyzed in Section 4. In Section 5, we confront the empirical results with a novel analytical framework, which yields a unique one-shot game representation of the average conflict situation considered. We identify policy recommendations. Finally, Section 6 concludes.

[12] Including available information on external funding and on the provision of social services by organizations has been attempted, but it has no significant effect in these data, and we do not pursue this research line here. Note that this result does not contradict the violence-depleting effect of service provision found in Iraq by Berman et al. (2011), since in their case, it is the government that provides the services, not the organizations.

2 The Data

2.1 Source

Our primary data source is the Minorities at Risk Organizational Behavior database (MAROB, Wilkenfeld et al., 2011), accessed through the National Consortium for the Study of Terrorism and Responses to Terrorism, which is a Department of the Homeland Security Center of Excellence, at the University of Maryland.[13] It provides us with information on 112 organizations, which represent ethnic 'minorities' in 12 Middle Eastern or Northern African countries for 25 years between 1980 and 2004. This period is particularly relevant, as it corresponds to major political events in the region, such as the 1979 Iranian Islamic Revolution, the 1980 Turkish military coup, the US-led coalition invasion of Iraq in 2003, and the end of the Al-Aqsa Intifada in 2004/2005.

The surveyed organizations claim to represent the interests of ethnic minorities or discriminated groups, have political goals, and have been active for at least three years. Piazza (2011) finds that countries that economically discriminate against minorities suffer terrorist attacks more frequently than countries that do not discriminate against these groups or do not have such groups. These organizations use violent as well as non-violent strategies, such as education programs, propaganda campaigns, and electoral politics. Their average life span is 15.74 years, with a median of 17 years. A total of 33 organizations were active violently or non-violently throughout the whole period, representing 29 percent of the total.

We construct our estimation dataset by extracting the variables 'STATEVIOLENCE', 'ORGST7', and 'ORGST8' from the MAROB database. 'STATEVIOLENCE' records information on lethal violence by the state, while 'ORGST7' and 'ORGST8' provide information on terrorism, i.e., lethal violence targeting civilians, and insurgency, i.e., lethal violence targeting the military or police, by the organization, respectively. We recode these variables as binary indicators equal to zero for 'No use of violence' and one for 'Use of violence'. Details on the construction of the variables are provided in Appendix.

2.2 Descriptive statistics

The descriptive statistics in Table I display considerable variation across countries, periods, and organizations in terms of patterns of violence. This justifies the crucial introduction of country×year fixed effects in our econometric specifications to control for factors that may lead to these differences. Specifically, violence is concentrated in certain periods and countries, such as Israel and Iraq. In contrast, the most typical situation is the absence of violence. Our econometric identification and estimation strategy, which essentially exploits the transitions between nonviolence and violence, successfully surmounts the challenge imposed by the amount of variability in the data.

[13] Available from https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/15973&studyListingIndex=2_fcee301dba3be9dc90023375a288

After discarding the few observations with missing information for our main variables, we end up with a sample of 1,732 observations that can be indexed by state-organization pairs and years.[14] In the FE estimations, two organizations are dropped from the estimation because of missing values. The final baseline sample contains 110 organizations. Overall, terrorism occurred in 13.6 percent of the cases, insurgency in 9 percent, and state violence in 13.3 percent. Cyprus and Bahrain did not experience any violence. Apart from these two countries and still focusing on minority-related conflicts, Algeria and Iran had no terrorism; Algeria, Syria, Jordan, and Saudi Arabia, no insurgency; and Saudi Arabia, no state violence. Terrorism is more frequent in Turkey and Israel (29.8 and 26.2 percent, respectively), insurgency in Turkey and Iran (42.1 and 28.8 percent, respectively) and state violence in Turkey and Iran (50.9 and 42.4 percent, respectively).[15]

Data inspection reveals that violence spans do not last long in general. The longest violent conflicts involve the relationships between the Palestinian Islamic Jihad and Israel, Hamas and Israel, the South Lebanon Army and Lebanon, the Partiya Karkari Kurdistan (PKK) and Turkey, and the Patriotic Union of Kurdistan (PUK) and Iraq, which lasted between 17 and 25 consecutive years. Apart from these five organization-state pairs, the violence spans are shorter than ten years, with a median below four years. In addition, some organizations are always non-violent.[16]

The transition matrices across years for each violent strategy in Table II show that even though violence exhibits a certain degree of persistence, there is a general tendency to return to peace. Violence is transitory, and our model helps us to analyze the likelihood of a return to peace. For instance, from Panels (a) to (c), the probability of a return to peace in the next year is 68 percent from a situation of terrorism, 78 percent from insurgency, and 72 percent from state violence. Table III displays non-parametric estimates of conditional frequencies that provide hints about potential violent responses to violence. These estimates have the advantage of being independent of the theoretical models and of the empirical models used. They are also consistent with the literature that often uses this kind of direct criterion as evidence for strategic responses to violence. However, they remain relatively raw diagnoses that do not control for covariates or richer dynamic effects.

Panel (a) of the table shows the frequency with which the organizations are observed at different terrorism levels (none, minor, major), given that the state was violent or not against the organization in the former year. Obviously, the level of terrorism increases with former state violence. Nine-tenths of the organizations observed as having enjoyed a non-violent state in the previous year refrain from

[14] These variables include the category 'Missing value or no basis for judgment', for which we have dropped the corresponding observations. This trimming removes 57 observations out of a total of 1,789 (3.2 percent) for 19 different organizations that are kept in the sample for the other valid observations. These missing values are consecutive and concentrated among a few Iraqi organizations.

[15] Recall that, as mentioned above, these data only capture violence involving 'minorities' as defined by MAROB. In particular, the 'Black decade' of the nineties in Algeria is *not* covered, as it concerned Islamic militants not characterized by minority status.

[16] For example, the Democratic Party (Turkish Cypriots, Turkey), the Popular Movement (Berbers, Morocco), the United Azerbaijan Movement (Azerbaijanis, Iran), the National Liberation Party (Maronite Christians, Lebanon), and the Bahrain Freedom Movement (Shi'a, Bahrain).

relying on terror strategies. However, when confronted with state violence instead, almost one-fourth use minor terror strategies, and 13 percent use major terror strategies. In the other panels, (b) to (d), similar suggestive patterns of seemingly violent responses to violence can be observed for the other pairs of violence variables shown in the table, that is, insurgency given former state violence, state violence given former terror, and state violence given former insurgency. In all cases, a positive first-order stochastic dominance relationship can be observed between the adversary's violence in the previous year and the contemporary violence of the agent. This result suggests that models of violent strategic responses may fit the data well.

Table IV and Figure I contain basic information about the strategy profiles for 15 organizations, which is used later to illustrate the main mechanisms discussed in this paper.[17]

In addition to this, MAROB data provide information on several organizational features that vary little over time, such as education, propaganda activities, the representation of the group, its political orientation towards officials and electoral politics, solicitation of external support, and non-coercive or forceful solicitations of local support. MAROB data also provide information on fixed characteristics, such as the openness, legality, militancy, and types of grievances of the organization. We do not use these fixed or quasi-fixed variables because our fixed-effect specification already takes them into account.

3 The Empirical Model and the Estimators

The empirical model describes the fixed and dynamic determinants of terrorism, insurgency and state violence for each state-organization pair. Thus, as pointed out by Shapiro (2012), terrorism is considered to be one tactical option among several for opposition groups, which improves the credibility of tests of strategic explanations. To allow for an autonomous treatment and distinct samples with specific missing values of independent and dependent variables, we specify and estimate each strategy-specific equation separately. The autoregressive terms are viewed as expressing the inherent inertia present in many violent processes. The terms describing the lagged strategies of the opponent are the main interests, as they reveal information about strategic responses. Finally, the second strategy of each organization, i.e., terrorism or insurgency, is included as a regressor in the equation for its other strategy because we want to explore transitions between these two strategies.[18] The tests conducted, as discussed below, lead us to favor a two-year lagged specification for the lagged independent and autoregressive variables. Note that the strategic interpretation of these equations is not symmetric since, first, the state violence equation does not include an alternative strategy, and, second, the state faces several organizations while each organization belongs to a unique state.

[17] Figure A1 in the Online Appendix extends Figure I to all violent organization-state pairs.

[18] Bueno de Mesquita (2013) and Enders and Sandler (1993) emphasize the importance of studying these tactics jointly, not only theoretically but also empirically, because of potential substitutabilities and complementarities.

We begin our analysis by considering the determinants of terrorism by an organization in the following linear autoregressive specification:

$$\begin{aligned}\text{Terrorism}_{i,t} &= \sum_{j=1}^{2} \alpha_j^1 \text{Terrorism}_{i,t-j} + \sum_{j=1}^{2} \beta_j^1 \text{Insurgency}_{i,t-j} \\ &+ \sum_{j=1}^{2} \gamma_j^1 \text{State Violence}_{i,t-j} + \zeta_i^1 + \delta_{c(i),t}^1 + \epsilon_{i,t}^1,\end{aligned} \tag{1}$$

where the subscript i stands for organization-state pairs (or organizations since the state is uniquely determined by the identity of the organization). We include two lags of the dependent variable $\text{Terrorism}_{i,t-j}$ with $j = 1, 2$ (a dummy variable for the occurrence of lethal terrorist attacks by organization i in year $t - j$) to capture the persistence of violence. Our main coefficients of interest in this equation are the coefficients on the two lags of $\text{State Violence}_{i,t-j}$ with $j = 1, 2$ (a dummy variable for the occurrence of lethal state violence against organization i in year $t - j$). The two lags of the variable $\text{Insurgency}_{i,t-j}$ with $j = 1, 2$ (a dummy variable for the occurrence of lethal insurgency actions by organization i in year $t - j$) can alternatively be considered mere controls. The ζ_i^1s are organization fixed effects, and the $\delta_{c(i),t}^1$s are country$\times$year fixed effects, with $c(i)$ denoting the country of organization i. The inclusion of all these fixed effects should attenuate any possible omitted variable bias. In this respect, country-year fixed effects are essential because they incorporate a large number of observed and unobserved country-specific conjuncture factors, such as GDP per capita and the general circumstances in neighboring countries. Organization-specific fixed effects, ζ_i^1, allow us to control not only for the myriad fixed characteristics of each organization but also for many of its strategies that are often stable over time, such as being involved in local service provision.

Similarly, we specify the following equation for the organization strategy 'Insurgency':

$$\begin{aligned}\text{Insurgency}_{i,t} &= \sum_{j=1}^{2} \alpha_j^2 \text{Terrorism}_{i,t-j} + \sum_{j=1}^{2} \beta_j^2 \text{Insurgency}_{i,t-j} \\ &+ \sum_{j=1}^{2} \gamma_j^2 \text{State Violence}_{i,t-j} + \zeta_i^2 + \delta_{c(i),t}^2 + \epsilon_{i,t}^2,\end{aligned} \tag{2}$$

again with organization and country$\times$year fixed effects (ζ_i^2 and $\delta_{c(i),t}^2$, respectively). Finally, to investigate the response of the state to violence from the organizations, we specify a comparable linear equation:

$$\begin{aligned}\text{State Violence}_{i,t} &= \sum_{j=1}^{2} \alpha_j^3 \text{Terrorism}_{i,t-j} + \sum_{j=1}^{2} \beta_j^3 \text{Insurgency}_{i,t-j} \\ &\quad + \sum_{j=1}^{2} \gamma_j^3 \text{State Violence}_{i,t-j} + \zeta_i^3 + \delta_{c(i),t}^3 + \epsilon_{i,t}^3,\end{aligned} \tag{3}$$

where the two lags of the dependent variable capture the inertia in State Violence. Here, the lags of the explanatory variables Terrorism and Insurgency describe the strategies of the organization to which the state may respond. In all these equations, α_j^k, β_j^k, and γ_j^k are parameters to be estimated. The ϵ_j^ks are error terms subject to suitable semiparametric restrictions that are discussed below. Under these specifications and without accounting for equation-specific missing values, the system of equations is akin to a VAR model of order two, augmented with relevant fixed effects.

We first use a fixed-effect estimation technique, which requires strict exogeneity assumptions for the error terms, i.e.,

$$E[\epsilon_{i,t}^k | Y_{i,t-1}^k, Y_{i,t-2}^k, X_{i,t-1}^k, X_{i,t-2}^k, \zeta_i^k, \delta_{c(i),t}^k] = 0 \tag{4}$$

for all i and t, and $k = 1, 2, 3$, where $Y_{i,t}^k$ is the dependent variable in equation k for organization i and year t and $X_{i,t}^k$ is the vector of nonfixed explanatory variables in equation k for organization i and year t. Note that this conditioning includes two distinct types of fixed effects as opposed to the condition for within-group estimators. Under the stated assumptions, not only is this estimator consistent when the number of organizations N goes to infinity, but it is also consistent when the number of periods T goes to infinity while N is fixed (Arellano, 2003). Therefore, we benefit from the non-negligible number of years (25) over which the organizations are followed. These fixed-effect estimations are informative regarding dynamic partial correlations among the violence variables even if, because of the presence of the lagged dependent variable, the strict-exogeneity restriction may not be satisfied, for example, if some error terms are serially correlated.

As a reply, not only to this issue but also to the possible endogeneity bias perhaps resulting from reverse causality and omitted variables, we also make use of a first-differenced generalized method of moments (DGMM), which yields our preferred estimations. For this, we first demean the variables from their country-year mean. In other words, we regress the variables Terrorism, Insurgency, and State Violence on the full set of country×year dummy variables and compute the residuals of these estimations. Then, the residualized data are further transformed into first differences to eliminate the organization fixed effects.

Such preliminary purging of effects, especially for fixed effects, is common in econometrics.[19] We

[19]For example, in Head, Lloyd-Ellis, and Sun (2014) or with the 'td' option in the 'pvar' command of Stata.

follow this approach for the DGMM because it simplifies the estimation procedure. However, this implies neglecting the potential correction of the estimates of the dynamic coefficients by simultaneously estimating the country×year fixed effects. The trade-off is that this approach allows for decisive simplification of an otherwise numerically intractable optimization estimation problem, which involves not only many local optima but also non-differentiabilities and discontinuities due to the presence of dummy variables associated with the fixed effects. Nevertheless, GMM estimation results can still be obtained by directly estimating all the effects together, including the organization-specific fixed effects and country×year fixed effects, provided that the most insignificant fixed effects obtained in the previous procedure are dropped from the model.[20] Finally, the approach also greatly simplifies the estimation of the asymptotic standard errors of the DGMM. Even so, bootstrapped standard errors are also estimated, clustered by organization, and provide accurate estimates that are very close to those obtained with the asymptotic estimations of standard errors, which is reassuring.[21]

For the implementation of the DGMM, the error term of the first-differenced equation is assumed to be orthogonal to the instrument matrix of the lagged explanatory variables in levels, limited to lags two to four.[22] Specifically, we assume the moment conditions

$$E[\Delta\epsilon_{it}^{k} Y_{i,t-s}^{k}] = 0 \text{ and } E[\Delta\epsilon_{it}^{k} X_{i,t-s}^{k}] = 0 \tag{5}$$

for $k = 1, 2, 3$, $t = 1, \ldots, T$ and $s = 2, 3, 4$, which are the basis of the GMM estimations, where Δ is the first difference operator and here Y and X denote the variables in terms of deviations from the country-year mean. We trim the instrument set to a maximum of four-year lags to avoid instrument proliferation and the degradation of the small-sample properties. In addition, we collapse the instruments for different periods to reduce the instrument count and avoid overfitting the dependent variable, which may lead to a failure to remove its endogenous component, as discussed in Roodman (2009). In this regard, the results of the Hansen overidentification test support that the instrumentation avoids overfitting, with p-values from 0.11 to 0.53 in Table V. Using second-order and higher lags as the instruments is standard, and furthermore, it is supported by the results of the AR(2) tests, which do not reject the absence of second-order correlation in the differenced error terms at the five percent level, with p-values from 0.081 to 0.54, as shown in Table V.[23]

This approach avoids the pitfalls associated with simultaneity on two grounds. First, as the equation does not contain regressors contemporaneous to the dependent variable, all effects that may happen during a year cannot directly generate simultaneity bias. Second, the right-hand side variables

[20] Specifically, we have checked that the DGMM results are identical to those obtained by simultaneously estimating the country×year fixed effects, limited to those that are significant at least at the 10 percent level in the FE estimation. Therefore, the preliminary purging of effects seems to be innocuous.

[21] The bootstrapped standard errors are obtained via 1,000 bootstrap replications with stratification at the country level. That is, each bootstrap sample has the same number of organizations per country as the original sample.

[22] We trim the sample by dropping the eight organizations with too few periods due to the need for lagged variables in the difference GMM (DGMM)estimations.

[23] See Arellano and Bond (1991).

that could be correlated with omitted contemporaneous regressors are all instrumented in the DGMM estimations. However, if they had been included, the contemporary effect could have been substituted to yield a VAR-type system of equations. Then, an alternative interpretation of System (1)-(2)-(3) is that it is a reduced-form specification possibly incorporating some instantaneous strategic responses. Alternatively, contemporary effects could be included in only one equation of the system while excluding them from the other two equations. For example, one could assume that the state would have the capacity and means to give almost immediate responses, whereas the organizations would require more time for internal collective decision making and capacity building before launching an insurrection or a terrorist campaign. In that case, only the state violence equation would be considered to be in reduced form, while the insurrection and terrorism equations would retain their structural interpretation.

Subsequently, we also use these residualized data to estimate fixed-effects panel VAR models based on jointly estimating the parameters of equations (1) to (3).[24] However, because of the stronger orthogonality conditions necessary in the case of the panel VAR, we prefer to keep the previous estimations as our baseline. In addition, the panel VAR estimations yield similar results.

4 Results

Table V contains our baseline results. The fixed-effect estimates are shown in the odd-numbered columns, and the difference GMM estimates are shown in the even-numbered columns. The proximity of the fixed-effect and DGMM results regarding the magnitude and significance of the coefficients may be an indication that endogeneity issues do not overly contaminate the equations estimated with these data. All columns contain a full set of country×year fixed effects, which are estimated for the fixed-effect estimator columns (1, 3, 5), while they are differenced out for the DGMM columns (2, 4, 6). Asymptotic robust standard errors are displayed in parentheses. For the DGMM estimations, bootstrapped standard errors are displayed in brackets. In practice, significance tests using any of the standard error estimators give the same inference results in our baseline specification.

4.1 The terrorism equation

Columns 1 and 2 display the FE and DGMM estimates of Equation (1), respectively, where the dependent variable is Terrorism by organization i and year t. The autocorrelation coefficient of the variable Terrorism is precisely and closely estimated with the two methods (0.2226 with FE and 0.1984 with DGMM). Clearly, there is a nonnegligible degree of persistence in terrorism beyond the persistence already accounted for by the fixed effects, while it is far from dominating the other effects. The coef-

[24] Enders and Sandler (1993) is a seminal paper for the use of VAR estimation in the field of terrorist studies.

ficients for the second-order autocorrelation are also positive, although insignificant at conventional levels.[25]

A consistent finding concerns the coefficient on the variable Insurgency_{t-2}, which is estimated at 0.12 for FE and 0.15 for DGMM and is significant at the five percent level. Namely, given the general tendency of an organization and of other organizations in the same country and same year to use terrorism, as captured by the fixed effects, it is more likely that this organization will use terrorism if it had been engaged in insurgency two years earlier. The estimated FE coefficient on the variable Insurgency_{t-2} in Column 1, which is 0.1175, implies that a one-time change from no insurgency to insurgency by an organization generates an approximately twelve percent increase in the probability of engaging in terrorism two years later. This is consistent with the rebel tactics analyzed in Bueno de Mesquita (2013).

The coefficients for the response of terrorism to state violence, although insignificant in the fixed-effect estimation, are slightly significant in the DGMM estimates for 'State Violence' at t-1 and t-2, albeit negatively. This negative sign may hint at the eradication of terrorist groups by violent state repression or at least the degradation of the capability of the violent organization, thus preventing further attacks or deterring attacks. In that case, the estimated effects may reveal direct damages inflicted by state violence rather than deliberate strategic responses by the organizations. The fragility of the terrorism response to state violence may also be related to terrorism being popular and efficient when limited, but not any more above a threshold level, at which point the targeted populations may harden their stance (Gould and Klor, 2010).

Some organizations included in Figure I have a strategy time profile that suggests a transition from insurgency to terrorism. For example, this is the case for the Supreme Council for the Islamic Revolution in Iraq and its military wing the Badr Brigade (Shi'a, Iraq) and for the Popular Front for the Liberation of Palestine–General Command (Palestinians, Lebanon), led by Ahmed Jibril, a splinter group from the PFLP more focused on military action. A comparable pattern is also noticeable with Amal (Shi'a, Lebanon).

4.2 The insurgency equation

Columns 3 and 4 show the estimation results for insurgency equation (2) based on the FE and DGMM estimators, respectively. Both estimates of the first-order autocorrelation coefficient are substantial and highly significant (0.41 for the FE estimation, 0.49 for the DGMM estimation), approximately twice the magnitude of the corresponding coefficient in the terrorism equation. Once insurrection is supported by an organization, it is likely to last for several years.

Unlike the previous equation, we observe a positive and significant coefficient on the response

[25] However, terrorism rapidly fades away in general, as in the cases of the Progressive Socialist Party (Druze, Lebanon) led by Walid Jumblatt, son of founder Kamal Jumblatt, and Al Sa'iqah (Palestinians, Lebanon).

of insurgency to state violence in the fixed-effect estimates equal to 0.076 and equal to 0.122 with DGMM. An organization is therefore more likely to use insurrectional violence against the military and the police forces if the state targeted it violently in the previous year. The FE estimate implies that a one-time occurrence of state violence sparks a 7.6 percent rise in the probability of insurgency the next year, everything else equal. Assuming a permanent change, dividing the sum of the short-run coefficients by the adjustment for the AR(1) and (2) coefficients yields a long-run increase of 15.2 percent.[26]

Therefore, the results indicate a definitive insurgency response to state violence. The history profiles, displayed in Figure I, of the Kurdistan Socialist Democratic Party (Kurds in Iraq) and Hizb al Da'wa al-Islamiyya (Shi'a in Iraq) are consistent with this mechanism. This is also the case for the Islamic Da'wa Party founded in 1958, which is one of the main two Shi'a parties in Iraq, along with the Supreme Council. This party supported the Iranian revolution and received funding and assistance from Ayatollah Khomeini in return. All its members were sentenced to death by the Ba'ath regime of Iraq. Later, they attempted to kill Saddam Hussein in 1982 in Dujail, which resulted in fierce repression by Hussein's regime with approximately 145 fatalities.

4.3 The state violence equation

Finally, in columns 5 and 6, we consider the violent response of the state against any organization i in the same country in year t, according to equation (3). The pattern of the estimated coefficients resembles that in the previous two columns. First, state violence exhibits a certain degree of persistence. The AR(1) coefficient is positive and significant at the one percent level in both equations, with an estimated value of 0.19 in the fixed-effect estimation in Column 5 and of 0.27 in the DGMM estimation in Column 6. There is also a strong tendency for the state to respond to insurgency led by the organization, as shown by the positive and significant coefficients on the lagged Insurgency variables (0.17 and 0.23 for the FE and DGMM, respectively).

These findings indicate an asymmetric situation, where the state responds more vigorously to violence than organizations do, perhaps because it is stronger and has a greater ability to act militarily. We also consistently find a limited positive strategic response to terrorism, with smaller coefficients of 0.055 and 0.064, respectively, which are only significant at the 10 percent level in the fixed-effect equation and are insignificant at conventional levels in the DGMM equation. Less systematic state responses in that case may stem from the nature of terrorist actions, which sometimes mask their perpetrators, who are therefore harder to target.

The FE coefficient estimate of the lagged Insurgency variable in Column 5, which is 0.1699, implies that a one-time occurrence of insurgency generates a 17 percent rise in the probability of state vi-

[26] In Column 4, we further restrict the lag length of the instruments to $s = 2, 3$ for the sake of the Hansen instrument validity test. The results are the same without this restriction, although the p-value of the Hansen test is 0.087.

olence the next year, everything else equal. Assuming a permanent change, by dividing the sum of the short-run coefficients by the adjustment for the AR(1) and (2) coefficients, we obtain a long-run increase of 19.6 percent. Therefore, there are substantial responses from states to insurgency. Some of the observed strategy profiles in Figure I are consistent with this mechanism, such as that for The Organization of the Revolutionary Toilers of Iranian Kurdistan, which was involved in the Kurdish rebellion in Iran, and that for the Kurdish Democratic Party of Iran. Finally, it is plausible that part of the response of the state could be almost immediate within the same year and would therefore escape the estimation. Such occurrence should reinforce the magnitude of the estimated responses, which therefore can be seen as a lower bound.

In addition, considering equations (1), (2), and (3) as a joint dynamic system may provide additional insights into the dynamic properties of this system, which depend on the eigenvalues of the corresponding transition matrix. The matrix of the stacked coefficients for the estimated dynamic system (FE estimates in columns 1, 3, and 5) has six eigenvalues with complex moduli of 0.4958, 0.2668 (twice), 0.1139 (twice), and 0.1095. For the DGMM estimates in columns 2, 4, and 6, the corresponding moduli are 0.6481, 0.3514 (twice), 0.1833 (twice), and 0.1578, respectively. As these eigenvalues are all inside the unit circle, the system converges to a unique steady state determined by the fixed effects.

4.4 Panel VAR estimates and impulse response functions

Table VI contains our fixed-effect panel VAR estimates of equations (1) to (3), computed using the estimator of Holtz-Eakin, Newey, and Rosen (1988).[27] A potential advantage of simultaneously estimating all equations is the efficiency gain stemming from accounting for correlations among the errors of the different equations. However, the sample must be truncated to 1,373 observations because of missing values. Nevertheless, the estimated panel VAR is useful for estimating impulse response functions easily. In addition, the country$\times$year fixed effects are again taken into account through prefiltering.

Columns 1 to 3 display the estimates of the exactly identified system when lags 1 to 2 are used as instruments. Columns 4 to 6 display the corresponding results with lags 1 to 3. We obtain results similar to those in the previous subsections in terms of the sign, magnitude and significance of the main coefficients.

In particular, in the terrorism response equation, the coefficient on Insurgency_{t-2} is significant at the five percent level (value of 0.163 in Column 1 and 0.133 in Column 4), and the coefficient on $\text{State Violence}_{t-1}$ is negative— -0.131 and -0.126—and significant at the five percent level with robust standard errors. In the insurgency and state violence equations, we again find positive and significant

[27] This estimation method requires several steps. First, a quasi-differentiation of the data is performed to eliminate all individual effects. Second, the sample periods are truncated to ensure identifiability with lagged internal instruments. Third, the quasi-differenced model is multiplied by the matrix of instruments. Fourth, a generalized least-squares estimation is conducted. The variance-covariance matrix for the GLS step is estimated by using preliminary 2SLS estimates for each time period.

coefficients for a cycle of violence, i.e., mutual responses, at least at the five percent level. Specifically, the coefficients on State Violence$_{t-1}$ are 0.136 and 0.0954 in Columns 2 and 5, respectively, and the coefficients on Insurgency$_{t-1}$ are 0.252 and 0.215 in Columns 3 and 6, respectively. Moreover, these two variables have positive and significant AR(1) coefficients.

One should also wonder if the equations for different organizations in the same country could be further connected, for example, through systematic reaction rules of the state uniformly applied to all organizations or to coalitions of several organizations, or even substitutionality or complementarity relationships across organizations in the same country. However, our attempts to obtain such effects in our estimation trials led to insignificant results, perhaps partly because of the limited sample size within each country. Moreover, examining the strategy profiles of the organizations for each country, as in Figure I, does not seem to reveal blatant substitutions or complementarities across organizations.

The estimates of the impulse response functions, displayed in Figure II, summarize the global dynamic properties of the estimated system from Columns 4 to 6. The dashed lines indicate the 90 percent confidence bands. The considered shocks are 20 percent shifts in the probability of moving from peace to violence in terms of the examined strategy.

In the long run, e.g., after 10 years, all effects of the shocks are almost fully dampened. However, the mutual response between state violence and insurgency lasts longer than the consequences of other shocks. This persistence justifies qualifying this relationship as a (dampened) cycle of violence. This interpretation is also supported by the results of Granger causality tests based on the panel VAR estimates, which show that state violence causes insurgency and vice versa (p-values of 0.065 and 0.005, respectively).[28]

In the short run, these impacts peak after two years before dropping monotonically. Therefore, the responses of organizations last longer than what is directly suggested by examining only the estimated coefficients for Insurgency and Terrorism. The dynamic interactions in the system maintain the heightened level of violence by organizations for a longer duration than what may have been their initial strategic intentions. In contrast, the horizon for terrorism seems to be very short. Panels 3 and 6 (Impulse: State Violence and Response: Terrorism and Insurgency, respectively) illustrate that the shock first increases organization violence, reaching its peak after two years and eventually subsiding. In contrast, Panels 7 and 8 (Impulse: Terrorism and Insurgency, respectively, and Response: State Violence) display a continual dampening of the impact of the shock. The next subsection confirms these main results for a large variety of changes in data, specifications and estimation methods.

[28] We performed Granger causality tests based on the panel VAR estimates. These results support the choice of our main variables and lag structure: 'Terrorism' is Granger caused by 'Insurgency' (p-value = 0.056, corresponding to the shift of violence); 'State Violence' causes 'Insurgency' with a p-value equal to 0.065, and 'Insurgency' causes 'State Violence' with a p-value equal to 0.005. These results are consistent with a dampened cycle of violence generated by violent responses originating in the violence of an opponent. These Granger causality tests do not inform us about causality per se but rather about the joint significance of the dynamic coefficients, and they do not solve the typical endogeneity problems. Even though the results support our analysis, we do not give them a central role, as they may not be robust to specification changes.

4.5 Robustness and extensions

The comparison of the FE and DGMM results shows that they produce effects that are almost always qualitatively similar, although the magnitudes of the response estimates with the DGMM are larger. An exception to this pattern is the significant (at the five percent level) negative response of terrorism to the one-year lag of state violence, which emerges in the DGMM results but not in the FE estimates. Other diverse estimation results, comparable to those shown in Table V and Table VI, are reported in the Online Appendix. They confirm those in the baseline tables. Specifically, in Table A1, we check for small-T sample bias by removing the organizations with short lifespans. This reduces the sample to 73 organizations. Nevertheless, the results are very similar to those of Table V regarding sign and significance.

We also include ethnicity×year fixed effects (instead of country×year fixed effects), as the data include ethnic minorities that are represented by several organizations in some countries. In Table A2, this allows for refined effects, such as the different treatment of distinct minorities by the state. The response of insurgency to state violence becomes insignificant at conventional levels, though still with positive estimated coefficients. However, accounting for the national conjuncture by using country×year fixed effects may seem more important.

We check the robustness of our results to the inclusion of additional diverse controls in Tables A3-A5. In Table A3, we add the controls 'Illegal Organization' to the estimations of Table V. In Table A4, we add a control for non-lethal repression, i.e., 'Ongoing Repression', and in Table A5, we add controls for agreements, the implementation of agreements, and concessions. The construction of these controls is described in the Appendix. Their coefficients are typically insignificant, and their inclusion does not affect our main results.

In Table A6, we estimate a VAR(2) model with the eight variables used in Table V and Tables A3-A5, i.e., Terrorism, Insurgency, State Violence, Illegal Organization, Ongoing Repression, Agreement, Implementation, and Concession. The main results are the same.

In Table A7, we use ordered logit fixed-effect models specifically designed for binary outcome variables (Baetschmann, Staub, and Winkelmann, 2015). We find the same positive and significant responses to the violence of the opponent. In Table A8, we check that our results are not the consequence of outliers. The sample is restricted by removing the five percent of the organizations with the largest residuals in absolute value. The main results pass this test. In Table A9, we verify that the DGMM results are not affected by the simultaneous estimation of the country×year fixed effects, limited to those fixed effects that are significant at least at the 10 percent level in the FE estimation, which indicates that the preliminary purging of the country×year fixed effects is valid.

In Tables A10-A12, we perform estimations with different subsamples. We do not interpret these tables as robustness tests of our main results but rather as an exploration of the heterogeneity in the strategic cases. We limit the lag length of the model to one, and we consider only the fixed effect

estimator because these smaller samples constitute a statistical challenge due to the limited information available. Moreover, we restrict the sample to organizations with a life span of at least 12 years to benefit from the square root of T-convergence. As a consequence, despite estimates that are often suggestive, it seems fair to say that the hazardous boundaries of an asymptotic statistical approach to these data are inspected here.

Table A10 contains the estimation results with country-specific samples for Iraq, Lebanon, and Israel, which are the countries with enough data and variation to yield useful estimates for each of the model coefficients. We find that, on average, organizations in Iraq respond significantly to state violence with insurgency. In contrast, in Israel and Lebanon, we do not find a systematic insurrection response to state violence among organizations, although the state responds violently to insurrection. This result is consistent with the results of Jaeger and Paserman (2006, 2008).

In Table A11, we display minority-specific estimation results for samples of organizations representing the Kurds, Palestinians, Shi'a, and Sunnis in all the countries where they appear. All the main results are present again, although to varying degrees for each minority. We find a positive and significant response of insurgency to state violence for Shi'i organizations (Iraq, Lebanon, and Saudi Arabia). We also find a positive and significant statistical relationship between lagged terrorism and insurgency. For the Sunni organizations (Iran and Lebanon), we find a large positive and significant response of the state to insurgency, as opposed to the insignificant response for the Shi'a. The transfer of violence from insurgency to terrorism is not significant at conventional levels, despite the large magnitude of the estimated coefficient, probably due to the small sample sizes and the one-year lag restriction. For the Palestinians in Israel, Jordan and Lebanon, we find a systematic terrorism response to state violence. For the Kurds in Iran, Iraq, and Turkey, we find a negative relationship between lagged terrorism and state violence.

In Table A12, we divide the sample according to the type of organization: religious, ethnic, or nationalist. Religious organizations are those that 'advocate policies that incorporate religion into public life', ethnic organizations are those which 'have claims related to ethnicity but no claims to autonomy or independence', and nationalist organizations are those which 'have nationalist claims to autonomy or independence'. The category that displays the most significant effects is the one with the 46 ethnic organizations. All the main effects are present, although sometimes only at the 10 percent level. Comparing the estimates of the non-religious vs. religious organization subsamples, we find a state response to insurgency for the non-religious organizations but not for the religious organizations. In the non-nationalist organization subsample, we observe a state response to both insurgency and terrorism, in contrast with the insignificant response of the state to the nationalist organizations. Finally, there is some evidence of sequentiality from lagged terrorism to insurgency in the religious and non-nationalist subsamples.

In the next section, we supplement the raw discussion of the estimated correlations with strategic interpretations. Although this sort of commentary is common in narratives in the literature, we

propose a new method to lend it some formal justification. To do this, we now match the most salient empirical results, namely, the presence of state violence-insurgency cycles, with an analytical framework that we explore.

5 Matching the Empirical Results and the Analytical Framework

5.1 General principles

Our identification method is based on two features of the sixteen 2×2 one-shot normal form games in Figure III: (1) the Nash equilibria and (2) the preference ordering of each player as a function of each given decision of its opponent. When discussing the theory thus, we focus on analyzing the strategic relationship between state violence and insurgency. The case of terrorism is discussed in subsection 5.5.

By assuming a preference for nonviolence as a disambiguation device, sixteen separate types of strategic forms can be distinguished, which are the ones depicted in Figure III. These matrices represent simultaneous-move games of two players, each of whom have two possible pure strategies, Peace or Violence. One player is the government (or 'state'), which selects its strategy vertically on the matrix, while the second player is the organization, which chooses horizontally.[29] Each square contains two *ordinal* payoffs corresponding to the state and the organization, respectively. The theoretical best responses of each player are indicated with thick arrows, and the Nash equilibria (NE) are encircled. Each best-response arrow shows the strategic choice of one player given the strategy chosen by the other player.

As mentioned before, we deliberately neglect potentially important elements of game theory models such as information structures, beliefs, commitment issues, repeated games, the timing of decisions, long or infinite horizons, the selection of solution concepts, the aggregation of individual preferences within groups, negotiations and transfers across coalitions of agents, comparisons of military capacities, and other constraints. Indeed, these features of strategic conflicts are not observed precisely for most of the state-organization pairs in the data used or in other databases that would cover all MENA countries. Such a dearth of data is acknowledged in Anderton and Carter (2009): *"The challenge presented to social scientists when testing these models is that expectations and the private information on which they rest are unobservable"*(p.89). Moreover, the identification conditions for sophisticated games of incomplete information proposed in the theoretical literature are unlikely to be satisfied in typical data.[30]

Under these conditions, our parsimonious approach is useful. By design, we restrict the analysis

[29] We keep the convention of denoting the pair of strategies in the order State-Organization throughout.

[30] See, e.g., de Paula and Tang, 2012 and Aguirregabiria and Mira, 2019. Finally, Salant and Cherry (2020) consider games in which the players themselves can conduct statistical inference about their opponents' actions.

of the dynamic correlations among violent strategies to the simplest structural framework that can be elaborated from game theory while keeping open a priori the question of the involved strategic types. This is the data that will determine the most relevant strategy types, on average. Examining simple strategic patterns helps us to focus on a few fundamentals of conflict dynamics in a kind of theoretical reduced-form approach. In this framework, basic rationality hypotheses contribute to making sense of the observed violent dynamic responses of agents.

5.2 Matching estimates to Nash equilibria

The first stage of the analysis consists of matching the games in Figure III to the DGMM estimates by referring to Nash equilibria. There are several motivations for scanning the Nash equilibria. First, the common focus on Nash equilibria in the literature is already a device that is often used to avoid specifying precise and arbitrary timing and procedures. Second, while there is no hope of being able to identify any complex model from the limited information available, Nash equilibria may be easier to diagnose. Third, there are theoretical reasons to believe that some outcomes of sophisticated games may often be indeterminate. For example, the folk theorem implies that subgame-perfect Nash equilibria can generate almost any feasible and individually rational average payoffs in repeated games, provided that the discount factor tends to one. Therefore, restricting attention to Nash equilibria in basic one-shot games may assist in generating useful insights.

Moreover, there are observational and econometric reasons why the Nash equilibrium is an attractive notion in our case. On the one hand, this view is consistent with many organizations never being observed in violent conflict against the state (listed in Table A13 in the Online Appendix), as would be the case if the Nash equilibrium is (Peace, Peace). On the other hand, stable situations, hence consistent with a Nash equilibrium from which no player has an incentive to deviate, can be well captured by fixed-effect components in panel models. One expects low (high) estimated fixed effects for the organizations that are never (always) observed as using and suffering violence.

Permanently peaceful cases occur for 57 out of the 110 organizations in the estimation sample. Compared to the average, the political orientation of these organizations leans democratic, often with leadership in the form of a council. Similarly, a few organizations are almost always observed fighting and being attacked by the state. These can be deemed to be firmly locked in a violent equilibrium. This is the case for the Partiya Karkari Kurdistan (PKK, Kurds, Example 3 in Table IV, Turkey), for both pairs of strategies State Violence-Insurgency and State Violence-Terrorism; the Supreme Council of the Islamic Revolution in Iraq (Example 7), for State Violence-Insurgency and prior to 1999 only; and Hamas (Example 15, Israel) for the strategy pair State Violence-Terrorism. Indeed, Panel 3 of Figure I suggests that the Turkish state and the PKK, a Kurdish party founded by Abdullah Ocalan in 1978 that at one point had over 30,000 fighters, stand in a violent equilibrium. In Panel 15, the state of Israel and the Palestinian party Hamas appear to be locked in a violent equilibrium characterized by terrorism. Hamas is a Sunni Islamist organization founded during the first Intifada in 1987. Its military

wing is the Izz ad-Din al-Qassam Brigade, whose violent tactics include suicide bombings and rocket strikes.

A Nash equilibrium can also describe stable but unilateral violence.[31] In Figure I, two Lebanese organizations can be reckoned to be at the unilateral-terrorism equilibrium: the South Lebanon Army (Example 9) and Hezbollah (Example 12). Underlying games that would illustrate this situation are games 9, 13, and 15, for which Peace by the state and Violence by the organization is a Nash equilibrium. The South Lebanon Army (Maronite Christians, Panel 9 of Figure I), the forces of which reached 5,000 fighters, may be associated with a unilateral violence equilibrium, mostly of terrorism. This organization, backed by Israel, fought Palestinian groups in South Lebanon before retreating in 2000. The case of Hezbollah (Shi'a, Panel 12), led by Hassan Nasrallah and initiated by Iran with the support of Syria to fight Israel, is similar. The absence of a response from the state in these two cases may be due to the weakness of the Lebanese army during that period.

An absence of equilibrium is also theoretically possible, such as for the 'Endless Cycle' case (Games 7 and 10), according to which one should observe alternating configurations of violent outcomes. These games are strategically equivalent to the well-known games 'Matching Pennies' and 'Land and Sea', in which an attacker chooses between two locations of attack, and the defender guesses where to fortify its position. This case conforms with the observed strategy profile of the Iraqi Communist Party (Shi'a, Iraq), which was episodically targeted by crackdown operations from the Ba'ath regime of Saddam Hussein, and of the Democratic Front for the Liberation of Palestine. Both organizations experienced erratic changes in violent outbreaks and repressions.

As mentioned before, we first restrict the analysis to the pair of strategies State Violence and Insurgency. Their correspondence with the data is devised as follows. The Nash equilibrium is matched with its mean empirical analogues. However, the individual Nash equilibrium notions for each organization have to be replaced by their average equivalents over the population of organizations and states. That is, we can mostly estimate mean relationships that will represent an average game structure as a kind of central tendency of the (possibly reduced-form) strategic relationship between opposing states and organizations in the MENA countries.

To do this, five alternative analogues are considered: (a) the mean violence level of each agent over the whole period studied ($N^{-1}\sum_t S_{i,t}$ and $N^{-1}\sum_t I_{i,t}$), (b) the mean estimated idiosyncratic fixed effect of each agent during the period studied (sums of $\widehat{\zeta_i^2}$ and $\widehat{\zeta_i^3}$), (c) the mean estimated sum of idiosyncratic and country-year fixed effects ($\hat{\zeta_i^2} + \hat{\delta}^2_{c(i),t}$ and $\hat{\zeta_i^3} + \hat{\delta}^3_{c(i),t}$) (for each country and year, country-year fixed effects are estimated with the main estimated country-year fixed effects summed over all the country's organizations observed for the year), (d) the extrapolated convergence point of each agent's strategy when T goes to infinity ($\lim S_{i,t}$ and $\lim I_{i,t}$ as $t \to \infty$) (For each state-organization pair, the sum of all the estimated fixed effects is recovered, which also provides a basis for

[31] Six games have a unilateral violence equilibrium: 'Hegemony' (Games 3 and 9), 'Hegemony Type' (Games 4 and 13), and 'Asymmetric Unilateral Violence' (Games 12 and 15).

the out-of-sample years in the forecast horizon of 500 years. Using the estimated system of equations, a prediction is computed iteratively year-by-year for the three strategic dependent variables, and convergence is easily reached), and (e) each agent's permanent equilibrium in the estimated model (S_i^* and I_i^*).

The first three items are straightforward. The fourth one can be estimated using a sequence of predictions obtained from the estimated model. The last alternative deserves more discussion, in particular because it fits the definition of the Nash equilibria as characterizing stable optimal responses of the players well. The reasoning is as follows. Let us assume, for simplicity, that we had estimated the following system:

$$I_{i,t} = a + \beta_1^2 \, I_{i,t-1} + \beta_2^2 \, I_{i,t-2} + \gamma_1^2 \, S_{i,t-1} + \gamma_2^2 \, S_{i,t-2} + \epsilon_{i,t}^2$$

and

$$S_{i,t} = b + \gamma_1^3 \, S_{i,t-1} + \gamma_2^3 \, S_{i,t-2} + \beta_1^3 \, I_{i,t-1} + \beta_2^3 \, I_{i,t-2} + \epsilon_{i,t}^3,$$

where $I_{i,t}$ is the insurgency variable and $S_{i,t}$ is the state violence variable. To simplify the exposition, the coefficients a and b include all the controls and fixed effects. The coefficients γ_1^2 and β_1^3 characterize the observable short-term responses of the organization and the state to their opponents, respectively. Below, we associate these coefficients with short-term adjustments related to preferences. However, we are currently interested in defining stable responses. Our aim is therefore to separate stable responses from transient responses.

Time-invariant responses may be more interesting here than long-term estimates since violence may disappear in the long term and, as a matter of fact, does disappear after a few years for most observed organizations. Let us denote the equilibria corresponding to these time-invariant responses as 'permanent' equilibria. The consideration of permanent equilibria is also consistent with our favored use of the one-shot game representations that do not easily allow for rich dynamic strategic features. In such a permanent equilibrium, $I_{i,t}^* = I_i^*$ and $S_{i,t}^* = S_i^*$ for all t and i.

Under these conditions, the above system can be used to compute explicit time-invariant response functions:

$$I_i^* = \frac{a + (\gamma_1^2 + \gamma_2^2) \, S_i^*}{1 - \beta_1^2 - \beta_2^2}$$

and

$$S_i^* = \frac{b + (\beta_1^3 + \beta_2^3)\, I_i^*}{1 - \gamma_1^3 - \gamma_2^3}.$$

Therefore, the permanent equilibrium response coefficients, $A = (\gamma_1^2 + \gamma_2^2)/(1 - \beta_1^2 - \beta_2^2)$ and $B = (\beta_1^3 + \beta_2^3)/(1 - \gamma_1^3 - \gamma_2^3)$, as well as their standard errors, can be calculated from our estimates. The following permanent equilibrium values can also be deduced:

$$I_i^* = \frac{a(1 - \gamma_1^3 - \gamma_2^3) + b(\gamma_1^2 + \gamma_2^2)}{(1 - \beta_1^2 - \beta_2^2)\,(1 - \gamma_1^3 - \gamma_2^3) - (\beta_1^3 + \beta_2^3)\,(\gamma_1^2 + \gamma_2^2)}$$

and

$$S_i^* = \frac{a\left(\beta_1^3 + \beta_2^3\right) + b\left(1 - \beta_1^2 - \beta_2^2\right)}{(1 - \beta_1^2 - \beta_2^2)\,(1 - \gamma_1^3 - \gamma_2^3) - (\beta_1^3 + \beta_2^3)\,(\gamma_1^2 + \gamma_2^2)}.$$

The row 'Nonlinear p-test' in Table V contains the p-values of the nonlinear test of the corresponding response coefficients A and B in the second-order model. They range from 0.0064 to 0.0264. Finally, since the estimated values of A and B are positive and significant, we can restrict our attention to games with symmetric Nash equilibria, which are Games 1, 2, 5, 6, 8, 13, and 16.

Since the DGMM and within-group estimates are very close, we compute the criteria from the latter, which is easier. Examining the deciles of each criterion (not shown) informs us of the potential heterogeneity in violent responses. The diversity of the distributions of the criteria illustrates the potential ambiguity of the measurement of strategic responses from observed behavior. The absence of violence dominates when using criterion A, i.e., the mean violence level (more than 70 percent for organizations and more than three-fifths for states). Although there are a majority of positive values for all the other criteria, criteria B and C, which are directly based on fixed effects, are characterized by a substantial proportion of negative values (more than 60 and 30 percent for the organizations, respectively, and more than 70 and 20 percent for the states). Similar observations can be made for criteria A, B and C associated with the states.

The estimates of criterion B, based on the organization's fixed effect, are not constrained to be centered (as would be the case for random effects) or to be positive. In fact, under the standard hypotheses associated with the use of the within-group estimator, the fixed effect estimator is unbiased in that the true fixed effect value can have any sign. Consistency is obtained only when the number

of periods goes to infinity. However, since we observed the organizations over a number of periods, failure to converge is not a plausible explanation for the negative signs in criterion B. Considering the explanatory factors in the estimated equations, it is natural that the estimated fixed effects can take any sign. In these conditions, criteria A and B are more useful as depictions of the intrinsic tendency towards violence of an organization than as measures of its retaliatory responses. Although using criterion C to gather all fixed effects for a given organization reduces the proportion of negative values, it is still ill-fitted for measuring violent responses to violence. These criteria measure something else and could be misleading when studying these responses.

The linear correlation coefficients offer a summary picture of the similarities between the five criteria studied for defining responses at a Nash equilibrium. All criteria are positively correlated, while they remain clearly distinct, at least for the first four criteria. The highest correlation coefficient is for pairs D and E, at 0.9876 for insurgency and 0.9968 for state violence. In contrast, A, B, and C are relatively unconnected with coefficients in the range of 0.70-0.75 for insurgency and 0.70-0.84 for state violence.

The results suggest that all criteria may be related to the average violent responses at equilibrium, although with distinct meanings. To further analyze the relationships between the five criteria, we consider the cross-plots in Figures IV and V. Our preferred criterion is E, as it seems to delineate more faithfully the response connotation that is associated with Nash equilibria. From this standpoint, the other criteria could be seen as providing rather imperfect approximations or distinct notions. Nonetheless, for all criteria, the measured tendency towards violence, at equilibrium, is much stronger, i.e., more systematic, for the states than for the organizations for which there is a non-negligible number of negative tendencies, as shown in the plots.

A valuable outcome of all these graphs is that they show well that having a dynamic model of violent responses to violence allows us to capture these phenomena much better than do criteria that directly measure general levels of violence, which are more typical in the literature. In the graphs for the organizations, crossing criterion A with criterion B or C shows that the positive observations of A are very strongly and positively linked to these criteria based on the fixed effects. Moreover, there are many negative B values for observations with A equal to zero. In contrast, C is generally positive, even for observations with A equal to zero. Therefore, the negative signs in criterion B are largely redressed when grouping all the fixed effects together in criterion C.

On the other hand, the 'structural' criteria D and E, which explicitly incorporate the modeling of the dynamic responses, are very positively correlated in their common graph. Therefore, we can comment on them together. The observations for which criteria A is equal to zero correspond to the low but positive responses described by D and E. Observations for which criteria A is different from zero are positively associated with D and E, though this link is very heterogeneous, with only relatively few observations remaining. Both fixed effects-based criteria, B and C, are positively correlated with the structural criteria D and E. This reflects the fact that the most violent organizations and states are also

the ones with the fiercest responses to violence. However, this may also stem from the heterogeneity that is captured mostly in the fixed effects of the estimated equations. Subsection 5.4 shows that incorporating heterogeneity into the response coefficients does not substantially change these general conclusions either.

When moving to the cross-plots of the criteria characterizing the state, similar patterns of the correlations between the respective criteria emerge. There is still some heterogeneity but of a different kind than for the organizations, which justifies the distinct modeling in Subsection 5.4. In addition, there are a few negative responses, including when using the two structural criteria, D and E.

It now remains to incorporate the information from the short-term responses into the analysis.

5.3 Matching data to short-term responses

Our identifying hypothesis is that the arrows in the matrices of Figure III correspond to observed short-term optimal adjustments. Therefore, in the estimated equations, it is assumed that the response of a player to a specific strategy of its adversary may take approximately one or two years. Of course, other interpretations of these lags are possible (e.g., random shocks shifting players out of equilibrium, nonrational moves, nonstrategic mechanisms), although we assume that such perturbations cancel out on average. This identifying approach is consistent with coordination delays and transient shocks but probably not with changing beliefs or with some unobserved permanent shocks to preferences, constraints or endowments. However, it provides a convenient analytical frame of reference.

There are good reasons to believe that there may be delayed optimal adjustments to Nash equilibria. For example, nothing guarantees that the aggregated decision-making process within a group can instantly adjust to a Nash equilibrium, and this is true for the state as well as for the organizations. Moreover, conflict may arise from mistaken beliefs about the hostility of the opponent, and these beliefs may be corrected over time. Finally, transient shocks to preferences, constraints or the environment may temporarily nudge the strategic system out of equilibrium. In addition, the latter explanation could be consistent with some observed transitory spells of violence.

Since we are chiefly interested in the observed violent responses of the state and the organizations to their respective opponent, assuming delayed adjustments in strategic games fits the empirical results that include temporal lags well. One advantage of this view is that, in parallel, explanations for the departure from an equilibrium can be suggested from strategic shifts that can be deduced from any given normal form matrix. For instance, in Game 6 (the Stag Hunt game), an exogenous deviation from Peace by one of the parties may shift the best-response equilibrium to bilateral violence. Likewise, under this perspective, the transition from rebellion to terrorism, or the shifts between violence and nonviolence, may be interpretable as transient changes before a return towards a Nash equilibrium. This is interesting because some normal forms can be excluded, on average, by examining the data. For example, in the case of the prisoner's dilemma, the responses indicated by the arrows in the

normal form correspond to two intrinsically violent players. That is, all responses are in the direction of increasing violence, regardless of the situation. This is not what is observed in our data on average, despite the popular use of this game in the conflict literature.[32]

We can distinguish four response patterns in Figure III: (i) the *Intrinsically Peaceful* responder chooses Peace as a dominant strategy, (ii) the *Tit-for-Tat* responder prefers to be peaceful when faced with a peaceful opponent but responds violently to violence, (iii) the *Coward-and-Bully* responder abuses peaceful opponents with violence but ceases to be violent when targeted, and finally, (iv) the *Intrinsically Violent* responder chooses Violence as a dominant strategy. Rows 1-4 show organizations of type (i)-(iv), respectively, and Columns 1-4 show a state of type (i)-(iv), respectively.

Under the stated views, these response types can be identified from the sign of the estimated short-term responses to the adversary's violence. Essentially, a Tit-for-Tat responder corresponds to a positive response; i.e., when the violence of its opponent increases, it changes its behavior from nonviolence to violence. In contrast, the Coward-and-Bully type corresponds to a negative response function; i.e., when the opponent augments its violence, the Coward-and-Bully type will reduce its own violence. For the Intrinsically Violent and the Intrinsically Peaceful types, the strategy is not affected by a change in the strategy of the opponent. For these latter two types, a dominant strategy is chosen irrespective of the strategy of the opponent and corresponds to an insignificant response to violence.

It is now possible to mobilize the information from the estimated short-term responses as a final discrimination step. Indeed, since the estimated short-term response coefficients γ_1^2 and β_1^3 are both significant and positive, one should have, on average, the following directions of the arrows in the normal form matrix.

For the horizontal player (state):

- In the left column, upwards (peaceful response to peace),
- In the right column, downwards (violent response to violence).

For the vertical player (organization):

- In the top line, towards the left (peaceful response to peace),
- In the bottom line, towards the right (violent response to violence).

In Section 4, we empirically found significant positive short-term responses of Insurgency to State Violence and vice versa. Some strategic form matrices correspond better to these positive correlations of degrees of violence between the two players. Previously, we mentioned that the games with

[32]For instance, in Acemoglu and Wolitzky (2014); Hirshleifer (1991, 1995); Jackson and Morelli (2011); Padro i Miquel and Yared (2012); Schneider, Brück, and Meierrieks (2015).

equilibria on the main diagonal, i.e., 'Peace-Peace' and 'Violence-Violence', which are Games 1, 2, 5, 6, 8, 13, and 16 in Figure III, fit this requirement well from a permanent viewpoint. However, additionally matching the signs of the short-term dynamic responses with the arrows within the normal forms to identify violent behavior patterns points towards Game 6, which is the Stag Hunt game.

Alternatively, in a model with several lags, several of these coefficients on the lagged opponent strategies can be combined to define a different kind of short-term response (which therefore extends to two years in that case). In these data, this does not change the identified aggregated game, which is still the Stag Hunt game.

We have therefore established that the only 'average' solution that matches both the permanent and short-term patterns of responses is the Stag Hunt game. This suggests that coordination issues may dominate the violent relationship between states and minority organizations in MENA countries.

5.4 Heterogeneity

A first view of the heterogeneity of the individual responses is provided in the appendix with re-estimates of the model for specific subpopulations. The results conform to the baseline estimation results.

In a final effort to capture the heterogeneity in organization and state behavior, we estimate models of insurgency and state violence for which the response coefficients can vary across organizations or across states, still with only one- and two-year lags. Considering the equations for the states and for the organizations separately allows us to try distinct strategies to account for their respective heterogeneities by using procedures as in Duflo (2004) and Guimarães and Portugal (2010). Individual-specific coefficients for the organizations have been attempted. However, the number of observed periods is too limited to reach satisfactory estimates in this case. As a fallback specification, we estimated response coefficients that are specific to each ethnicity-state pair instead. Finally, the state violence equation includes state-specific responses. That is, while the coefficients vary by state, the responses of the same state to the former violence of different organizations are characterized by the same coefficients. The heterogeneous response equations are constructed by allowing for heterogeneity in the response coefficient in addition to heterogeneity in the fixed effects. Specifically, for the insurgency response, we assume that the response can vary by ethnicity-state pair: $\gamma^2_{j,g}$, for lags j = 1, 2, where g denotes the ethnicity-state pair considered. Each organization is thus associated with a minority ethnicity in its country. Since some groups are present in several countries, such as the Kurds, the dummy variable for the group is interacted with these country dummies to allow for specific responses in different states. Moreover, we assume that the state's violent response varies by country: $\beta^2_{j,c}$, for lags j = 1, 2, where c is the index of the country.

The results are displayed in Table VII. Columns (1a) and (1b) contain the estimates for the insurgency equation. Five distinct ethnic groups can be identified as having significant responses. Each

of these ethnicity-specific responses are significantly positive. The ethnicity-state pairs with significantly estimated first-lag coefficients are Saharawi-Morocco (0.569), Kurd-Iraq (0.225), Sunni-Iraq (0.331), Druze-Lebanon (0.510), and Shi'a-Lebanon (0.682). Columns (2a) and (2b) contain the estimates for the state violence equation. Four states have a significant response. For three of these states, the response is significantly positive. However, for Iran, a negative response is obtained. The countries with distinctive significantly estimated positive first-lag response coefficients are Morocco (0.704), Syria (0.191) and Lebanon (0.148). Therefore, even accounting for heterogeneity, most organizations and states are found to be likely to respond to violence with violence, sometimes with large magnitudes. An exception is the case of Iran, for which we find a negative and significant coefficient (-1.040). Again, it is remarkable that one-year lags suffice to capture most of the reaction patterns. This supports our approach of considering them to be short-term adjustment terms.

Let us devote a few words to the specific case of Iran. Examining the profiles of violence for organizations in Iran reveals that this result corresponds to two Kurd organizations enjoying a cessation of aggression from the Iranian state during the Iran-Iraq war, from 1986 to 1988, whereas they conducted attacks throughout that period.[33] This can be explained first by the fact that after requesting support from Saddam Hussein, these organizations had found refuge in Iraqi Kurdistan and were therefore out of the reach of the Iranian state for a few years. Moreover, these two organizations often fought each other between 1984 and 1991, which reduced the need for direct Iranian retaliation. Finally, fighting these two organizations at the height of the Iran-Iraq war may not have been the strategic war priority of the Iranian army headquarters.[34]

On the whole, the results including heterogeneous responses again support the use of the Stag Hunt game as an approximate summary of the strategic opposition of states and minority organizations under the severe information constraints of the analyst.

5.5 Terrorism: Allowing for non-strategic corrections

Let us now attempt to apply the same analytical approach to the pair of strategies Terrorism and State Violence. However, in this case, the empirical results, with an insignificantly estimated response of state violence to terrorism, do not unambiguously indicate which kind of Nash equilibria should be expected. Nevertheless, the negative responses of Terrorism to State Violence, as estimated with the DGMM and Panel VAR results, suggest that games with equilibria off the main diagonal, such as games 9, 11, and 12, may make sense in this case. Therefore, these empirical results seem to support the opinion that terrorist organizations are of the Coward-and-Bully type, even though the estimates reveal

[33] The Organization of Revolutionary Toilers of Iran Kurdistan, also known as Komala, and the Kurdish Democratic Party of Iran are two armed ethnic parties of Kurds in Iran. The first is communist, while the second is also left-oriented. Both parties waged several insurgencies against Iran. They suffered fierce repression from the Iranian state.

[34] Some background information on these facts can be found, for example, in Tahiri (2007), Entessar (2010) and Neuberger (2014).

nothing about the type of the state. As a result, a one-shot normal form cannot be identified when using only the information about violent responses to terrorism and state violence.

Instead, the negative and significantly estimated coefficient on state violence in the equation for terrorism suggests a possible non-strategic interpretation of state violence, which, in that case, may degrade the organization's capacity for violence and prevent further attacks.

Further insight may be obtained by extending the above 2×2 normal form Stag Hunt to include terrorism as an additional alternative strategy for the organization. That is, we could consider the 2×3 one-shot normal forms that are compatible with the above 2×2 Stag Hunt. One of the benefits of extending the strategy set to include Terrorism could be to bestow some strategic meaning to the observed frequent transitions from insurgency to terrorism, especially in the presence of violence from the state. However, if the state is of the Tit-for-Tat type, as admitted in our previous analysis, such a transition is excluded in such a restricted setting. Indeed, under state violence, if the 2×3 payoff matrix is such that it generates a transition from Insurgency to Terrorism, this means that, in this matrix row, the organization payoff from Terrorism should be greater than its payoff from Insurgency. In that case, the organization should directly pass from Peace to Terrorism without stopping at the Insurgency stage.

Therefore, transition insurgency-terrorism cannot be fully consistent with the coordination intuition typically associated with the Stag Hunt. Something fundamental would have to be changed to allow for this transition for strategic reasons. For example, one could have the state moving from State Violence to Peace under Insurgency, and then from Peace to Violence under Terrorism. But this does not seem to be a promising avenue. What is more plausible is that there are non-strategic reasons for the Insurgency-Terrorism transition, for example, the destruction of the organization's capacity for violence. It is also plausible that the response of the state to terrorist attacks is much quicker than occurring over a year. If this response is immediate, then the estimation results cannot sufficiently capture it for it to be validly included in the strategic analysis. There are, however, hints towards this coincidence. Simultaneous terrorism and state violence occur in 5.3 percent of the sample, while the averages are 13.5 and 13.2 percent, respectively.

All these considerations have incited us to focus the strategic analysis on the Insurgency–State Violence pair. Moreover, the difficulty in incorporating terrorism into the strategic system tells us that it may still be more profitable to collect observations on nonstrategic determinants and short-term responses for a broad set of MENA countries.

In the next subsection, we discuss what can be learned from this analysis for policy.

5.6 Policies

Some lessons for policy can be derived from the knowledge of the Stag Hunt strategic structure. The Stag Hunt game suffers more from a coordination problem than an inefficiency problem. In that game,

there is inconsistency between the risk that the opponent does not give up violence even when the agent adopts a Peace strategy, on the one hand, and the mutual benefits of reciprocal Peace on the other. Therefore, as opposed to the prisoner's dilemma case, this is not a case of individual rationality that contradicts mutual gains but rather some lack of commitment and trust between players. As a matter of fact, building trust is probably a preliminary step towards overcoming the specific risks that adversaries face. Therefore, policies should concentrate on measures that can generate trust between the fighting foes once they commit to Peace but also perhaps during conflict. Reputation building processes, mediated by external international institutions, may help.

More fundamentally, the shadow of the future, which can make adversaries more aware of the benefits of durable peace, is what may shift the equilibrium towards mutually peaceful strategies. Therefore, external persuasion, admonition and dialog may make this dimension of expectations more salient in the minds of the adversaries. Public and common knowledge and understanding of these benefits are ingredients likely to improve trust, viewed as a consequence of well-understood interests. Indeed, under the Stag Hunt setting, it is not enough that the enemies learn to know each other and engage in talks. They need to learn how to interact together in a way that pushes them towards peaceful cooperation. This is not obvious a priori. Indeed, in this case, learning to know each other better may sometimes just confirm the players in their choice of violent strategies that lead to inferior equilibria. In this situation, an avenue towards progress could be external policy-makers advertising examples of Stag Hunt cases in which cooperation led to success. Inciting the fighting opponents to emulate these accomplishments could provide an efficient road map to successful negotiations that would lead to durable peace agreements. More generally, the Stag Hunt characterization points at bargaining failures. In this regard, Jackson and Morelli (2010) dwell on the multiple reasons for these failures in wars: information asymmetries about the costs and benefits of conflict, commitment problems, the indivisibility of resources, inconsistency between leaders' and group members' incentives, and coalition issues. These are some of the challenges that policy-makers have to tackle.

The above identification results that suggest favoring the Stag Hunt game as an analytical tool can also be made useful for policy by allowing us to directly examine how they would affect the equilibrium in the normal form of this specific game. Many policies can be discussed in this setting, such as the provision of social services, the protection of minorities, coordination or communication among groups, reparations by the state and the organizations, rewards for peaceful behavior, conditional transfers, and punishments for violence or targeted assassinations. These policies can be analyzed as originating from external policy-makers, which could be other governments, international organizations and NGOs, or other religious or humanitarian foreign or international bodies.

When considering the normal form of the Stag Hunt game, two devices useful for policy design emerge: (i) potential switches between the two equilibria within the Stag Hunt game matrix and (ii) shifts in the structure of the payoffs, which change the type of the normal form into a different king of strategic game and change the attained equilibrium as a consequence.

Since the Stag Hunt game exhibits two distinct equilibria, switches between them could arise through errors, mistaken beliefs, or transient or permanent shocks to the payoffs. Policy design should escape the plausible inefficiency of the mutual violence trap by fostering a switch to the other equilibrium. For instance, in the Stag Hunt game, as just discussed, mutual violence may be alleviated by the external facilitation of communication or coordination, which could bring the players back to the peaceful equilibrium, as in Baliga and Sjöström (2012).

Policy can alternatively be based on a change in the type of game that would displace the position of an equilibrium in the payoff matrix. Beyond external shocks, such as international funding or external support, other factors could provoke a shift in the structure of the game and thereby induce an adjustment in the chosen strategies. For instance, equilibrium changes may result from changes in the preferences of the players. Thus, after elections, the taste for violence of the new state player may be reduced compared to that of the former government, facilitating political concessions. In that case, the underlying game may change to Game 5 (No Conflict), which has a single peaceful equilibrium. Then, another electoral transition may occur without affecting the newly attained stable peace, even if the situation has fallen back to that of the initial Stag Hunt game.

Changing opportunity costs may also affect incentives for violence. Through this mechanism, many policies could generate diverse shifts in the games of Figure III (e.g., punishment, conciliation, transfers and social service provision, external support, and direct international control). These policies can be classified as either Dovish, i.e., those that do not make use of violence, or Hawkish, i.e., those that are based on violent actions. The conditional or unconditional nature of the policies is also relevant, i.e., whether they are applied to the targeted agents based on their violent behavior or not. In the Israel-Palestine conflict, Dugan and Chenoweth (2012) show the potential importance of targeting. Indeed, they find that general repression does not reduce terrorist attacks and instead entails a backlash effect, whereas conciliatory actions targeted towards cooperative opponents reduce terrorism. Accordingly, potential punishment from an external agent, or even perhaps from the state, is a form of deterrence that lowers the organization's expected benefits from engaging in violent behavior. Nevertheless, the probability of catching the offender needs to be high enough and sufficiently well known to suppress violence. For example, Benmelech, Berrebi, and Klor (2015) find that house demolitions that target terrorists reduce terrorism, whereas preventive house demolitions increase it. These repressive measures could be carried out by international regulators instead of the state, if politically justified.

Punishment of the organization for violence can be associated with a reduction in the organization's payoff in the Peace-Violence case. In some cases, punishment can be efficient. For example, when the initial equilibrium is Violence-Violence, an external military intervention that would strengthen the central government and reduce the gains associated with violence for the organization would transform the Stag Hunt game into Game 2 (No Violence), where the only equilibrium is Peace-Peace.

In contrast to punishment, conciliatory policies may be mutually advantageous. Dugan and Chenoweth (2012) find that in Israel, conciliatory actions are followed by drops in terrorist attacks. Their findings support the idea that repressive actions may not deter terrorism and can lead to a backlash effect. Moreover, indiscriminate conciliatory actions may decrease future terrorism because they reward non-violent behavior. By augmenting the organization's payoff from nonviolence, these policies, especially when supported by external sponsors, can make such organizations more peaceful.[35]

Another alternative to punishment is enhancing the organization's incentives to engage in peaceful behavior through transfers and social service provision. Because repression may diminish violence only in the short run but foster it in the long run due to increased hatred and grievances, handing over indiscriminate advantages to the underlying group can avert violence, as these could be lost in case of attacks. This policy may contribute to shifting an organization from a Tit-For-Tat responder into an Intrinsically Peaceful agent. Moreover, this policy may result in lower support and recruitment for the organization. The survival and capacity of organizations depend on their ability to recruit members and to maintain strong leadership (Crenshaw, 1987). For instance, Hamas and Hezbollah have successfully used social services provision to poor areas to achieve this goal. For this reason, the state may provide competing public services to undermine these organizations by reducing the dependence of their constituency on their services. Again, this can be taken into account in a reduced-form fashion through a change in payoffs.

A further strategy for reducing organizational violence is to curtail its external support, which it needs for food, safe shelter, recruits, and political power. External support can take the form of financial aid, which serves to buy weapons, remunerate the families of martyrs, and pay operatives. The usual sources are external communities, the diaspora, or foreign patrons (Bloom, 2005). For example, the PKK relied on the large Kurdish diaspora in Europe to raise funds through voluntary donations, intimidation and the drug trade. Starting from the Stag Hunt game, which has a Tit-For-Tat responder organization, such a policy may change it to Game 2, which has an Intrinsically Peaceful organization.

With the intervention of an international policy-maker, imposing punishment on a state for its violence is also possible, which can change its type from a Tit-For-Tat responder to Intrinsically Peaceful. An additional policy tool is to impose reparations for violence, which may involve positive and negative transfers, conditional on the violence committed and suffered.

6 Conclusion

In conflict situations, violent actors often claim that their acts deter enemy aggression. In contrast, violent actions frequently induce retaliation likely to fuel a cycle of violence. Therefore, understanding

[35]However, in the data used, attempts to include regressors representing conciliatory actions, such as those in Tables A5 and A6 of the Online Appendix, did not lead to significant effects on the violent strategies.

the hidden strategic mechanisms in the relationships between opponents is important for designing efficient peace policies.

In the MENA context characterized by antagonistic religio-ethnic identities, with long periods of governmental dominance by one group, we study organizations fending for minority groups that may use violent strategies to support their constituency. We estimate dynamic panel data models of violent responses to violence between organizations that represent minorities at risk and governments using a unique database covering 112 organizations in 12 Middle Eastern or Northern African countries between 1980 and 2004. In contrast to the literature, we control for a broad range of observed and unobserved fixed and time-varying characteristics at the state-year and organization levels.

The results indicate the presence of dampened cycles of violence between the central state and insurgent organizations, while no such cycle is found for terrorism. Furthermore, frequent transitions in organizational violence from insurgency to terrorism occur.

Finally, we relate the observed timings of the strategies to game-theoretic elements by considering the strategic forms of one-shot games. To make this connection, we propose an identification method that identifies the Stag Hunt game as the unique one-shot game corresponding, on average, to the sequences of violence by the state and organizations. Peace-promoting policies that foster changes in the equilibrium type or even in the strategic type of the game are examined.

By referring to the strategic forms of simple one-shot games, we have shown that some average identification of game structures can be achieved at the cost of simplified settings. This finding invites researchers to consider with caution the many interpretations of empirical conflicts in the literature that rely on a priori specific game explanations, such as the extensive, but often arbitrary, use of the prisoner's dilemma game setting.

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Table I: Descriptive Statistics by Country

	Number of		Mean of		
Country	Organizations	Observations	Terrorism	Insurgency	State Violence
Algeria	4	49	0	0	2.04
Bahrain	4	48	0	0	0
Cyprus	8	140	0	0	0
Iran	5	66	0	28.79	42.42
Iraq	27	329	13.68	24.32	25.84
Israel	20	290	26.21	1.38	17.93
Jordan	6	90	5.56	0	1.11
Lebanon	24	522	15.71	3.26	3.64
Morocco	3	64	7.81	18.75	18.75
Saudi Arabia	2	42	4.76	0	0
Syria	3	35	8.57	0	8.57
Turkey	4	57	29.82	42.11	50.88
Total	110	1,732	13.57	9.01	13.28

Source: Authors' calculations based on Minorities at Risk Organizational Behavior data (Wilkenfeld et al., 2011)

Table II: Transitions: number and frequencies

(a) Terrorism from t-1 to t			
	None	Minor	Major
None	1,330	67	4
(%)	94.93	4.78	0.29
Minor	69	101	7
(%)	39.98	57.06	3.95
Major	1	8	35
(%)	2.27	18.18	79.55
(b) Insurgency from t-1 to t			
	None	Minor	Major
None	1,441	21	7
(%)	98.09	1.43	0.48
Minor	22	23	10
(%)	40.00	42.81	18.18
Major	12	8	78
(%)	12.24	8.16	79.59
(c) State Violence from t-1 to t			
	None	Minor	Major
None	1,342	55	4
(%)	95.79	3.93	0.29
Minor	57	93	11
(%)	35.40	57.76	6.83
Major	5	15	40
(%)	8.33	25.00	66.67
1,622 observations			

Table III: Conditional frequencies

(a) Terrorism in t given State Violence in t-1				(b) Insurgency in t given State Violence in t-1			
	No	Minor	Major		No	Minor	Major
No	1,249	121	17	No	1,352	23	12
(%)	90.05	8.72	1.23	(%)	97.48	1.66	0.87
Yes	139	52	28	Yes	109	28	82
(%)	63.47	23.74	12.79	(%)	49.77	12.79	37.44
Both	1,400	176	46	Both	1,475	52	95
(%)	86.31	10.85	2.84	(%)	90.94	3.21	5.86
(c) State Violence in t given Terrorism in t-1				**(d) State Violence in t given Insurgency in t-1**			
	No	Minor	Major		No	Minor	Major
No	1,254	101	33	No	1,348	101	6
(%)	90.35	7.28	2.38	(%)	92.65	6.94	0.41
Yes	136	61	21	Yes	42	61	48
(%)	62.39	27.98	9.63	(%)	27.81	40.40	31.79
Both	1,404	163	55	Both	1,404	163	55
(%)	86.56	10.05	3.39	(%)	86.56	10.05	3.39

1,622 observations

Table IV: Examples of organizations

	Organization	Ethnic Group	Country	Onset of Violence	Political Orientation	Leadership	Dynamics
(1)	O. of Revolutionary Toilers of Iranian Kurdistan	Kurds	Iran	1967	Leftist	N.A.	Insurgency then State Violence
(2)	The Kurdistan Democratic Party of Iran	Kurds	Iran	1945	Leftist, Nationalist	Single	Insurgency then State Violence
(3)	Partiya Karkari Kurdistan	Kurds	Turkey	1978	Leftist, Nationalist	Single	Violent Equilibrium
(4)	Kurdistan Socialist Democratic Party	Kurds	Iraq	1979	Leftist, Nationalist	Council	State Violence then Insurgency
(5)	Iraqi Communist Party	Shi'a	Iraq	1934	Leftist, Ethno-Nat.	Weak	Unstable
(6)	Hizb al-Da'wa al-Islamiyya	Shi'a	Iraq	1958	Religious, Ethnic	Weak	State Violence then Insurgency
(7)	Supreme Council for the Islamic Revolution in Iraq	Shi'a	Iraq	1982	Religious, Ethnic	Council	Insurgency then Terrorism
(8)	Progressive Socialist Party	Druze	Lebanon	1948	Leftist, Nationalist	Single	Terrorism fades
(9)	South Lebanon Army	Maronite Christians	Lebanon	1978	Ethnic	Single	Unilateral Violence
(10)	Popular Front for the Liberation of Palestine (GC)	Palestinians	Lebanon	1968	Ethnic	Single	Insurgency then Terrorism
(11)	Al-Sa'iqah	Palestinians	Lebanon	1967	Ethnic	Council	Terrorism fades
(12)	Hezbollah	Shi'a	Lebanon	1982	Religious, Ethnic	Council	Unilateral Violence
(13)	Amal	Shi'a	Lebanon	1975	Ethnic	Council	Insurgency then Terrorism
(14)	Democratic Front for the Liberation of Palestine	Palestinians	Israel	1984	Leftist, Nationalist	Council	Unstable
(15)	Hamas	Palestinians	Israel	1987	Religious, Nationalist	Council	Violent Equilibrium

Note: This table provides basic information on a list of example organizations to illustrate the main mechanisms discussed in the paper. All these organizations still existed at the end of 2004 except for the South Lebanon Army, which ceased to exist in 2001. The foundation of the Kurdistan Socialist Democratic Party took place in 1979 and of the Democratic Front for the Liberation of Palestine in 1969.

Table V: Dynamic Strategic Responses

	Dependent variable					
	Terrorism_t		Insurgency_t		State Violence_t	
	(1)	(2)	(3)	(4)	(5)	(6)
	FE	DGMM	FE	DGMM	FE	DGMM
Terrorism_{t-1}	0.2226***	0.1989***	0.0264	-0.0136	0.0638*	0.0551
	(0.0522)	(0.0624)	(0.0361)	(0.0431)	(0.0331)	(0.0527)
		[0.0608]		[0.0497]		[0.0537]
Terrorism_{t-2}	0.0012	0.0267	-0.0010	-0.0489	0.0218	-0.0046
	(0.0593)	(0.0624)	(0.0206)	(0.0349)	(0.0273)	(0.0378)
		[0.0616]		[0.0358]		[0.0392]
Insurgency_{t-1}	-0.0327	-0.1325	0.4058***	0.4513***	0.1699**	0.2327**
	(0.0533)	(0.0828)	(0.0672)	(0.0929)	(0.0660)	(0.0925)
		[0.0857]		[0.1041]		[0.0983]
Insurgency_{t-2}	0.1175**	0.1460**	-0.0154	-0.0666	-0.0174	0.0399
	(0.0552)	(0.0635)	(0.0583)	(0.0914)	(0.0573)	(0.0514)
		[0.0634]		[0.0853]		[0.0539]
$\text{State Violence}_{t-1}$	0.0040	-0.1799**	0.0757**	0.1368**	0.1942***	0.2766***
	(0.0425)	(0.0849)	(0.0335)	(0.0605)	(0.0524)	(0.0996)
		[0.0884]		[0.0660]		[0.1007]
$\text{State Violence}_{t-2}$	0.0116	-0.0867*	0.0168	0.0745	0.0273	0.0668
	(0.0395)	(0.0456)	(0.0349)	(0.0482)	(0.0385)	(0.0638)
		[0.0484]		[0.0532]		[0.0650]
Country × Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,483	1,361	1,483	1,361	1,483	1,361
Number of Organizations	110	102	110	102	110	102
Within R-squared	0.2165		0.4680		0.3473	
AR(1)-p		<0.001		<0.001		<0.001
AR(2)-p		0.166		0.540		0.0814
Hansen-p		0.529		0.341		0.106
Number of instruments		9		8		9
Non-linear p-test			0.0264	0.0259	0.0254	0.0064

Note: *** p<0.01, ** p<0.05, and * p<0.1. Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 2 show the Terrorism response function. Columns 3 and 4 show the Insurgency response function. Columns 5 and 6 show the State Violence response function. Columns 1, 3, and 5 show fixed effects estimates. Columns 2, 4, and 6 show DGMM estimates. In Column 4, we further restrict the lag length of the instruments to $s = 2, 3$ for the sake of the Hansen instrument validity test. All estimations include organization fixed effects and country×year fixed effects.

Table VI: Panel VAR

	Dependent variable					
	Terrorism_t	Insurgency_t	State Violence_t	Terrorism_t	Insurgency_t	State Violence_t
	(1)	(2)	(3)	(4)	(5)	(6)
	PVAR-GMM (2 Lags)			PVAR-GMM (3 Lags)		
Terrorism_{t-1}	0.234***	0.0497	0.00644	0.240***	0.0216	0.0272
	(0.0543)	(0.0365)	(0.0464)	(0.0526)	(0.0325)	(0.0443)
	[0.0572]	[0.0360]	[0.0398]	[0.0558]	[0.0330]	[0.0365]
Terrorism_{t-2}	0.0318	-0.00391	-0.0235	0.0265	-0.0243	-0.0214
	(0.0475)	(0.0305)	(0.0427)	(0.0461)	(0.0289)	(0.0417)
	[0.0635]	[0.0280]	[0.0325]	[0.0586]	[0.0294]	[0.0333]
Insurgency_{t-1}	-0.0170	0.544***	0.252***	-0.0138	0.554***	0.215***
	(0.0694)	(0.0822)	(0.0793)	(0.0677)	(0.0801)	(0.0769)
	[0.0988]	[0.0846]	[0.0856]	[0.0835]	[0.0836]	[0.0824]
Insurgency_{t-2}	0.163**	0.0476	0.0392	0.133**	0.0462	0.00608
	(0.0685)	(0.0597)	(0.0570)	(0.0667)	(0.0558)	(0.0527)
	[0.0583]	[0.0678]	[0.0467]	[0.0642]	[0.0561]	[0.0422]
$\text{State Violence}_{t-1}$	-0.131**	0.136**	0.265***	-0.126**	0.0954*	0.309***
	(0.0615)	(0.0614)	(0.0705)	(0.0578)	(0.0533)	(0.0654)
	[0.0961]	[0.0537]	[0.0773]	[0.0745]	[0.0509]	[0.0697]
$\text{State Violence}_{t-2}$	-0.0582	0.0844*	0.0520	-0.0633	0.0558	0.0639
	(0.0552)	(0.0501)	(0.0567)	(0.0518)	(0.0435)	(0.0507)
	[0.0682]	[0.0608]	[0.0534]	[0.0579]	[0.0404]	[0.0438]
Organization Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Country $\times$ Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,373	1,373	1,373	1,373	1,373	1,373
Number of Organizations	103	103	103	103	103	103
Hansen-p				0.0769	0.0769	0.0769
Number of instruments	6	6	6	9	9	9

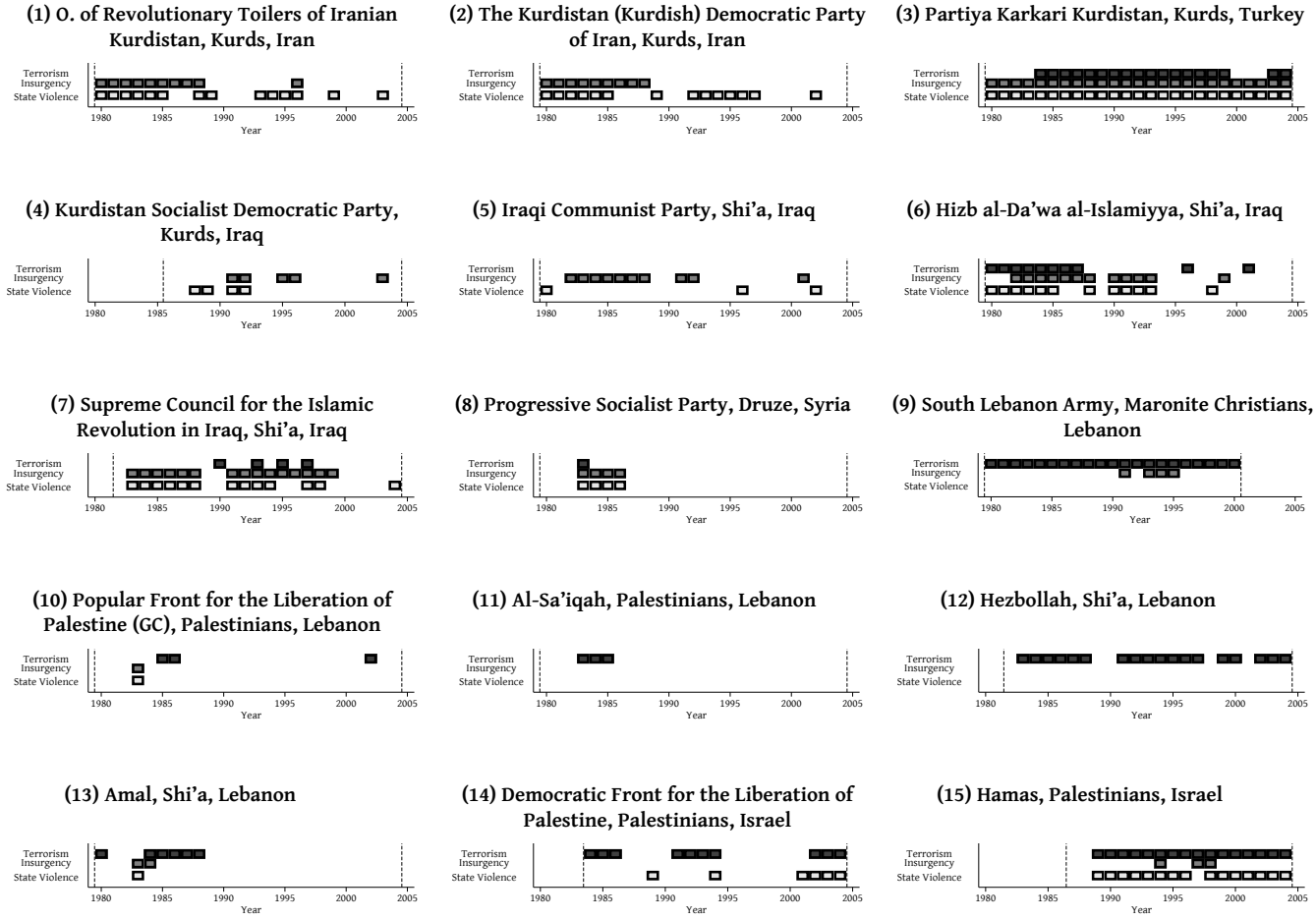
Note: *** $p<0.01$, ** $p<0.05$, and * $p<0.1$. Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 4 show the Terrorism response function. Columns 2 and 5 show the Insurgency response function. Columns 3 and 6 show the State Violence response function. Columns 1 to 3 show Panel VAR estimates with 2 lags as the GMM instruments and Columns 4 to 6 with 3 lags as the GMM instruments. All estimations include organization fixed effects and country$\times$year fixed effects.

Table VII: Heterogeneous responses

	Dependent variable			
	Insurgency$_t$		State Violence$_t$	
	(1a)	(1b)	(2a)	(2b)
	Multi-Way Fixed-Effects Model			
Insurgency$_{t-1}$	0.331***		State Violence$_{t-1}$	0.178***	
	(0.0352)			(0.0330)	
Insurgency$_{t-2}$	-0.0107		State Violence$_{t-2}$	0.0213	
	(0.0338)			(0.0329)	
Terrorism$_{t-1}$	0.0340*		Terrorism$_{t-1}$	0.0568**	
	(0.0206)			(0.0270)	
Terrorism$_{t-2}$	-0.00897		Terrorism$_{t-2}$	0.0147	
	(0.0199)			(0.0263)	
State Violence *	t − 1	t − 2	Insurgency *	t − 1	t − 2
Morocco, Saharawis	0.569***	0.0481	Morocco	0.704**	-0.0213
	(0.220)	(0.129)		(0.293)	(0.285)
Iran, Kurds	-0.000788	-0.144	Iran	-1.040***	0.138
	(0.0941)	(0.135)		(0.321)	(0.323)
Turkey, Kurds	0.0188	0.0107	Syria	0.191***	-0.0970*
	(0.236)	(0.214)		(0.0579)	(0.0567)
Iraq, Kurds	0.0832	0.00527	Lebanon	0.148**	-0.0327
	(0.0714)	(0.102)		(0.0736)	(0.0733)
Iraq, Kurds	0.225***	0.0000	Israel	0.187	0.135
	(0.0511)	(0.234)		(0.126)	(0.126)
Iraq, Sunnis	0.331***	0.0478			
	(0.110)	(0.0716)			
Lebanon, Druze	0.510***	0.0590			
	(0.136)	(0.0507)			
Lebanon, Palestinians	-0.0752	-0.0994			
	(0.0712)	(0.0666)			
Lebanon, Shi'a	0.682***	-0.398**			
	(0.179)	(0.179)			
Lebanon, Sunnis	0.0125	-0.139*			
	(0.0771)	(0.0829)			
Jordan, Palestinians	0.00458	-0.0124			
	(0.221)	(0.221)			
Israel, Palestinians	-0.0825*	0.0436			
	(0.0428)	(0.0428)			
Organization Fixed-Effects	Yes			Yes	
Country × Year Fixed-Effects	Yes			Yes	
Observations	1,422			1,422	
Number of Organizations	103			103	
Within R-squared	0.758			0.689	

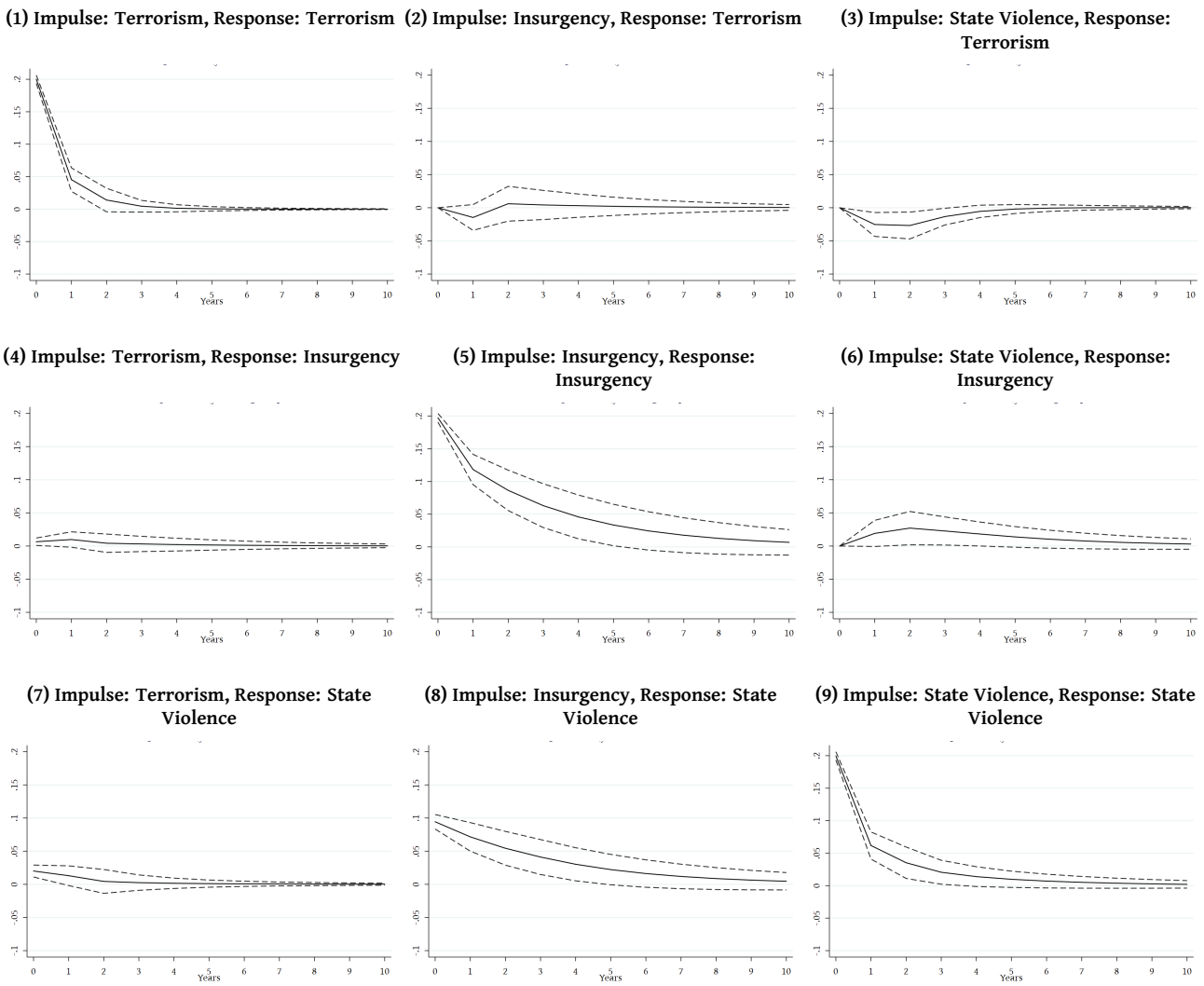
Note: *** p<0.01, ** p<0.05, and * p<0.1. Standard errors are in parentheses. Columns 1a and 1b show the Insurgency response function with interactions between lags 1 and 2 of State Violence and ethnic groups by state. Columns 2a and 2b show the State Violence response function, with interactions between lags 1 and 2 of Insurgency and the state. All columns show multi-way fixed-effects model estimates. All estimations include organization fixed effects and country×year fixed effects.

Figure I: A Few Cases of Strategy Time Profiles



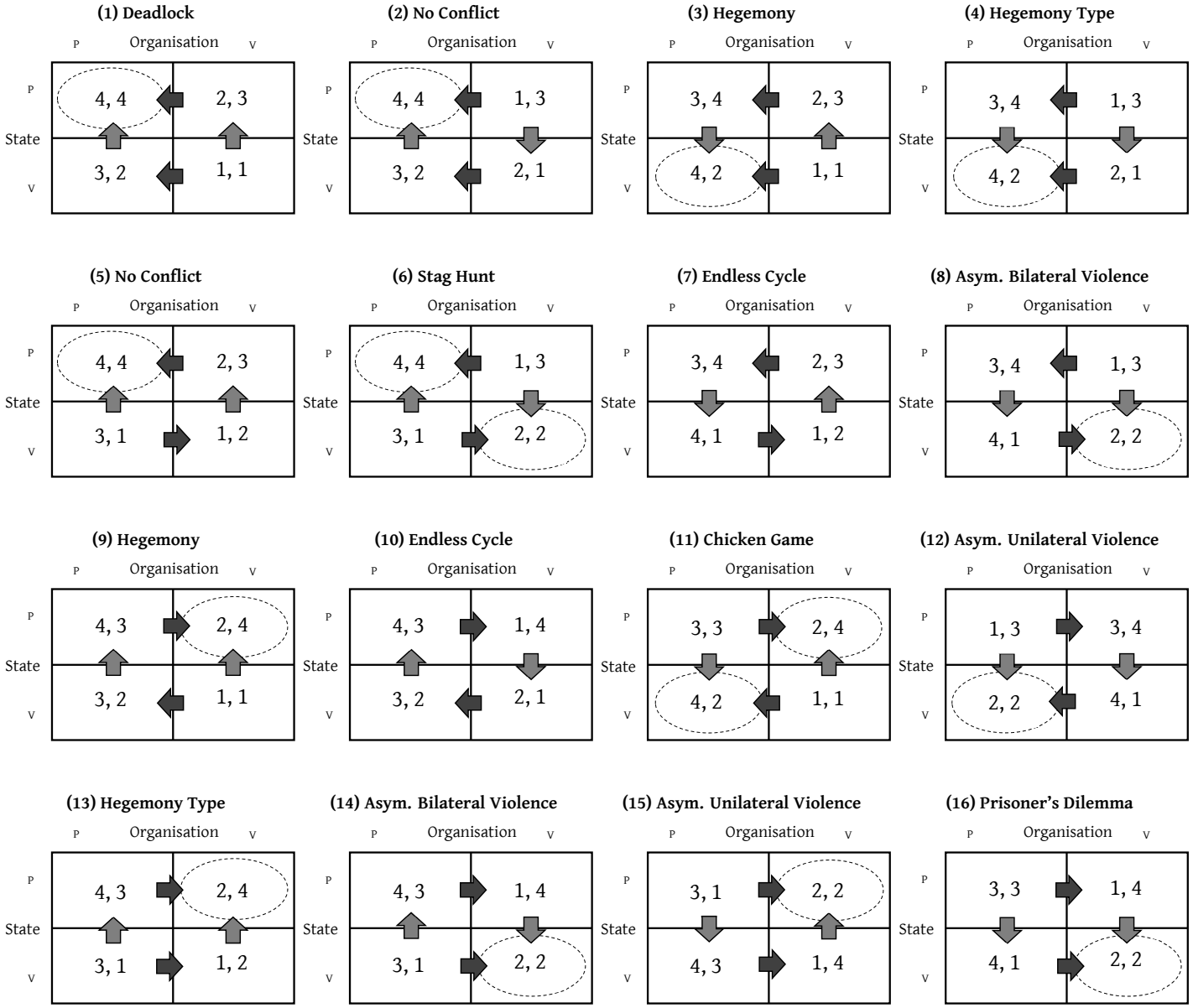
Note: This figure shows the strategy time profiles for a few illustrative organization-state pairs. The dark gray squares indicate the use of terrorism, the light gray squares, insurgency, and the light squares, state violence, by year from 1980 to 2004.

Figure II: Impulse Response Functions



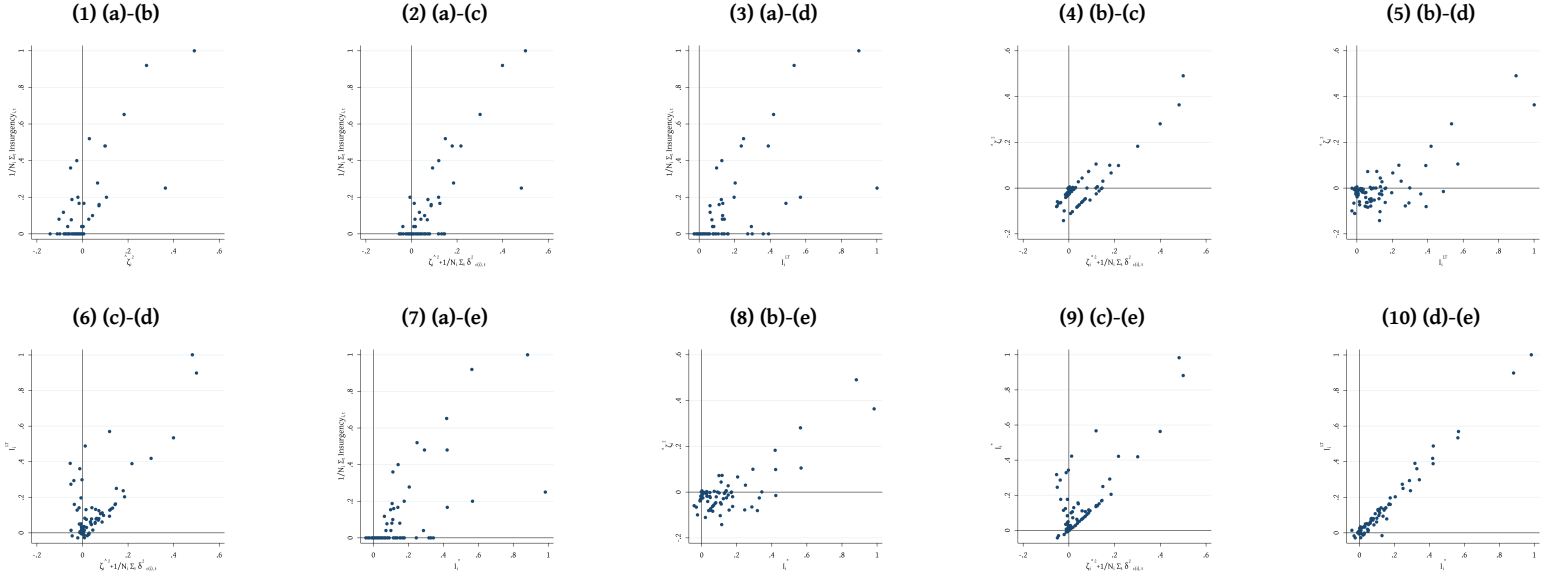
Note: This figure shows estimates of the impulse response functions based on the coefficient estimates in Table VI, Columns 4 to 6. The shock is a 20 percent increase in the probability of an agent using one of the strategies: Terrorism in Column 1, Insurgency in Column 2, and State Violence in Column 3, in deviations from the country-year mean. The estimated response is plotted for up to 10 years after the shock, with 90 percent confidence bands. Terrorism is in Row 1, Insurgency in Row 2, and State Violence in Row 3, still in deviations from the country-year mean.

Figure III: Strategic Forms of Games and their Nash Equilibria



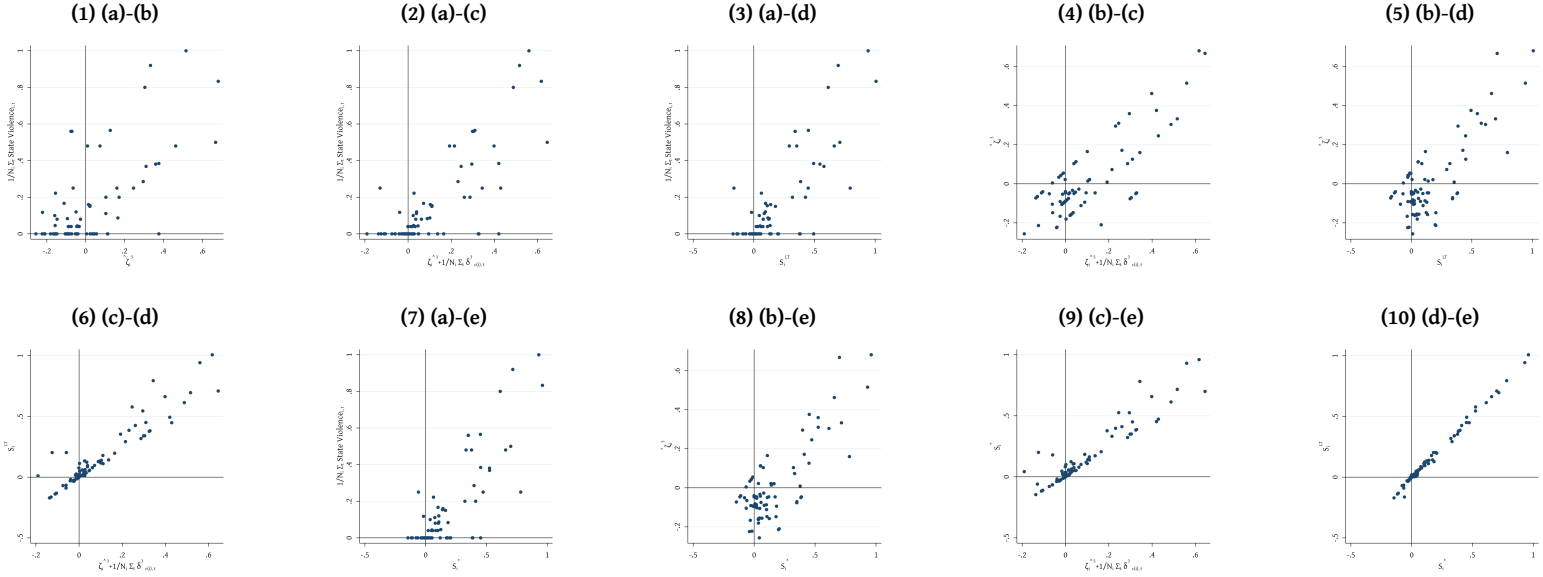
Note: This figure shows the configurations of the strategic forms of all possible 2x2 games. One player is the state, which chooses vertically, and the other player is the organization, which chooses horizontally. Both choose between Peace (P) and Violence (V). Thick arrows indicate the best responses. The Nash equilibria are encircled.

Figure IV: Cross-Plots of the Five Criteria for Insurgency: (a) Mean Strategies, (b) Estimated Fixed Effects, (c) Estimated Fixed Effects plus Mean Country-Year Fixed Effect, (d) Long-Run Strategies, and (e) Equilibrium Strategies



Note: This figure shows the cross-plots of the five criteria for Insurgency: (a) mean Strategies, (b) estimated fixed effects, (c) estimated fixed effects plus mean country-year fixed effects, (d) long-run strategies, and (e) equilibrium strategies

Figure V: Cross-Plots of the Five Criteria for State Violence: (a) Mean Strategies, (b) Estimated Fixed Effects, (c) Estimated Fixed Effects plus Mean Country-Year Fixed Effect, (d) Long-Run Strategies, and (e) Equilibrium Strategies



Note: This figure shows the cross-plots of the five criteria for State Violence: (a) mean strategies, (b) estimated fixed effects, (c) estimated fixed effects plus mean country-year fixed effects, (d) long-run strategies, and (e) equilibrium strategies.

Appendix: Variable Construction

The variable STATEVIOLENCE records the coded information based on the answer to the question *'Does the state use violence against the organization?'* There is a category for missing values, which we exclude. The three remaining categories for nonmissing information relate to increasing degrees of lethal violence against the organization and correspond to *'no lethal violence'*, *'periodic lethal violence'*, and *'consistent lethal violence'*. We redefine the variable 'State Violence' as zero for the category *'no violence'* and as one for the categories *'periodic'* and *'consistent'* violence.

The variable ORGST7 records the coded information based on the answer to the question 'Does the organization attack civilians (terrorist activities)?' Beyond the category 'missing', there are three levels for this variable: *'not used'*, *'minor or infrequent use (ten or fewer attacks per year by the organization)'*, and *'major or frequent use (more than ten attacks)'*. Again, we recode this variable as the indicator 'Terrorism', which is equal to one for the categories *'minor'* and *'frequent use'* and zero otherwise.

The variable ORGST8 records the coded information on insurgent violence in three categories for the nonmissing information: *'not used'*, *'minor'*, and *'consistent'*. 'Minor' refers to when the organization has small-scale or intermediate military activity with a small militia, and *'consistent'* refers to when insurgent strategies are frequently used, i.e., when there are a large number of attacks, a large-scale militia or a civil war. We recode this variable as the indicator 'Insurgency', which is equal to one for the categories *'minor'* and *'consistent'* use and zero otherwise.

The variable STORGREPRESS records answers to the question 'How does the state treat the organization'. This variable provides information on the general stance of the government concerning the organization. The scale includes 'legal organization', 'legal but subject to periodic repression', 'illegal but tolerated', 'illegal and subject to periodic repression', and 'illegal and targeted by ongoing repression'. We use the thresholds 'three and above' and 'five and above' to construct our indicators. This threshold accounts for the difference between legal organizations and illegal organizations and the difference between periodic and ongoing repression for illegal organizations.

We also have some information on the conclusion and implementation of agreements between the state and the organization. For instance, the variable ORGSUCCESS records information related to the question 'To what degree has the organization succeeded in obtaining government agreements over the years (based on agreements, not implementation)?' The scale ranges from 'no negotiations' to 'concession to the primary goal of the organization'. We use a threshold based on concession to the primary goal to define the dummy variable Agreement.

The variable ORGSUCIMPL indicates 'To what degree has the government implemented agreements with the opposing side in that year?' We use a threshold that indicates implementation, that is, at least at the level 'State has started to implement agreements this year', to define the dummy variable Implementation. Additionally, the variable ORGIMPL indicates 'To what degree has the organization implemented agreements with the opposing side in that year?' We use the threshold that indicates implementation, that is, at least at the level 'Organization has started to implement agreements this year', to define the dummy variable Concession.

Terrorism, Insurgency, State Repression, and Cycles of Violence

Online Appendix

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1st February 2021

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Table A1: Organizations lasting 12 or more years

	Dependent variable					
	$Terrorism_t$		$Insurgency_t$		State $Violence_t$	
	(1)	(2)	(3)	(4)	(5)	(6)
	FE	DGMM	FE	DGMM	FE	DGMM
$Terrorism_{t-1}$	0.2312***	0.2256***	0.0342	0.0089	0.0463	0.0348
	(0.0545)	(0.0618)	(0.0366)	(0.0361)	(0.0314)	(0.0446)
$Terrorism_{t-2}$	0.0115	0.0444	-0.0067	-0.0453	0.0323	0.0018
	(0.0607)	(0.0640)	(0.0213)	(0.0355)	(0.0286)	(0.0377)
$Insurgency_{t-1}$	-0.0278	-0.0960	0.4282***	0.4487***	0.1390**	0.2428***
	(0.0567)	(0.0769)	(0.0704)	(0.0955)	(0.0631)	(0.0939)
$Insurgency_{t-2}$	0.1358**	0.1759***	-0.0310	-0.0725	0.0026	0.0565
	(0.0560)	(0.0600)	(0.0622)	(0.0950)	(0.0558)	(0.0524)
State $Violence_{t-1}$	-0.0248	-0.2096**	0.0604*	0.1290**	0.2427***	0.2905***
	(0.0444)	(0.0856)	(0.0339)	(0.0630)	(0.0523)	(0.1027)
State $Violence_{t-2}$	0.0128	-0.0977**	0.0270	0.0786	0.0092	0.0589
	(0.0432)	(0.0457)	(0.0376)	(0.0510)	(0.0395)	(0.0673)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,345	1,261	1,345	1,261	1,345	1,261
Organizations	73	73	73	73	73	73
Within R-Squared	0.231		0.483		0.374	
AR(1)-p		<0.001		<0.001		<0.001
AR(2)-p		0.293		0.581		0.0905
Hansen-p		0.850		0.371		0.131
Instruments		9		8		9

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 2 display the Terrorism response function. Columns 3 and 4 show the Insurgency response function. Columns 5 and 6 display the State Violence response function. Columns 1, 3, and 5 include fixed effect estimates, while Columns 2, 4, and 6 include DGMM estimates. All estimations have organization fixed effects and country*year fixed effects. The observations are restricted to organizations with longevity 12 years or above.

Table A2: Ethnic-Group*Year Fixed Effects

	Dependent variable					
	$Terrorism_t$		$Insurgency_t$		$State\ Violence_t$	
	(1)	(2)	(3)	(4)	(5)	(6)
	FE	DGMM	FE	DGMM	FE	DGMM
$Terrorism_{t-1}$	0.2398***	0.2275***	0.0235	-0.0261	0.0516	0.0690
	(0.0547)	(0.0748)	(0.0331)	(0.0443)	(0.0324)	(0.0484)
$Terrorism_{t-2}$	0.0275	0.0599	-0.0210	-0.0682**	0.0103	0.0260
	(0.0564)	(0.0613)	(0.0227)	(0.0340)	(0.0261)	(0.0376)
$Insurgency_{t-1}$	-0.0842*	-0.1953**	0.3952***	0.4157***	0.1224**	0.2240***
	(0.0474)	(0.0809)	(0.0537)	(0.0771)	(0.0481)	(0.0811)
$Insurgency_{t-2}$	0.1497***	0.1698***	-0.0160	-0.0884	-0.0797	0.0215
	(0.0529)	(0.0656)	(0.0578)	(0.0725)	(0.0517)	(0.0460)
$State\ Violence_{t-1}$	0.0070	-0.1478**	0.0480	0.0652	0.2373***	0.2719***
	(0.0358)	(0.0736)	(0.0297)	(0.0552)	(0.0534)	(0.0840)
$State\ Violence_{t-2}$	0.0305	-0.0544	0.0296	0.0373	0.0144	0.0294
	(0.0324)	(0.0430)	(0.0297)	(0.0427)	(0.0392)	(0.0537)
Ethnic-Group*Year	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,483	1,361	1,483	1,361	1,483	1,361
Organizations	110	102	110	102	110	102
Within R-Squared	0.222		0.483		0.303	
AR(1)-p		<0.001		<0.001		<0.001
AR(2)-p		0.604		0.783		0.103
Hansen-p		0.297		0.288		0.244
Instruments		9		8		9

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 2 display the Terrorism response function. Columns 3 and 4 show the Insurgency response function. Columns 5 and 6 display the State Violence response function. Columns 1, 3, and 5 include fixed effect estimates. Columns 2, 4, and include DGMM estimates. All estimations have organization fixed effects and ethnic-group*year fixed effects.

Table A3: Illegal Organizations

	Dependent variable					
	$Terrorism_t$		$Insurgency_t$		$State\ Violence_t$	
	(1)	(2)	(3)	(4)	(5)	(6)
	FE	DGMM	FE	DGMM	FE	DGMM
$Terrorism_{t-1}$	0.2116***	0.1917***	0.0270	-0.0123	0.0661**	0.0509
	(0.0510)	(0.0596)	(0.0368)	(0.0439)	(0.0333)	(0.0532)
$Terrorism_{t-2}$	-0.0009	0.0273	0.0006	-0.0493	0.0242	-0.0074
	(0.0608)	(0.0625)	(0.0205)	(0.0351)	(0.0273)	(0.0389)
$Insurgency_{t-1}$	-0.0348	-0.1513	0.3996***	0.4908***	0.1760***	0.2550**
	(0.0553)	(0.0920)	(0.0666)	(0.1120)	(0.0655)	(0.1092)
$Insurgency_{t-2}$	0.1308**	0.1503**	-0.0187	-0.0556	-0.0125	0.0482
	(0.0560)	(0.0640)	(0.0608)	(0.0997)	(0.0590)	(0.0548)
$State\ Violence_{t-1}$	-0.0090	-0.1991**	0.0766**	0.1325*	0.1954***	0.2883***
	(0.0436)	(0.0938)	(0.0322)	(0.0719)	(0.0518)	(0.1088)
$State\ Violence_{t-2}$	0.0238	-0.0885*	0.0267	0.0753	0.0383	0.0836
	(0.0354)	(0.0490)	(0.0354)	(0.0536)	(0.0422)	(0.0718)
$Illegal\ Org_{t-1}$	0.0279	0.0467	0.0054	0.1283*	-0.0219	0.0171
	(0.0367)	(0.0812)	(0.0286)	(0.0664)	(0.0345)	(0.0627)
$Illegal\ Org_{t-2}$	-0.0691**	-0.0111	-0.0259	0.0398	-0.0565	-0.0376
	(0.0296)	(0.0434)	(0.0177)	(0.0322)	(0.0375)	(0.0428)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,449	1,326	1,449	1,326	1,449	1,326
Organizations	109	100	109	100	109	100
Within R-Squared	0.225		0.462		0.351	
AR(1)-p		<0.001		<0.001		<0.001
AR(2)-p		0.128		0.308		0.072
Hansen-p		0.753		0.163		0.227
Instruments		13		12		13

Note: *** p<0.01, ** p<0.05, * p<0.1. We add the control variables Illegal Organization t-1 and t-2. Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 2 display the Terrorism response function. Columns 3 and 4 show the Insurgency response function. Columns 5 and 6 display the State Violence response function. Columns 1, 3, and 5 include fixed effect estimates. Columns 2, 4, and 6 include DGMM estimates. All estimations have organization fixed effects and country*year fixed effects.

Table A4: Ongoing Repression

	Dependent variable					
	$Terrorism_t$		$Insurgency_t$		$State\ Violence_t$	
	(1)	(2)	(3)	(4)	(5)	(6)
	FE	DGMM	FE	DGMM	FE	DGMM
$Terrorism_{t-1}$	0.2073***	0.1881***	0.0224	-0.0383	0.0695**	0.0433
	(0.0514)	(0.0581)	(0.0367)	(0.0425)	(0.0341)	(0.0532)
$Terrorism_{t-2}$	-0.0060	0.0250	-0.0036	-0.0627*	0.0257	-0.0118
	(0.0592)	(0.0623)	(0.0200)	(0.0342)	(0.0275)	(0.0391)
$Insurgency_{t-1}$	-0.0507	-0.1314	0.3828***	0.4530***	0.1863***	0.2619**
	(0.0571)	(0.0907)	(0.0671)	(0.1106)	(0.0697)	(0.1169)
$Insurgency_{t-2}$	0.1220**	0.1643***	-0.0247	-0.0799	-0.0061	0.0519
	(0.0548)	(0.0628)	(0.0601)	(0.0904)	(0.0574)	(0.0540)
$State\ Violence_{t-1}$	-0.0315	-0.1764*	0.0488	0.0613	0.2070***	0.2752***
	(0.0459)	(0.0900)	(0.0337)	(0.0712)	(0.0500)	(0.0934)
$State\ Violence_{t-2}$	0.0108	-0.0821	0.0227	0.0338	0.0417	0.0741
	(0.0434)	(0.0546)	(0.0378)	(0.0583)	(0.0443)	(0.0730)
$Ongoing\ Rep._{t-1}$	0.0848**	-0.0707	0.0850*	0.1802**	-0.0487	0.0129
	(0.0393)	(0.1014)	(0.0453)	(0.0789)	(0.0554)	(0.1123)
$Ongoing\ Rep._{t-2}$	0.0103	-0.0459	0.0083	0.0944**	-0.0467	-0.0079
	(0.0428)	(0.0670)	(0.0348)	(0.0473)	(0.0482)	(0.0606)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,449	1,326	1,449	1,326	1,449	1,326
Organizations	109	100	109	100	109	100
Within R-Squared	0.226		0.468		0.351	
AR(1)-p		<0.001		<0.001		<0.001
AR(2)-p		0.142		0.282		0.061
Hansen-p		0.398		0.036		0.191
Instruments		13		12		13

Note: *** p<0.01, ** p<0.05, * p<0.1. We add the control variables Ongoing Repression t-1 and t-2. Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 2 display the Terrorism response function. Columns 3 and 4 show the Insurgency response function. Columns 5 and 6 display the State Violence response function. Columns 1, 3, and 5 include fixed effect estimates. Columns 2, 4, and 6 include DGMM estimates. All estimations have organization fixed effects and country*year fixed effects.

Table A5: Agreement, Implementation, and Concession

	Dependent variable					
	$Terrorism_t$		$Insurgency_t$		$State\ Violence_t$	
	(1)	(2)	(3)	(4)	(5)	(6)
	FE	DGMM	FE	DGMM	FE	DGMM
$Terrorism_{t-1}$	0.2100***	0.1827***	0.0277	-0.0185	0.0643*	0.0436
	(0.0500)	(0.0564)	(0.0369)	(0.0435)	(0.0330)	(0.0530)
$Terrorism_{t-2}$	-0.0004	0.0202	-0.0010	-0.0515	0.0205	-0.0116
	(0.0599)	(0.0623)	(0.0199)	(0.0353)	(0.0278)	(0.0384)
$Insurgency_{t-1}$	-0.0457	-0.1429	0.3964***	0.4699***	0.1633**	0.2694**
	(0.0563)	(0.0899)	(0.0676)	(0.1077)	(0.0635)	(0.1056)
$Insurgency_{t-2}$	0.1273**	0.1535**	-0.0201	-0.0589	-0.0176	0.0550
	(0.0547)	(0.0625)	(0.0602)	(0.0957)	(0.0576)	(0.0551)
$State\ Violence_{t-1}$	0.0026	-0.2015**	0.0740**	0.1513**	0.1873***	0.2763**
	(0.0438)	(0.0870)	(0.0310)	(0.0664)	(0.0514)	(0.1082)
$State\ Violence_{t-2}$	0.0117	-0.0996**	0.0275	0.0864*	0.0348	0.0655
	(0.0370)	(0.0469)	(0.0365)	(0.0511)	(0.0411)	(0.0682)
$Agreement_{t-1}$	-0.0041	-0.0270	-0.0058	0.0365	0.0007	-0.0451
	(0.0274)	(0.0383)	(0.0423)	(0.0402)	(0.0451)	(0.0534)
$Agreement_{t-2}$	-0.0104	-0.0017	-0.0347	-0.0381	-0.0144	-0.0481
	(0.0228)	(0.0262)	(0.0295)	(0.0363)	(0.0306)	(0.0315)
$Implementation_{t-1}$	0.2167*	0.0081	0.0500	0.1477	0.0610	0.0823
	(0.1105)	(0.0644)	(0.1137)	(0.1372)	(0.1217)	(0.0921)
$Implementation_{t-2}$	0.1292*	-0.0198	-0.0211	0.0770*	0.0545	0.0440
	(0.0732)	(0.0472)	(0.0546)	(0.0426)	(0.0510)	(0.0714)
$Concession_{t-1}$	-0.1251	-0.0136	-0.1771	-0.2272*	-0.1778	-0.0945
	(0.1316)	(0.0934)	(0.1162)	(0.1214)	(0.1150)	(0.1030)
$Concession_{t-2}$	-0.1830*	-0.0708	0.0783	0.0226	-0.0573	0.0137
	(0.0965)	(0.0838)	(0.0963)	(0.0787)	(0.0565)	(0.0628)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,449	1,326	1,449	1,326	1,449	1,326
Organizations	109	100	109	100	109	100
Within R-Squared	0.228		0.471		0.355	
AR(1)-p		<0.001		<0.001		<0.001
AR(2)-p		0.147		0.511		0.082
Hansen-p		0.602		0.499		0.543
Instruments		21		20		21

Note: *** p<0.01, ** p<0.05, * p<0.1. We add the control variables Agreement, Implementation, and Concession t-1 and t-2. Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 2 display the Terrorism response function. Columns 3 and 4 show the Insurgency response function. Columns 5 and 6 display the State Violence response function. Columns 1, 3, and 5 include fixed effect estimates. Columns 2, 4, and 6 include DGMM estimates. All estimations have organization fixed effects and country*year fixed effects.

Table A6: Panel VAR, All Variables

	Dependent Variable							
	Terrorism$_t$	Insurgency$_t$	State Violence$_t$	Illegal Org.$_t$	Ongoing Rep.$_t$	Agreement$_t$	Implementati	Concession$_t$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PVAR	PVAR	PVAR	PVAR	PVAR	PVAR	PVAR	PVAR
Terrorism$_{t-1}$	0.217***	0.0366	0.00350	0.00946	0.00448	-.0689**	-0.0458*	-0.0340
	(0.0559)	(0.0355)	(0.0460)	(0.0349)	(0.0394)	(0.0351)	(0.0250)	(0.0225)
Terrorism$_{t-2}$	0.0223	-0.0121	-0.0242	0.0413	-0.0110	-0.0105	-0.0130	0.00685
	(0.0484)	(0.0299)	(0.0426)	(0.0380)	(0.0354)	(0.0244)	(0.0186)	(0.0189)
Insurgency$_{t-1}$	-0.0296	0.517***	0.251***	-0.00254	0.206**	-0.0221	-0.0152	-0.0181
	(0.0717)	(0.0822)	(0.0820)	(0.0455)	(0.0813)	(0.0612)	(0.0480)	(0.0501)
Insurgency$_{t-2}$	0.183**	0.0377	0.0498	-0.0179	-0.116*	-0.0613	0.0123	-0.0287
	(0.0713)	(0.0619)	(0.0602)	(0.0399)	(0.0650)	(0.0586)	(0.0387)	(0.0391)
State Violence$_{t-1}$	-.168***	0.0362	0.248***	0.0230	-0.0128	-0.0520	-0.0243	0.0114
	(0.0615)	(0.0599)	(0.0691)	(0.0503)	(0.0652)	(0.0505)	(0.0418)	(0.0409)
State Violence$_{t-2}$	-0.0454	0.0588	0.0683	-0.0170	-0.00744	-0.0249	-.0820**	-0.0313
	(0.0606)	(0.0526)	(0.0598)	(0.0456)	(0.0599)	(0.0437)	(0.0330)	(0.0352)
Illegal Org.$_{t-1}$	0.0555	0.111**	0.0107	0.351***	0.0617	-0.0309	0.0240	0.0502
	(0.0620)	(0.0486)	(0.0564)	(0.0689)	(0.0507)	(0.0386)	(0.0310)	(0.0343)
Illegal Org.$_{t-2}$	-0.0284	0.0305	-0.0284	0.154**	0.0148	0.0106	0.0287	0.0242
	(0.0461)	(0.0338)	(0.0429)	(0.0604)	(0.0362)	(0.0337)	(0.0237)	(0.0276)
Ongoing Rep.$_{t-1}$	0.0298	0.208***	0.0137	0.114**	0.377***	-.231***	-0.0548	-0.0889*
	(0.0567)	(0.0556)	(0.0679)	(0.0483)	(0.0709)	(0.0554)	(0.0486)	(0.0500)
Ongoing Rep.$_{t-2}$	-0.0347	0.0801*	-0.0277	0.0513	0.155***	-0.0712	0.0327	0.0224
	(0.0526)	(0.0438)	(0.0539)	(0.0364)	(0.0554)	(0.0436)	(0.0412)	(0.0411)
Agreement$_{t-1}$	-0.0299	0.0727	-0.00305	0.0641	-0.0573	0.221**	0.122**	0.0666
	(0.0448)	(0.0491)	(0.0537)	(0.0476)	(0.0406)	(0.0877)	(0.0582)	(0.0511)
Agreement$_{t-2}$	-0.0291	-0.0104	-0.0182	-0.00246	0.00980	0.0138	-0.00685	0.0305
	(0.0356)	(0.0334)	(0.0350)	(0.0401)	(0.0329)	(0.0699)	(0.0381)	(0.0382)
Implementation$_{t-1}$	0.122	0.115	0.0743	-0.135	0.00721	-0.0858	-0.0373	0.0691
	(0.106)	(0.147)	(0.109)	(0.129)	(0.0608)	(0.0950)	(0.107)	(0.141)
Implementation$_{t-2}$	0.0726	0.0738	0.0573	0.0393	0.0810	-0.0409	-0.0166	-0.114
	(0.0986)	(0.0893)	(0.0872)	(0.108)	(0.0565)	(0.0932)	(0.0933)	(0.0885)
Concession$_{t-1}$	-0.111	-0.236*	-0.125	0.0851	0.0176	0.0882	0.561***	0.496***
	(0.101)	(0.139)	(0.114)	(0.142)	(0.0653)	(0.105)	(0.126)	(0.138)
Concession$_{t-2}$	-0.131	0.0448	-0.0167	-0.0247	0.0393	0.0426	0.109	0.197*
	(0.112)	(0.0817)	(0.0913)	(0.104)	(0.0584)	(0.0992)	(0.104)	(0.105)
Observations	1,340	1,340	1,340	1,340	1,340	1,340	1,340	1,340

Note: *** p<0.01, ** p<0.05, * p<0.1. We estimate a Panel VAR model like that of Table IV, with all additional variables of Tables A3 to A5. Robust standard errors clustered at the organization level are in parentheses. All estimations have organization fixed effects and country*year fixed effects.

Table A7: Fixed-Effects Ordered Logit and Fixed-Effects Logit Strategic Response Estimates

	Dependent variable is					
	$Terrorism_t$		$Insurgency_t$		$State\ Violence_t$	
	(1) Logit	(2) Ordered Logit	(3) Logit	(4) Ordered Logit	(5) Logit	(6) Ordered Logit
$Terrorism_{t-1}$			0.2294	0.8913	0.8333**	0.9684**
			0.7890	0.7451	0.3343	0.3818
$Insurgency_{t-1}$	-0.2790	0.0282			1.7988***	1.8657***
	0.5755	0.5355			0.4411	0.4250
$State\ Violence_{t-1}$	0.7420**	0.8594***	1.7734***	2.0554***		
	0.3681	0.2880	0.5641	0.4378		
Org. Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	723	890	440	743	672	888

Note: *** p<0.01, ** p<0.05, * p<0.1. Ordered fixed effect model estimates based on the approach of Baetschmann et al. (2015). Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 2 display the Terrorism response function. Columns 3 and 4 show the Insurgency response function. Columns 5 and 6 display the State Violence response function. Columns 1, 3, and 5 include fixed effect logit estimates. Columns 2, 4, and 6 include fixed effect ordered logit estimates. All estimations have organization fixed effects and year fixed effects.

Table A8: Robustness to the removal of outliers

	Dependent variable					
	$Terrorism_t$		$Insurgency_t$		$State\ Violence_t$	
	(1)	(2)	(3)	(4)	(5)	(6)
	FE	DGMM	FE	DGMM	FE	DGMM
$Terrorism_{t-1}$	0.2124***	0.224***	0.0375	0.00400	0.0559	0.0987*
	(0.0611)	(0.0550)	(0.0377)	(0.0312)	(0.0389)	(0.0536)
$Terrorism_{t-2}$	0.0091	0.0338	-0.0038	-0.0294	0.0364	0.00472
	(0.0634)	(0.0611)	(0.0219)	(0.0373)	(0.0272)	(0.0375)
$Insurgency_{t-1}$	-0.0329	-0.136	0.4369***	0.461***	0.1725**	0.183*
	(0.0570)	(0.0841)	(0.0826)	(0.108)	(0.0831)	(0.105)
$Insurgency_{t-2}$	0.1483**	0.123**	-0.0136	-0.113	0.0195	0.0659*
	(0.0606)	(0.0617)	(0.0577)	(0.0919)	(0.0623)	(0.0397)
$State\ Violence_{t-1}$	-0.0121	-0.105	0.0797**	0.178***	0.1738**	0.309**
	(0.0396)	(0.0844)	(0.0338)	(0.0677)	(0.0725)	(0.123)
$State\ Violence_{t-2}$	0.0104	-0.0668	0.0460	0.103**	0.0441	0.104*
	(0.0430)	(0.0421)	(0.0395)	(0.0496)	(0.0315)	(0.0534)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,356	1,255	1,399	1,272	1384	1,265
Organizations	104	96	104	96	104	96
Within R-Squared	0.282		0.178		0.299	
AR(1)-p		<0.001		<0.001		<0.001
AR(2)-p		0.349		0.188		0.107
Hansen-p		0.676		0.157		0.213
Instruments		8		8		9

Note: *** p<0.01, ** p<0.05, * p<0.1. The sample is restricted by removing outlier organizations, with largest residuals in absolute value (5 per cent). Robust standard errors clustered at the organization level are in parentheses. Columns 1 and 2 display the Terrorism response function. Columns 3 and 4 show the Insurgency response function. Columns 5 and 6 contain the State Violence display function. Columns 1, 3, and 5 include fixed effect estimates. Columns 2, 4, and 6 include DGMM estimates. All estimations have organization fixed effects and country*year fixed effects.

Table A9: DGMM with significant Country-Year Fixed Effects

	Dependent variable		
	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$
	(1)	(2)	(3)
	DGMM	DGMM	DGMM
$Terrorism_{t-1}$	0.2196***	-0.0126	0.0815
	(0.0758)	(0.0377)	(0.0543)
$Terrorism_{t-2}$	0.0315	-0.0312	0.0176
	(0.0613)	(0.0366)	(0.0351)
$Insurgency_{t-1}$	-0.0751	0.4220***	0.2260***
	(0.0692)	(0.0713)	(0.0735)
$Insurgency_{t-2}$	0.1631**	-0.0852	0.0130
	(0.0708)	(0.0914)	(0.0587)
$State\ Violence_{t-1}$	-0.1281*	0.1296**	0.3018***
	(0.0702)	(0.0586)	(0.0922)
$State\ Violence_{t-2}$	-0.0422	0.0720	0.0310
	(0.0431)	(0.0453)	(0.0679)
Country*Year FE	Yes	Yes	Yes
Observations	1361	1361	1361
Number of organizations	102	102	102
AR(1)-p	<0.001	<0.001	<0.001
AR(2)-p	0.294	0.939	0.0952
Hansen-p	1	1	1
Number of instruments	29	31	43

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the organization level are in parentheses. Columns 1 displays the Terrorism response function. Columns 2 shows the Insurgency response function. Columns 3 displays the State Violence response function. All columns include DGMM estimates. All estimations have organization fixed effects and country*year fixed effects restricted to those significant at 10 per cent in the baseline FE estimation.

Table A10: Fixed Effects Estimations by Country Sub-Samples

	Iraq			Lebanon			Israel		
	Dependent Variable								
	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$Terrorism_{t-1}$	0.2186*	0.0642	0.0667	0.1399**	0.0230	0.0193	0.4413***	0.0026	0.1161*
	(0.1113)	(0.0743)	(0.0647)	(0.0671)	(0.0366)	(0.0329)	(0.0868)	(0.0368)	(0.0599)
$Insurgency_{t-1}$	-0.0000	0.4208***	0.0857	0.0377	0.3742***	0.2159*	0.0994**	0.1362**	0.1982**
	(0.0644)	(0.0938)	(0.0951)	(0.1227)	(0.0604)	(0.1135)	(0.0451)	(0.0451)	(0.0747)
$State\ Violence_{t-1}$	-0.0226	0.0996*	0.2874***	-0.0235	0.0684	0.0745	0.0235	-0.0533	0.3058***
	(0.1001)	(0.0547)	(0.0764)	(0.1076)	(0.0690)	(0.0805)	(0.0876)	(0.0356)	(0.0756)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	220	220	220	490	490	490	222	222	222
Number of organizations	12	12	12	23	23	23	12	12	12
Within R-squared	0.1745	0.4297	0.2221	0.1232	0.2460	0.1519	0.3801	0.1074	0.3881
Avg. Years	18.33	18.33	18.33	21.30	21.30	21.30	18.50	18.50	18.50

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the organization level are in parentheses. Columns 1 to 3, 4 to 6, and 7 to 9 display the Terrorism, Insurgency, State Violence response function, for the Iraq, Lebanon, and Israel samples, respectively. All columns include fixed effect estimates. All estimations have organization fixed effects and year fixed effects. The observations are restricted to organizations with longevity 12 years or above.

Table A11: Fixed Effects Estimations by Ethnic Group Sub-Samples

	Kurds			Palestinians		
	Dependent Variable					
	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$
	(1)	(2)	(3)	(4)	(5)	(6)
$Terrorism_{t-1}$	0.2315	-0.0165	-0.1746***	0.2381***	0.0154	0.0615
	(0.1514)	(0.0984)	(0.0496)	(0.0841)	(0.0320)	(0.0436)
$Insurgency_{t-1}$	-0.0579	0.6240***	0.0782	-0.0725	0.1800**	0.0472
	(0.0667)	(0.1136)	(0.0554)	(0.0930)	(0.0793)	(0.0967)
$State\ Violence_{t-1}$	-0.0276	0.0234	0.3652***	0.1273*	-0.0382	0.3380***
	(0.0309)	(0.0300)	(0.0745)	(0.0731)	(0.0242)	(0.0927)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	201	201	201	465	465	465
Number of organizations	11	11	11	24	24	24
Within R-squared	0.4541	0.5773	0.3444	0.2104	0.0769	0.1772
Avg. Years	18.27	18.27	18.27	19.38	19.38	19.38
	Shi'a			Sunnis		
	Dependent Variable					
	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$
	(7)	(8)	(9)	(10)	(11)	(12)
$Terrorism_{t-1}$	0.2354**	0.1661***	0.1031	0.4061*	0.0251	0.1484
	(0.0848)	(0.0399)	(0.1002)	(0.1982)	(0.0239)	(0.1385)
$Insurgency_{t-1}$	0.1319	0.3341**	0.1125	0.4062	0.6288**	0.7033***
	(0.1305)	(0.1430)	(0.1137)	(0.2395)	(0.2074)	(0.1773)
$State\ Violence_{t-1}$	-0.1402	0.1869***	0.1606**	-0.2042	-0.0025	-0.1204
	(0.1474)	(0.0565)	(0.0618)	(0.2068)	(0.0091)	(0.0807)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	206	206	206	137	137	137
Number of organizations	10	10	10	7	7	7
Within R-squared	0.4190	0.6480	0.3650	0.2273	0.3956	0.3701
Avg. Years	20.60	20.60	20.60	19.57	19.57	19.57

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the organization level are in parentheses. Columns 1 to 3, 4 to 6, 7 to 9, and 10 to 12 display the Terrorism, Insurgency, State Violence response function, for the Kurds, Palestinians, Shi'a, and Sunnis samples, respectively. All columns include fixed effect estimates. All estimations have organization fixed effects and country*year fixed effects. The observations are restricted to organizations with longevity 12 years or above.

Table A12: Fixed Effects Estimations by Type of Organization
Religious, Ethnic, and Nationalist Sub-Samples

	Non-Religious			Religious		
	Dependent Variable					
	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$
	(1)	(2)	(3)	(4)	(5)	(6)
$Terrorism_{t-1}$	0.2498***	0.0080	0.0255	0.0922	0.1135**	0.0629
	(0.0647)	(0.0331)	(0.0346)	(0.1112)	(0.0490)	(0.0725)
$Insurgency_{t-1}$	0.0084	0.4691***	0.1524**	0.0427	0.4194***	0.1513
	(0.0774)	(0.0738)	(0.0705)	(0.0714)	(0.1060)	(0.0939)
$State\ Violence_{t-1}$	0.0407	0.0313	0.3044***	-0.0867	0.0664	0.1591**
	(0.0540)	(0.0375)	(0.0684)	(0.1063)	(0.0436)	(0.0690)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,084	1,084	1,084	346	346	346
Within R-squared	0.3153	0.5435	0.4467	0.3682	0.5943	0.4342
Number of org.	55	55	55	18	18	18
Avg. Years	19.71	19.71	19.71	19.22	19.22	19.22
	Non-Ethnic			Ethnic		
	Dependent Variable					
	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$
	(7)	(8)	(9)	(10)	(11)	(12)
$Terrorism_{t-1}$	0.3637***	-0.0489	0.0196	0.2038***	0.0817*	0.0784*
	(0.0888)	(0.0459)	(0.0710)	(0.0649)	(0.0424)	(0.0395)
$Insurgency_{t-1}$	-0.0199	0.3232***	0.1122	0.1316*	0.3953***	0.1223*
	(0.0810)	(0.1045)	(0.0751)	(0.0750)	(0.0618)	(0.0610)
$State\ Violence_{t-1}$	-0.0283	-0.0471*	0.2469***	-0.0114	0.1098*	0.1118
	(0.0583)	(0.0275)	(0.0816)	(0.1208)	(0.0633)	(0.0738)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	538	538	538	889	889	889
Within R-squared	0.5344	0.7115	0.6201	0.2213	0.3834	0.2263
Number of org.	29	29	29	46	46	46
Avg. Years	18.55	18.55	18.55	19.33	19.33	19.33
	Non-Nationalist			Nationalist		
	Dependent Variable					
	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$	$Terrorism_t$	$Insurgency_t$	$State\ Violence_t$
	(13)	(14)	(15)	(16)	(17)	(18)
$Terrorism_{t-1}$	0.1994***	0.0754*	0.0629*	0.3721***	-0.0485	0.0176
	(0.0639)	(0.0406)	(0.0374)	(0.0869)	(0.0447)	(0.0701)
$Insurgency_{t-1}$	0.1135	0.3742***	0.1724**	-0.0339	0.3341**	0.0640
	(0.0681)	(0.0708)	(0.0733)	(0.1013)	(0.1207)	(0.0861)
$State\ Violence_{t-1}$	-0.0173	0.0964**	0.0853	-0.0299	-0.0349	0.2731***
	(0.0825)	(0.0479)	(0.0622)	(0.0623)	(0.0252)	(0.0892)
Country*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	948	948	948	479	479	479
R-squared	0.2160	0.3545	0.1948	0.5144	0.7339	0.6269
Number of org.	49	49	49	26	26	26
Avg. Years	19.35	19.35	19.35	18.42	18.42	18.42

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the organization level are in parentheses. Columns 1 to 6, 7 to 12, and 13 to 18 display the Terrorism, Insurgency, State Violence response function, for the Non-Religious vs. Religious, Non-Ethnic vs. Ethnic, and Non-Nationalist vs. Nationalist organization samples, respectively. All columns include fixed effect estimates. All estimations have organization fixed effects and country*year fixed effects. The observations are restricted to organizations with longevity 12 years or above.

Table A13: Peaceful Organizations

Organization	Ethnic Group	Country	Onset	Political Orientation	Leadership
Turkish Republican Party	Turkish Cypriots	Cyprus	1970	Leftist, Nationalist	Council
Democratic Party	Turkish Cypriots	Cyprus	1992	Democratic	Council
Democratic People's Party	Turkish Cypriots	Cyprus	1979	Leftist, Nationalist	Single
New Birth Party or New Dawn Party	Turkish Cypriots	Cyprus	1984	Democratic	Council
Toplumcu Kurtulus Partisi	Turkish Cypriots	Cyprus	1976	Leftist, Nationalist	Council
National Unity Party	Turkish Cypriots	Cyprus	1975	Democratic	Single
Turkish Unity Party	Turkish Cypriots	Cyprus	1980	Democratic	Single
Patriotic Union Party	Turkish Cypriots	Cyprus	1989	Democratic	Weak
Popular Movement	Berbers	Morocco	1958	Ethnic	N.A.
National Popular Movement	Berbers	Morocco	1991	Democratic	N.A.
Rally for Culture and Democracy	Berbers	Algeria	1989	Democratic	Council
Berber Citizens Movement	Berbers	Algeria	2001	Democratic	Council
Movement for the Autonomy of Kabylie United	Berbers	Algeria	2001	Democratic	Council
Azerbaijan Movement	Azerbaijanis	Iran	1994	Nationalist	Weak
National Liberation Movement of Southern Azerbaijan	Azerbaijanis	Iran	1995	Nationalist	Council
National Revival Movement of Southern Azerbaijan	Azerbaijanis	Iran	1995	Democratic	Single
Kurdistan Ulusal Kurtulus Partisi	Kurds	Turkey	1977	Democratic	N.A.
Democratic Mass Party	Kurds	Turkey	1997	Democratic	Single
Conservative Party	Kurds	Iraq	1992	Democratic	Council
Kurdistan Islamic Union	Kurds	Iraq	1994	Democratic	Council
Islamic Labor organization	Shi'a	Iraq	1968	Democratic	Weak
Workers' Communist Party of Iraq	Kurds	Iraq	1993	Ethnic	Council

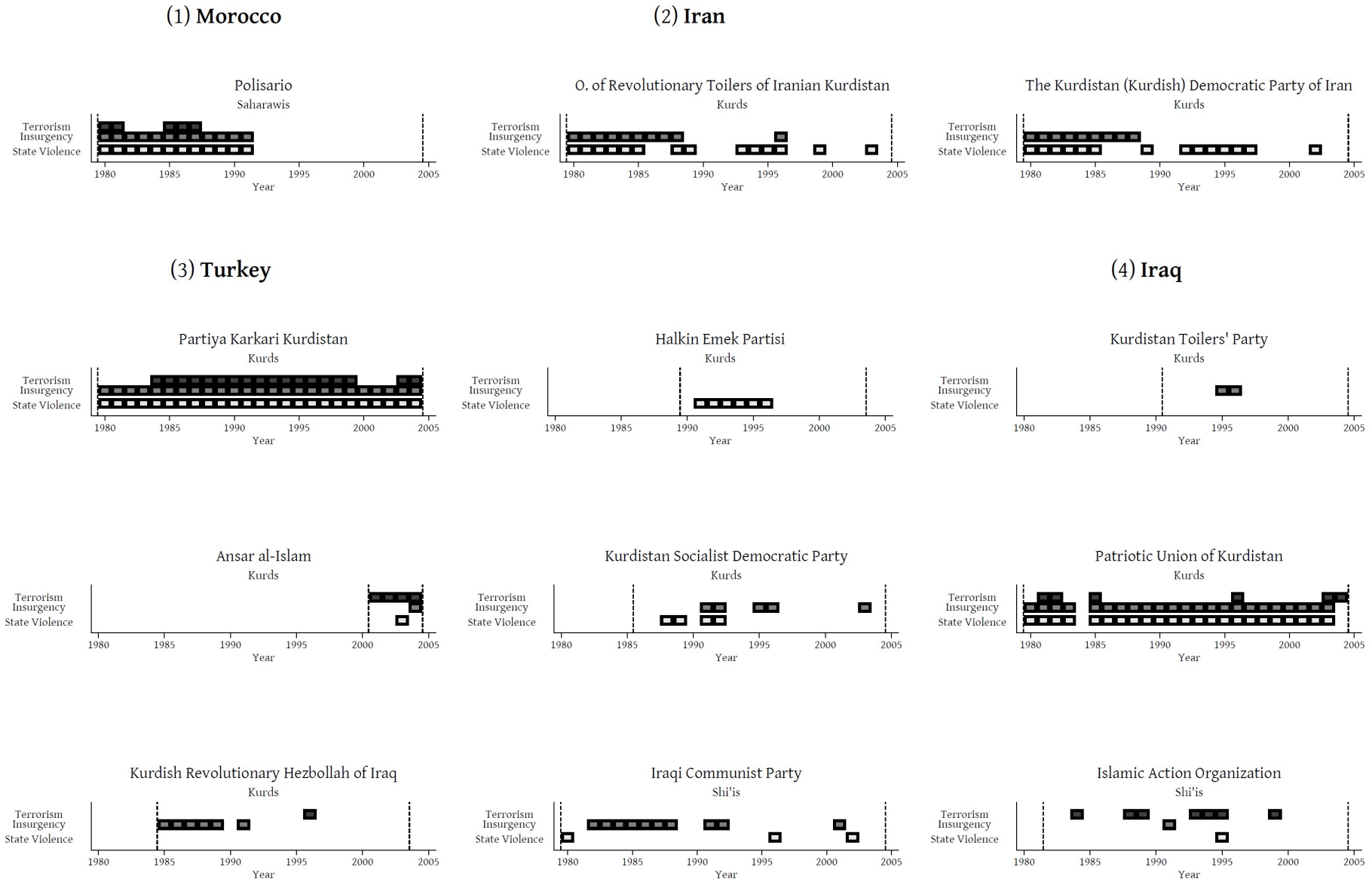
Islamic Accord Movement	Shi'a	Iraq	1994	Ethnic	Council
Iraqi Islamic Party	Sunnis	Iraq	1960	Ethnic	Weak
Iraqi National Alliance	Sunnis	Iraq	1992	Democratic	Council
Iraqi National Movement	Sunnis	Iraq	2001	Democratic	Council
Democratic Centrist Tendency	Sunnis	Iraq	1999	Democratic	Council
Iraqi National Salvation Movement	Sunnis	Iraq	2002	Democratic	Single
Iraqi Officers Movement	Sunnis	Iraq	2000	Democratic	Single
Kurdish Democratic Progressive Party	Kurds	Syria	1965	Democratic	N.A.
National Liberation Party	Maronite Christians	Lebanon	1958	Democratic	Single
Democratic Front for the Liberation of Palestine Revolutionary Palestinian	Palestinians	Lebanon	1969	Ethnic	Single
Communist Party Hamas	Palestinians	Lebanon	1982	Ethnic	Single
al-Ahbash	Palestinians	Lebanon	1987	Ethnic	Council
Popular Nasserist organization	Sunnis	Lebanon	1930	Ethnic	Single
Democratic Front for the Liberation of Palestine Hamas	Sunnis	Lebanon	1975	Ethnic	Council
Fatah/ Palestinian Liberation organization Jordanian People's Democratic Party	Palestinians	Jordan	1969	Ethnic	Single
Ta'al	Palestinians	Jordan	1987	Ethnic	Council
Arab Democratic Party	Palestinians	Jordan	1959	Ethnic	Single
National Democratic Assembly	Palestinians	Jordan	1989	Democratic	Weak
Hadash	Arabs	Israel	1999	Democratic	Single
Progressive List for Peace	Arabs	Israel	1988	Ethnic	Council
Sons of the Village	Arabs	Israel	1996	Democratic	Council
Islamic Movement	Arabs	Israel	1977	Ethnic	Council
Palestine Democratic Union	Arabs	Israel	1984	Ethnic	Council
	Arabs	Israel	1969	Democratic	N.A.
	Arabs	Israel	N.A.	Ethnic	Council
	Palestinians	Israel	1991	Nationalist	Council

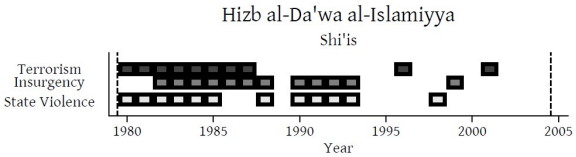
National Movement for Change	Palestinians	Israel	1995	Democratic	Council
Palestinian Popular Struggle Front	Palestinians	Israel	1967	Nationalist	Council
Palestinian National Initiative	Palestinians	Israel	2002	Democratic	Single
Fatah the Uprising	Palestinians	Israel	1983	Nationalist	Council
The Reform Movement	Shi'a	Saudi Arabia	1975	Ethnic	Weak
Bahrain Freedom Movement	Shi'a	Bahrain	1982	Democratic	Weak
Al Wefaq	Shi'a	Bahrain	2002	Democratic	Council
Islamic Action Society	Shi'a	Bahrain	2002	Ethnic	Council
Islamic Front for the Liberation of Bahrain	Shi'a	Bahrain	1976	Ethnic	Weak

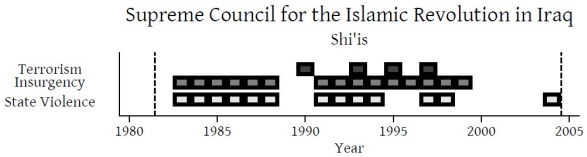
Note: This table provides basic information on the complete list of peaceful organizations.

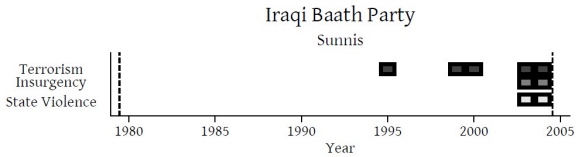
Figure A1: Strategy Time Profiles (All violent organization-state pairs)

Note: This figure extends Figure IV, with all violent organization-state pairs of the sample.

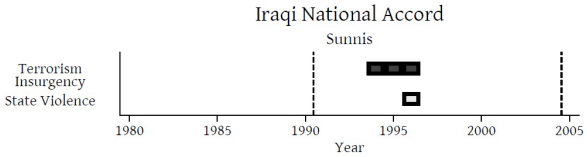


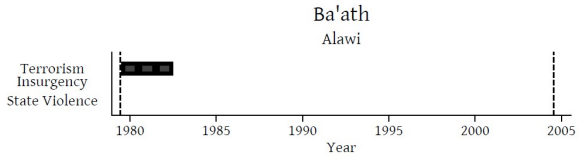


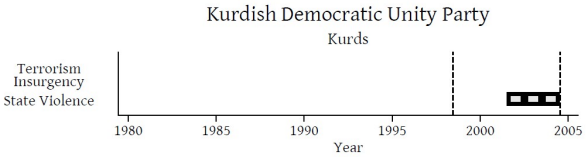




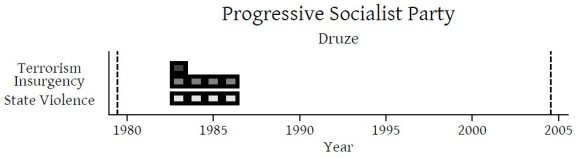
(5) **Syria**

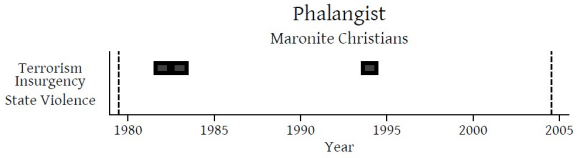


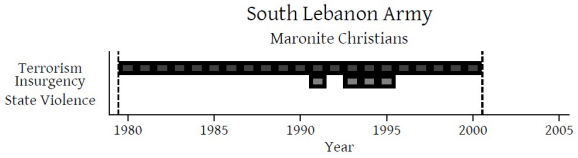


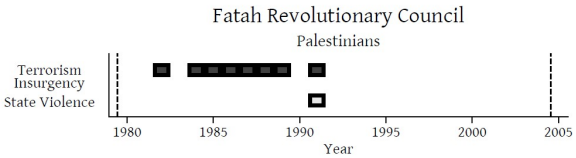


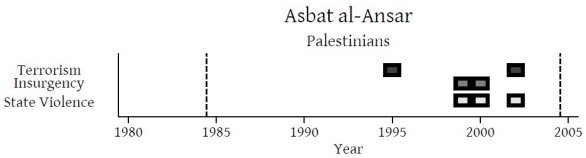
(6) **Lebanon**

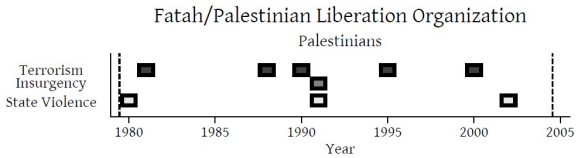


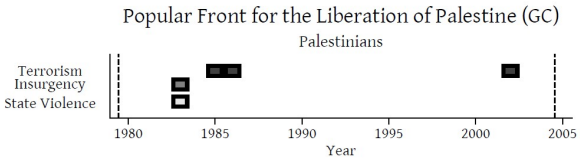


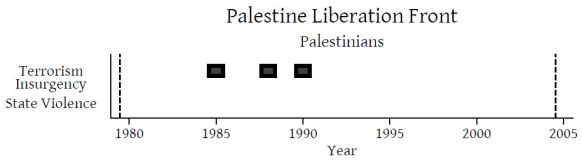


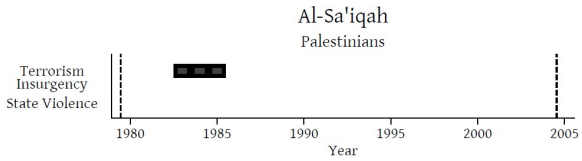




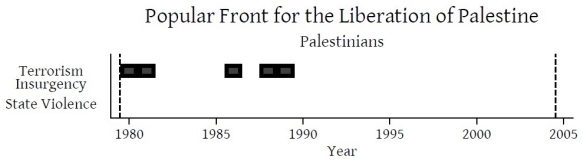


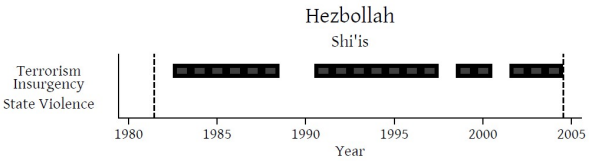

Popular Front for the Liberation of Palestine (GC)
Palestinians
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

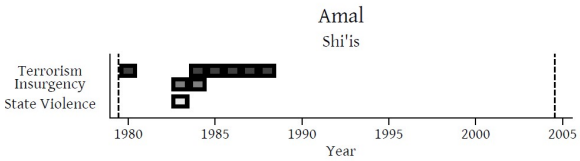

Palestine Liberation Front
Palestinians
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

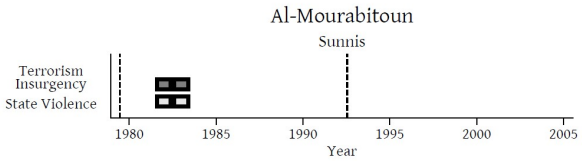

Al-Sa'iqah
Palestinians
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

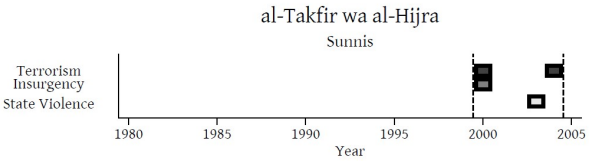

Palestinian Popular Struggle Front
Palestinians
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year


Popular Front for the Liberation of Palestine
Palestinians
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

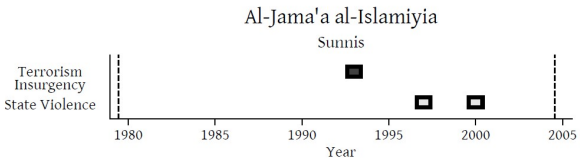

Hezbollah
Shi'is
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

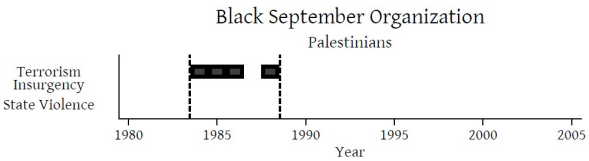

Amal
Shi'is
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

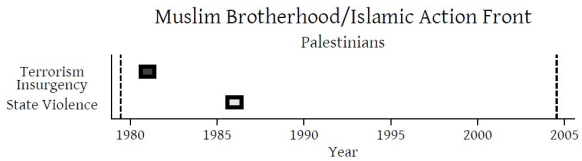

Al-Mourabitoun
Sunnis
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year


al-Takfir wa al-Hijra
Sunnis
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

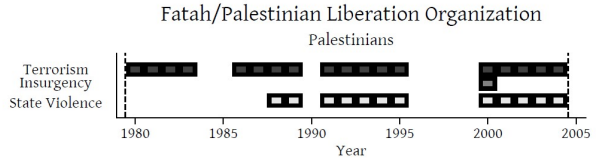
(7) **Jordan**

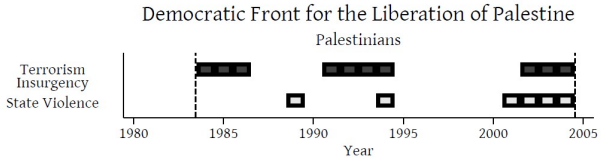

Al-Jama'a al-Islamiyia
Sunnis
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

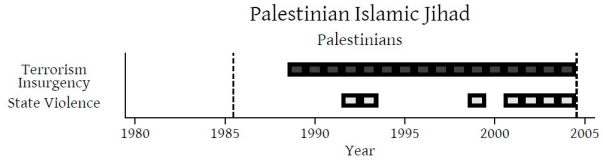

Black September Organization
Palestinians
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

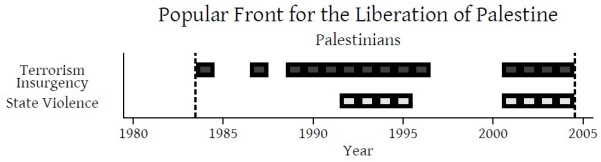

Muslim Brotherhood/Islamic Action Front
Palestinians
Terrorism
Insurgency
State Violence
1980
1985
1990
1995
2000
2005
Year

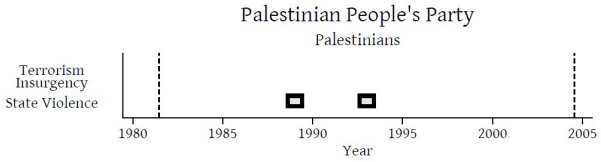
(8) **Israel**

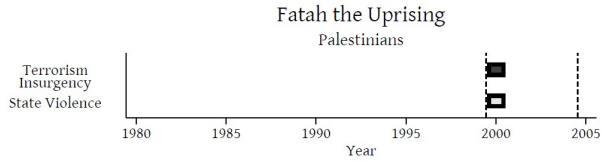


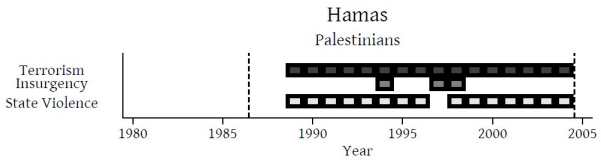












(9) **Saudi Arabia**