A Price on the Sacred: When Religion Mobilizes and Restrains[*]

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Abstract

I study how religious observance affects political violence and civilian protest. I argue that greater observance reprices political action according to its doctrinal compatibility, raising the return to actions that doctrine can frame as worship while increasing the opportunity cost of actions that compete with worship for scarce time. I test this mechanism using Ramadan, exploiting the Islamic lunar calendar's rotation through the Gregorian year as plausibly exogenous variation in observance. Armed conflict rises by 4.1% during Ramadan in predominantly Muslim states, while civilian protest declines by 7.1%. The increase in conflict is driven by religious insurgencies, not governments or secular-nationalist groups. A text analysis of a decade of weekly newsletters from a transnational insurgency shows that militant propaganda becomes more devotional during the month. Hourly military data from Afghanistan reveal that the daytime fast shapes the timing of escalation, concentrating labor-intensive combat in the windows after each meal. On the civilian side, global surveys show that Muslims report more frequent prayer during Ramadan, alongside lower political interest and willingness to demonstrate, with no comparable changes among non-Muslims. A common rise in observance thus moves different actors in opposite directions.

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1 Introduction

Religion has long been understood as a force that can both bind communities together and intensify political conflict. It can strengthen cooperation by sustaining social ties and shared norms (e.g., Ibn Khaldun, 1377; Durkheim, 1912; Greif, 1994), but it can also make political objectives sacred and resistant to material compromise (Atran et al., 2007; Bénabou and Tirole, 2011). An enduring puzzle is that even within a single tradition, religion can mobilize some actors while restraining others.

I argue that this divergence arises because religious observance reprices political action according to its doctrinal compatibility with worship. When an actor can frame an activity as worship, greater observance raises its return because the same effort produces both political and religious value; when the activity lacks such compatibility, observance instead raises its opportunity cost by increasing the value of time devoted to worship. The same increase in observance can therefore mobilize one actor while restraining another, depending on how the activity enters each actor's objective function.

This logic builds on the insight that the same tradition can support opposed readings of a political act, as worship or as a distraction from it. (Swidler, 1986; Appleby, 2000). For example, the *Bhagavad Gita*, in which Krishna instructs Arjuna to fulfill his sacred duty as a warrior by fighting, was read by Gandhi as an allegory for nonviolent struggle (Robinson, 2014; Kapila and Devji, 2013). In Judaism, religious Zionists have interpreted the return to the Land of Israel as part of a divinely sanctioned process of redemption and state-building, while anti-Zionist Haredim have drawn on the same textual tradition to oppose Jewish sovereignty before the Messiah (Ravitzky, 1996). Black churches have drawn on Exodus to cast protest as an act of faith, while other Christian clergy have invoked biblical injunctions to obey governing authorities as grounds for political restraint (Chappell, 2005).

I formalize this idea in a simple relative-price framework (Becker, 1965; Azzi and Ehrenberg, 1975), in which an action's doctrinal compatibility, defined as the degree to which an actor's doctrinal interpretation allows it to be read as an act of worship, determines whether effort jointly produces religious and political value. I use Ramadan in the Islamic tradition as a natural setting to test this mechanism because its competing doctrinal interpretations allow these forces to operate in opposite directions. Classical teaching emphasizes the lunar month as a season of self-restraint and reconciliation, likening the fast to a shield and enjoining the faster to refrain even from quarreling. Militant organizations instead invoke early Islamic victories to cast Ramadan as a season of conquest: for an armed group that can frame combat as worship, the return to violence rises.[1] Yet the broader public retains the restraint reading, and violating it carries a severe reputational cost that pulls against mobilization (Hassner, 2017; Reese et al., 2017). For ordinary citizens, intensified fasting and prayer raise the shadow price of secular time, crowding out protests that lack comparable doctrinal compatibility, while daily

[1] The foundational precedents are the Battle of Badr (624 AD) and the Conquest of Mecca (630 AD), two of the most consequential events in early Islamic history, both occurring during Ramadan. Badr, fought on the seventeenth of the month against a far larger Meccan force, is remembered as a divinely aided triumph and is referenced in the Quran. The Conquest, achieved with little resistance, brought Mecca and its sanctuary under the control of the early Muslim community.

congregations may simultaneously lower the cost of coordinating collective action (Chaney, 2013; Kikuta, 2024).

Observed by nearly two billion Muslims worldwide (Pew Research Center, 2017), Ramadan generates a recurring increase in religious observance through daytime fasting, intensified prayer, and communal worship (Lugo et al., 2012). Because the lunar calendar is about eleven days shorter than the Gregorian calendar, Ramadan rotates through the solar year, making its timing determined by astronomy rather than political or economic conditions (Campante and Yanagizawa-Drott, 2015). I exploit this 33-year drift with a balanced panel using country-by-Hijri-year and Gregorian-month fixed effects, isolating within-country, within-year variation net of common seasonal patterns. I sharpen this with a novel matched-date design that improves upon the literature's standard month-level or fasting-hour variation.[2] Specifically, the final days of Ramadan in one year occupy the same Gregorian dates as the days just after Ramadan in the following year, once the month has receded. Matching these days holds the solar calendar fixed while switching the treatment on and off.[3] I also exploit within-day variation from hourly conflict records to test how daytime fasting affects the distribution of attacks.

Using this quasi-exogenous variation, I compare two forms of political activity with sharply different doctrinal compatibility: armed insurgency and civilian protest. Religious and secular-nationalist insurgencies fight the same states in the same countries, allowing me to hold the adversary and the conflict environment fixed and ask whether doctrinal compatibility governs the direction of the response.[4] For civilians, protest generally lacks comparable doctrinal compatibility with worship, so religious congruence is low for Muslims and non-Muslims alike. Comparing them within the same country and month therefore asks whether the protest decline runs through religious observance rather than other features of Ramadan.

Before presenting any results, I collected ex ante forecasts from 61 researchers through the Social Science Prediction Platform (DellaVigna et al., 2019). According to Figure A.1, most expected Ramadan to dampen both forms of political action, and a clear majority predicted a decline in armed conflict. The estimates below run sharply against the prevailing expectation.

Across a global panel of 107 countries, incident-level data from the Uppsala Conflict Data Program (UCDP) from 1989 to 2022 reveal that armed conflict rises by 4.1% during Ramadan in predominantly Muslim countries.[5] Restricting attention to countries averaging at least one

[2] Campante and Yanagizawa-Drott (2015) identify Ramadan effects from the interaction of latitude with the month's Gregorian timing, which generates differences in daily fasting hours across countries and years. I find that fasting duration is unrelated to either conflict or protest (Table A.13), consistent with a mechanism that operates through the value of religious observance rather than through the physiological or economic burden of a longer fast.

[3] This comparison nets out any confound tied to a specific calendar date, such as weather or a fixed-date holiday, that month-level fixed effects cannot, and it isolates the month's most demanding slice, when worship and the cumulative toll of fasting both peak. I exclude the holiday of Eid al-Fitr from the control window.

[4] Compatibility also splits these groups by target: mainstream Islamic jurisprudence forbids harming non-combatants, while the Islamic State's takfiri reading strips whole categories of civilians of protected status, the same tradition yielding opposite answers on the same act.

[5] For comparison, the climate-conflict meta-analysis of Burke et al. (2024) reports an average standardized intergroup-conflict effect of 2.5% per one-standard-deviation temperature shock. The estimates are not directly comparable because they arise from different treatments, but they are of similar order of magnitude. The result

rebel-government incident per month nearly doubles the Ramadan coefficient to 7.3%, implying approximately 26 additional armed clashes across the subsample during a typical Ramadan. An event study confirms this escalation represents excess violence rather than temporal substitution, as adjacent months show no compensating decline.

Using a large language model to classify the initiator in more than 100,000 conflict reports, I show that the escalation originates primarily from rebel offensives rather than government operations.[6] Classifying groups by ideology from their founding charters, affiliations, and the reported role of religious doctrine (Brosché and Sundberg, 2024; Crenshaw and Robinson, 2025), I find the increase is concentrated among religious insurgencies and absent among secular-nationalist organizations operating in the same countries.

If doctrine is the mechanism, it should leave a distinct footprint in how these groups communicate and whom they target. I score a decade of the self-proclaimed Islamic State's Arabic-language weekly newsletter for religious framing with an LLM. Its public messaging turns sharply more devotional during Ramadan, while its operational battle reporting, a within-issue placebo, does not.[7] The same mechanism implies that doctrine should govern target selection. Because harming non-combatants violates mainstream Islamic jurisprudence, a doctrinally driven escalation should stop at the civilian boundary. Based on UCDP and Global Terrorism Database records, civilian targeting does not rise during Ramadan for the general run of religious groups. The Islamic State is the sole exception. Its violence too is directed primarily against the state, but its takfiri doctrine strips whole categories of people of protected status, including Muslims it judges apostate (Bunzel, 2015).

Because fighters keep the fast even while operating, the physical toll of dawn-to-sunset abstinence from food and water should push labor-intensive combat into the hours when capacity is restored, which are the hours following a meal. I use hourly military records from Afghanistan (Shaver and Wright, 2017) to find that the Ramadan increase in physically demanding direct fire attacks concentrates in two such windows, after the pre-dawn suhoor and after iftar, and is absent through the midday fast, except when facing opponents with advanced night-fighting capabilities. No account resting on darkness, on defender inattention, or on the publicity value of an attack predicts elevated close combat in both post-meal windows. Fighters escalate to capture Ramadan's spiritual returns but optimize their timing against their own physiological limits and the technological advantages of their targets.

If observance raises violence among those who can frame it as worship, it should lower political action among those who cannot. Civilian protest provides the discriminating con-

is also robust across independent data sources: ACLED yields effects nearly twice as large, while province-level military records from Afghanistan show a near 9% monthly increase in rebel attacks.

[6]The attribution uses the GABRIEL text-analysis framework (Asirvatham et al., 2026), which classifies each event from its own source description as government-initiated, rebel-initiated, or neutral via log-probability extraction at temperature zero. The resulting patterns are consistent with the SIGACTS military records, which separately log friendly and enemy actions.

[7]The Islamic State's prolific media output (Zelin, 2015), specifically the consistently dated weekly *al-Naba*, provides a rare, systematic corpus for within-year comparisons. While prior work quantifies jihadist media at scale (Vergani and Bliuc, 2015), its devotional intensity across the liturgical calendar remains unexplored. Acknowledging limits to external validity, I treat this as a single-group mechanism probe, plausibly an upper bound on the reframing a typical religious insurgency would exhibit, and rely on the conflict panels for cross-group contrasts.

trast. Lacking comparable doctrine that recasts a demonstration as worship, and lacking the organizational resources of a rebel group, ordinary citizens face the ritually dense calendar as an increase in the shadow price of secular time. In ACLED data from 1997-2023, I find that demonstrations in predominantly Muslim countries decline by 7.1% during Ramadan, and the military records from Afghanistan also reveal a drop in protest. To recover the micro-foundations of this decline, I exploit the timing of World Values Survey interviews around Ramadan. Across 23 Muslim-majority countries between 2001 and 2022, tens of thousands of Muslims interviewed during the holy month report increased daily prayer alongside declines in political interest and willingness to demonstrate. Non-Muslim respondents interviewed in the same country-months show no comparable changes. This pattern corroborates the opportunity-cost mechanism.

A set of alternative mechanisms could in principle generate the main results without any causal effect of religious observance and doctrine. The most serious is strategic timing, in two forms. The first holds that insurgents attack because the state is fasting and less attentive. Two findings rule this out. Secular-nationalist organizations facing the same fasting states show a precisely estimated null, so a weakened adversary is not enough to produce the escalation. And state forces raise rather than lower their own operational tempo during the month.

The second holds that the sacred month raises the propaganda value of an attack, so groups strike for publicity rather than merit. This cannot be separated from the doctrinal channel by messaging evidence, since devotional framing appears under either reading. The two differ instead in whose payoff moves. Propaganda accrues to the organization, but the escalation requires individual fighters to accept greater risk of death, and organizational publicity gives a fighter no reason to do so. What does is the elevated religious reward of combat and martyrdom during Ramadan, which is the doctrinal channel itself. A symbolic return that actually moves fighters is therefore not an alternative to observance repricing but the same channel viewed from the organization's side.

A financing channel holds that Ramadan almsgiving swells militant budgets through charity fronts, and that the extra funds buy more attacks (Limodio, 2022). But the composition is wrong for a budget shock: capital-intensive tactics stay flat, while the rise is in cheap improvised explosives and labor-intensive direct fire, gated by fighters' effort rather than cash, and its post-iftar timing is one money cannot explain. The one causal estimate of this channel is identified from a compulsory bank-deposit Zakat levy specific to Pakistan, whereas the giving that would fund a panel-wide escalation is overwhelmingly informal and in kind. Moreover, differential media reporting due to the salience of Ramadan is contradicted by identical patterns in declassified, non-media military records. Finally, the intensive margin of fasting does not drive the violence, which also rules out a channel in which hunger and fatigue raise aggression: were caloric deficit raising impulsive aggression, high-exertion violence would peak in the mid-afternoon trough of fasted performance, whereas it bottoms there and rises only after the fast is broken.

The paper's central contribution is to show that religion's two seemingly contradictory political consequences, restraint and militancy, both arise from a single mechanism operating

through religious observance. A rise in religious observance increases the return to actions doctrine can frame as worship while raising the opportunity cost of actions that compete with worship for scarce time. This identifies an underexplored margin in the economics of religion. The canonical club-good and screening models treat religious intensity as a fixed organizational trait that deters free-riding and commits members through costly ritual and sacrifice (Iannaccone, 1992; Berman and Laitin, 2008; Berman, 2011; Aimone et al., 2013). Because intensity is a property of the club rather than of the action, these models are silent on whether doctrine sanctions the particular thing the club does, and they therefore cannot generate opposite responses to a common religious shock. I instead treat observance as a short-run shock to an existing membership. Ramadan is too brief to change who belongs to an armed group or a religious community, so the variation operates on those already committed and reprices their actions according to doctrinal compatibility rather than screening who joins.

While a large literature studies the causal determinants of armed conflict (Miguel et al., 2004; Blattman and Miguel, 2010; Besley and Persson, 2011; Dube and Vargas, 2013; McGuirk and Nunn, 2025), comparatively little work isolates the role of religious observance itself (Iyer, 2016).[8] Existing studies of Ramadan largely emphasize restraint, documenting fewer incidents of political violence around Islamic holidays or long run effects of fasting on terrorism (Reese et al., 2017; Hodler et al., 2024). I show instead that greater observance can increase violence, but only for organizations whose doctrine allows combat to be framed as worship. Terrorism-based measures primarily capture attacks against civilians, and the Ramadan response I identify occurs through battlefield activity against state forces, the primary arena in which these groups operate.

The paper also contributes to the strands of literature on collective action (Campante and Chor, 2012; Madestam et al., 2013; Enikolopov et al., 2020) and how religious practice shapes behavior (Clingingsmith et al., 2009; Campante and Yanagizawa-Drott, 2015; Montero and Yang, 2022). Existing work emphasizes the mobilizing role of religious participation, showing that communal rituals and assembly can facilitate collective action by strengthening coordination and social ties (Hoffman and Jamal, 2014; Kikuta, 2024). I show that the political consequences of intensified observance depend on the type of action being organized. During Ramadan, the rising value of devotional time increases the opportunity cost of activities that lack religious compatibility, reducing civilian protest despite the coordination benefits generated by collective religious practice.

Finally, the paper speaks to the growing literature that exploits Ramadan's lunar calendar for causal identification (Almond and Mazumder, 2011; Oosterbeek and van der Klaauw, 2013; Campante and Yanagizawa-Drott, 2015; Hodler et al., 2024). Existing studies primarily identify effects from cross-sectional differences in the intensity of fasting, driven by variation in fasting duration across latitude or by the Gregorian timing of Ramadan. I instead exploit the calendar's repeated rotation within the same countries and armed organizations, using within-country, within-Hijri-year variation and a matched-date design that compares identical solar

[8] A parallel literature examines the reverse relationship, asking how conflict and adversity shape religious commitment (Blattman, 2009; Zussman, 2014; Henrich et al., 2019; Dube et al., 2022).

dates across adjacent lunar years to absorb seasonal fluctuations. The resulting variation helps isolate the short-run effect of religious observance from the persistent characteristics that make religion otherwise difficult to study causally.

2 Background

Ramadan is the ninth month of the Hijri calendar.[9] It holds profound significance for Muslims as the month in which the Qur'an was first revealed. Observing Ramadan through fasting from early dawn to sunset is a key practice, known as one of the five pillars of Islam. Fasting during Ramadan was made obligatory during the second year of Hijrah (624 AD) after the Muslims migrated from Mecca to Medina in the month immediately preceding Ramadan. Fasting is obligatory for all Muslims who have reached puberty, with exceptions for those who are acutely or chronically ill, traveling, elderly, breastfeeding, diabetic, or pregnant. Fasting during Ramadan involves abstaining from food, drink, tobacco products, and sexual relations.

Ramadan significantly transforms the social and individual lives of those who observe it. Adherents wake up before dawn to eat and drink (*suhur*) and carry on with their daily activities, before breaking their fast at sunset, often in the company of family, friends, and other co-religionists. Mosques also host iftar meals, attracting large gatherings throughout the month.

Among various religions, predominantly Muslim countries have the highest daily and weekly rates of worship (Pew Research Center, 2018). Muslims pray five times a day, either in the mosque or individually, and gather for weekly Friday congregational prayers around noon throughout the year, with heightened emphasis on these practices during Ramadan. Both men and women frequently attend additional congregation prayers (*tarawih*) after iftar, which typically last 1-2 hours. For instance, Pope (2024) uses evidence from US cellphone data to report large spikes in Muslim worship attendance during Ramadan.

The theological foundations for this intensified engagement are explicit in the prophetic traditions.[10] One canonical tradition holds that whoever fasts Ramadan in sincere faith, seeking God's reward, is forgiven his past sins (Sahih Bukhari, Book 2, Hadith 38), establishing the month as a period of uniquely heightened religious receptivity.[11]
This hadith illustrates the special spiritual status accorded to Ramadan, establishing the month as a period of uniquely heightened religious receptivity for believers. Another hadith (Sahih Muslim, Book 13, Hadith 212) explicitly discourages interpersonal disputes during fasting:[12]

> Abu Huraira reported Allah's Messenger as saying: Allah the Exalted and Majestic said: Every act of the son of Adam is for him, except fasting. It is exclusively meant for Me and I alone will reward it. Fasting is a shield. When any one of you is fasting on a day, he should neither indulge in obscene language, nor raise the voice; or if anyone reviles him or tries to quarrel with him he should say: I am a person fasting.

[9] It is a purely lunar calendar that consists of twelve months that are either 29 or 30 days long. This causes Ramadan to occur 10 to 12 days earlier each year in relation to the Gregorian calendar.

[10] All hadith references follow the standard numbering of the Sahih al-Bukhari collection and the Sahih Muslim collection, which serve as major sources of religious law and moral guidance, accessed via https://sunnah.com.

[11] Translation available at https://sunnah.com/bukhari:38.

[12] Translation available at https://sunnah.com/muslim:1151d.

Together, these traditions create a powerful set of incentives for ordinary Muslims to redirect time and energy from secular activities toward worship, prayer, and self-restraint during the holy month.[13]

While the Hijri calendar governs the timing of religious observances, virtually all Muslim-majority countries use the Gregorian calendar for civil, commercial, and governmental functions (Aydin, 2017). Work schedules, school terms, agricultural cycles, and military operations follow Gregorian months and seasons. Even Saudi Arabia, which historically relied on the Hijri calendar for official purposes, adopted the Gregorian system for administrative functions in 2016. As a result, Ramadan's annual rotation through the Gregorian calendar means that fasting overlaps with different seasonal and institutional conditions each year.

Fighting in Ramadan

Islam designates four sacred months during which warfare is prohibited except in self-defense.[14] Ramadan is not among them. Crucially, foundational military victories in early Islam occurred during Ramadan. These include the Battle of Badr, the first major engagement between early Muslims and the Meccan Quraysh, as well as the Conquest of Mecca, widely considered one of the most pivotal events in Islamic history.

Throughout Islamic history, several other major battles have occurred during Ramadan, including the Muslim conquest of the Iberian Peninsula in 711, the Siege of Jerusalem in 1187, and the decisive Mamluk victories over the Mongols at Ain Jalut in 1260 and Marj al-Saffar in 1303. These historical precedents have carried into the modern era, heavily influencing the timing of the 1973 Arab-Israeli War, often referred to in the Arab world as the Ramadan War, and Iran's massive 1982 offensive during the Iran-Iraq War. The latter, involving over 180,000 troops in one of the largest land battles since World War II, was named Operation Ramadan to invoke religious legitimacy and the historical memory of early Islamic victories to motivate forces.

Both state forces and insurgent groups continue to leverage this historical narrative to provide religious and strategic legitimacy for military engagements during the holy month. While classical Islamic teachings often emphasize the "Greater Jihad" (the internal, spiritual struggle for self-restraint), modern radical Islamist organizations selectively prioritize the "Lesser Jihad" (offensive warfare). These groups engage in a sophisticated form of ideological appropriation, framing Ramadan as a unique temporal window where the spiritual rewards for martyrdom and military success are exponentially multiplied. For example, the Afghan Taliban have formally rejected calls for seasonal ceasefires as an "ignorance of religion," instead

[13] A natural question is why this injunction against confrontation does not similarly restrain insurgent groups. As discussed in the following subsection, religious-ideological organizations selectively invoke a separate strand of the prophetic tradition that frames offensive warfare during Ramadan as uniquely meritorious, drawing on historical precedents such as the Battle of Badr and the Conquest of Mecca. The behavioral norm against quarreling applies to interpersonal conduct among civilians; insurgent groups reinterpret the martial traditions as superseding it for combatants engaged in what they define as obligatory armed struggle.

[14] These months are Muharram (the first month), Rajab (the seventh month), and the last two months, Dhul Qa'dah and Dhu al-Hijjah (Al-Dawoody, 2011).

characterizing combat during the fast as an "obligatory worship" (*ibadat*) for which the spiritual merit is multiplied seventyfold (Taylor and Harooni, 2013).

Similarly, spokesmen for the Islamic State have frequently characterized Ramadan as the "month of conquest and jihad," explicitly drawing a parallel between modern insurgent activities and the foundational victories of the Prophet (Bin Ali, 2017; Amarasingam and Winter, 2017). In this framework, the physical hardship of the fast is rebranded as a form of ascetic preparation that increases the spiritual merit (*thawab*) of the fighter, turning physiological deprivation into a psychological asset.

The doctrinal raw material for this appropriation is readily available in the canonical hadith collections (Cook, 2015; Hegghammer, 2017). A concrete example illustrates how this appropriation works in practice. One canonical tradition on guarding the frontier (*ribat*) states:[15]

> It was narrated from Salman Al-Khair that the Messenger of Allah said, "Whoever guards Ribat (the frontier) in the cause of Allah for one day and one night, he will have (a reward) like that of fasting and praying (night prayers) for a month. If he dies he will continue to receive reward for what he did ..."

The hadith is conventionally understood to honor the discipline of frontier service in defensive contexts. Fundamentalist militants invert this interpretive emphasis to argue that armed combat during Ramadan yields spiritual rewards exceeding the most sacred forms of devotional worship. For example, issues of the Islamic State's Arabic-language weekly *al-Naba* published during Ramadan 1438 (June 2017) describe the fasting month as a period of "ribat, jihad, giving, and martyrdom," and explicitly argue that one night of frontline guard duty during Ramadan surpasses the spiritual merit of worship on Laylat al-Qadr, the most sacred night in Ramadan (Zelin, 2026). The interpretive moves required to reach this conclusion, equating modern offensive operations with classical defensive ribat, illustrate how canonical doctrinal raw material is reshaped to serve a specifically militant interpretive agenda.

Finally, insurgent fighters maintain strict observance of the fast even while conducting operations. Hegghammer (2017) documents the prevalence insurgent groups fasting during Ramadan, including suicidal fighters observing the fast before attacks. The Taliban's code of conduct (Layeha) similarly requires fighters to uphold core religious obligations (Munir, 2011). This observance is the behavioral premise of the within-day analysis: because fighters keep the fast, the physical costs of dawn-to-sunset abstention weigh on them as they do on ordinary believers, generating the post-iftar concentration of the Ramadan increase in high-exertion attacks that I document below.

3 Conceptual Framework

The premise of this section is that sacred time changes prices, not preferences. The key departure from standard models is that political actions differ in whether doctrine allows the effort they require to produce worship jointly with its political payoff, a property I call the

[15] Sunan an-Nasa'i, Book 25, Hadith 83. Translation available at https://sunnah.com/nasai:3167.

action's *doctrinal compatibility*. In a standard account, political effort a yields only a political output, $a \mapsto P$; for a compatible action, the same effort yields political and religious output together, $a \mapsto (P, W)$. Doctrine is thus neither a preference nor a belief but a feature of the production process, fixing whether effort maps into political output alone or into political and religious output jointly.

Sacred time raises the value of religious output, so it alters the return to a political action through this channel alone. It increases the return to actions that produce worship and taxes the time of actions that do not. Although I study Ramadan, the framework applies to any setting in which an exogenous increase in the value of religious devotion changes the relative returns to political action; Ramadan is simply the shock I observe.

Every other force in the model, the opportunity cost of devotional time, the coordination value of communal gatherings, and the reputational cost of acting in sacred time, is a standard mechanism drawn from prior work and included only to discipline the empirical predictions. I formalize this in a single decision problem: one payoff, one first-order condition, and one comparative static whose sign is ordered by compatibility. The model adds no mechanism beyond the one above; its role is to show that divergent responses to a common shock share a single price structure and to mark the one point at which the theory is silent and the data must decide. Proofs are in Appendix A.

A representative actor chooses the intensity of a political action $a \geq 0$: armed operations for an insurgent group, protest for a civilian. Let $R \geq 0$ index sacred salience, rising through Ramadan and peaking in its final ten days. The payoff is

$$U(a; R) = \underbrace{B(a)\big[1 + \phi(\mu(R) - 1)\big]}_{\text{jointly produced return}} + \underbrace{\gamma(R)\, a}_{\text{coordination}} - \underbrace{\lambda(R)(1 - \phi)\, a}_{\text{secular-time tax}} - \underbrace{\rho(R)\, a}_{\text{reputational cost}} - \underbrace{c(a)}_{\text{effort}}, \qquad (1)$$

with B increasing and concave and the effort cost c increasing and convex.

The first term is the return to the action, augmented by the religious output it jointly produces. The multiplier $\mu(R) \geq 1$ is the marginal value of religious output: as sacred salience rises, worship is worth more. Off Ramadan $\mu = 1$ and the term is the ordinary political return.

The value of religious output reaches the actor only through $\phi \in [0, 1]$, the doctrinal compatibility of its action: the extent to which the doctrinal reading the actor holds renders that action an act of worship. Compatibility is thus a property of an action paired with an actor's adopted reading, not of the actor's piety. It is high for combat a group construes as a religious obligation. For protest, ϕ depends on whether a movement has adopted a reading that renders demonstration itself devotional, as the Black church tradition did with Exodus, and low where it has not. In the Ramadan setting I study, the mass of recorded demonstrations is not organized by religious movements and no established reading in the Islamic tradition frames street protest as an act of worship comparable to fasting or night prayer

The same devout individual therefore faces $\phi = 0$ when protesting, whatever the intensity of personal observance, and a group that has not adopted a doctrine rendering its combat worship faces $\phi = 0$ in fighting as well. The interpretive raw material for a merit-bearing reading is available in any tradition, but which reading a group can credibly hold is fixed by

its founding ideology and the expectations of its base: a secular-nationalist organization cannot adopt a jihadist construal of combat without forfeiting the identity that defines it, so adoption is costly and, once made, stable over the horizon of a fasting month. Compatibility is therefore predetermined with respect to the timing of Ramadan, which is what identification exploits.

The remaining terms are prices, each linear in the action and each standard. The time tax $\lambda(R)(1-\phi)$ is the shadow price that devotional time places on any action that does not itself produce worship (Becker, 1965; Azzi and Ehrenberg, 1975; Iannaccone, 1990). The coordination term $\gamma(R)$ is the fall in the cost of organizing collective action when communal gatherings assemble people at predictable times (Kikuta, 2024). And $\rho(R)$ is the reputational cost of acting during sacred time, carrying the backlash logic of prior work (Hassner, 2017; Reese et al., 2017).

The factor $(1-\phi)$ on the time tax is the joint-production insight stated as a price. Devotion now claims hours that could go elsewhere, so the time an action consumes is costly, but only for actions that compete with worship. If the action itself produces worship ($\phi = 1$), the time it takes is not diverted from devotion, it is devotion, and there is nothing to trade off. Compatibility is therefore the same object in both terms, entering the return multiplied by ϕ and the tax by $(1-\phi)$, so it alone determines which price an actor faces.

The framework is conditional on actors' feasible choice sets. An insurgent organization allocates effort over armed operations, whereas an ordinary civilian allocates effort over political participation such as protest, and neither can adopt the other's mode of action over the horizon of a fasting month. The model asks how a common rise in religious observance changes the optimal intensity of the political action available to each actor, not how actors choose among actions.

How large the price responses λ' and γ' are depends on organizational form rather than on compatibility. A professional organization devotes resources to political activity as its occupation, not from the discretionary hours that devotion now fills, and is already organized, so neither the time tax nor the coordination benefit moves with sacred time for it ($\lambda' \approx \gamma' \approx 0$). An individual allocates political participation from the same discretionary time and would rely on the same gatherings to coordinate, so both bind ($\lambda' > 0$, $\gamma' > 0$). This is heterogeneity in the magnitude of standard forces, not a second channel.

Rearranging the first-order condition sets the two prices facing each other:

$$\underbrace{B'(a^*)\big[1+\phi(\mu(R)-1)\big]}_{\text{value of action, raised by joint production}} = \underbrace{c'(a^*)+\lambda(R)(1-\phi)+\rho(R)-\gamma(R)}_{\text{price of action, taxed by devotional time}}. \tag{2}$$

Raising R pushes up the left side through the value of religious output and the right side through the time tax, and compatibility decides which push an actor feels. A fully compatible action collects the rising return and escapes the tax; an incompatible one forgoes the return and pays the tax in full.

The object of interest is the sign of the response to sacred time. The payoff is strictly concave (Appendix A, Lemma 1), so the optimum is well defined and the implicit function theorem

gives

$$\operatorname{sign}\left(\frac{da^*}{dR}\right) = \operatorname{sign}\Big[\underbrace{B'(a^*)\,\phi\,\mu'(R)}_{\text{joint-production return }(+)} + \underbrace{\gamma'(R)}_{\text{coordination }(+)} - \underbrace{\lambda'(R)(1-\phi)}_{\text{time tax }(-)} - \underbrace{\rho'(R)}_{\text{reputation }(-)}\Big]. \tag{3}$$

This comparative static is the paper's central object, and doctrinal compatibility governs its sign. Compatibility enters the first term multiplied by itself and the third by its complement, so a higher ϕ shifts the whole derivative upward, switching on the joint-production return and switching off the time tax. The coordination and reputational terms resolve only what ambiguity remains once compatibility has set the dominant force. The response to sacred time is thus ordered by compatibility, and everything that follows is a reading of this one expression.

Take each armed group to be fighting the state, a target whose reputational cost does not rise during the month. An actor whose action is compatible and who fields a professional organization collects the rising joint-production return and pays no time tax, so only the return is active and its action rises. An otherwise identical actor whose action is incompatible collects no return and pays no tax; every force in the sign condition is switched off and its response is a precise null. This null is not a coincidence of offsetting terms. Sacred time offers such an actor nothing it values, no religious output it can claim, no time relief it needs, no coordination help it needs, and no change in its reputation against the state. Because the two are otherwise identical, professional, state-directed, and operating in the same environment, their difference under sacred time is the pure effect of doctrinal compatibility (Proposition 1, Appendix A).

An individual taking an incompatible action collects no religious return, so the joint-production term is again absent, but as a participant spending discretionary time it feels both the time tax and the coordination benefit, while a nonviolent action carries no reputational penalty. Its response reduces to the time tax set against the coordination benefit, a contest the model does not call. The coordination term is the one standard force that could overturn the time-tax prediction for the civilian, which is why the sign of the civilian response must be settled by the data rather than assumed. This is the model's one open sign, and I return to it below.

3.1 Testable implications

The comparative static delivers the following predictions that let the data choose among mechanisms.

First, the state is itself a largely secular actor with no comparable way to produce worship through counterinsurgency ($\phi = 0$), so the rising value of religious output does not lift its operations.[16] The aggregate rise should therefore come from rebel offensives, not from government activity, which I test by attributing the aggressor in each event from unstructured text.

[16] Muslim-majority governments do invoke religious legitimacy and their soldiers keep the fast, so $\phi = 0$ is a relative statement rather than a literal one. What separates a national army from a religious insurgency is that the latter's doctrine constitutes combat itself as merit-bearing worship scaling with the sacred calendar, whereas a state's invocation of religion and its soldiers' piety are legitimation and personal observance rather than features of the production technology of counterinsurgency; fighting co-religionists during Ramadan tends to raise a state's reputational cost, not lower it. All the model needs is that the state's ϕ lie far below the insurgents'

Second, if the joint-production return is what drives the escalation, the groups' own words should move with it, turning measurably more devotional and martial during the month. I take this to a decade of one organization's weekly newsletter.

Third, the reputational cost attaches to the target, not to the act. What outrages a population is not that a group fights during Ramadan but whom it harms: striking a checkpoint carries relatively lower stigma, killing civilians in the holy month carries a great deal. So ρ is flat against the state but high and rising against civilians, and the escalation should stop at the civilian line for the general run of religious groups. Two kinds of evidence support the asymmetry. Insurgent codes of conduct themselves restrict harm to non-combatants, the Taliban's Layeha among them (Clark, 2011), and survey and field evidence indicates that civilian harm by armed groups imposes reputational costs on the perpetrator (Condra and Shapiro, 2012; Fair et al., 2012). .

The exception is a doctrine that reclassifies whole categories of civilians as legitimate targets: for such a group, on that margin, harming them is neither stigmatized nor incompatible with worship within its own frame, so the return and the reputational logic behave as they do against the state, and only there does the increase cross into civilian targeting (Corollary 1).

Fourth, the timing of violence within the day is governed by a constraint the monthly problem omits: because fighters keep the fast while operating, the physical toll of daytime abstention makes high-exertion tactics costly during fasting hours and cheap after iftar, while low-exertion, pre-positioned attacks are unaffected. High-exertion violence should therefore concentrate after iftar, whereas the monthly level, set by the value of religious output, should not depend on the number of fasting hours (Corollary 2). This within-day signature distinguishes a physical-capacity channel from a backlash story, under which all violence would fall, and from a simple preference for darkness, under which every tactic would shift to night together. The same corollary implies an asymmetry across enemies: where the adversary fields night vision and air support, the post-iftar hours are no longer cheap for a high-exertion assault, so the within-day concentration vanishes even as the level can still rise through the value of religious output. I develop the physiological detail behind this constraint in the empirical analysis of the hourly combat records.

Finally, the civilian response is the model's one open sign, contested between the time tax and the coordination benefit. Ramadan fills the discretionary day with devotional obligation (Pope, 2024), raising the shadow price of every competing use of time, so the time-allocation account predicts that protest falls. A supply-side alternative, in which the state raises the cost of assembly in anticipation of unrest, predicts the same aggregate decline but a different footprint on attitudes. Pure repression lowers willingness to protest without changing private belief, whereas the time-allocation account predicts that religious practice rises while political interest and willingness to demonstrate fall together. A further test separates observance from the season, since a devotional time squeeze acts only on those who observe. Non-Muslims live through the same Ramadan but do not fast or add prayers, so their attitudes should not move if the channel is observance rather than the general disruption of the season. These mechanisms interlock across the levels at which I observe them, with the joint-production

channel in cross-country panels and in heterogeneity by group ideology and national Muslim share, the physiological channel in hourly combat records and the within-day contrast across tactics, and the time-allocation channel in individual survey responses and the non-Muslim placebo.

4 Empirical Framework

4.1 Data

Armed conflict

The primary source of armed conflict data is the UCDP Georeferenced Event Dataset (GED) covering the period from 1989 to 2022. I focus on state-based armed conflicts, which account for more than 70% of all conflict events. State-based events involve a coherent organized opposition whose ideological position on combat during Ramadan is identifiable, and the rebel group identity and aggressor narrative are recorded consistently — both essential to the ideology and aggressor coding I use later. Non-state and one-sided violence lack this organizational structure, making any Ramadan-mediated shift in behavior harder to identify.

This also distinguishes the outcome from the terrorism-event data used in related work. Databases built around a terrorism definition, such as the GTD, restrict coverage to civilian-directed attacks outside conventional warfare and frequently leave the perpetrator unattributed; they thus under-record the rebel-state combat in which the escalation channel operates while over-representing the targets where backlash deters operations (Reese et al., 2017). Consequently, the divergence between my findings and prior terrorism literature is not a contradiction, but a direct reflection of this difference in targets and tactics.

An individual "event" in UCDP-GED involves the use of armed force by the government of a state against one or more opposition groups, with at least one direct battle death (Sundberg and Melander, 2013). Although each event requires only a single battle death, inclusion is set at the dyad-year level: a government-opposition dyad enters the sample only if it produces at least 25 battle-related deaths within a calendar year, UCDP's standard threshold for an active conflict. GED thus disaggregates into individual events precisely the conflicts that constitute UCDP's country-year armed conflict data, rather than recording all low-intensity violence. Each event also records the identity of the rebel group involved, which contains more than 100 distinct entities across the sample. The dataset also includes a source article field containing brief narrative descriptions of each event.

This panel dataset covers nearly all Muslim-majority countries and spans one complete cycle of Ramadan's progression through the solar year,[17] with a sample of 107 countries (see Figure A.2).

[17] Since a lunar month is about 29.5 days long, the Hijri calendar shifts by around 1.5 weeks each year compared to the Gregorian calendar, with 34 Hijri years approximately corresponding to 33 Gregorian years.

Hours of attacks

Data on hourly insurgent violence come from the U.S. Defense Department's Significant Activities (SIGACTS) dataset for Operation Enduring Freedom, covering more than 200,000 insurgent attacks in Afghanistan from 2002 through early 2015 (Condra et al., 2018; Shaver and Wright, 2017). These records were jointly collected by Afghan security forces and NATO's International Security Assistance Force (ISAF) following standardized military reporting protocols. Unlike media-sourced datasets, military-recorded data of this kind offer more systematic coverage of conflict events and are less susceptible to the reporting biases documented in media-based incident compilation (Weidmann, 2016). This makes the SIGACTS data a valuable complement to the UCDP records used in the cross-country analysis. Each incident is geo-referenced using military grid coordinates and includes a time stamp, typically precise to the minute.[18]

The data capture three main attack types relevant to this analysis, ordered by the level of physical exertion required of insurgents: direct fire (DF), which involves small arms and rocket-propelled grenades carried out in close combat by insurgents operating in groups and demands sustained presence and effort; indirect fire (IDF), which involves mortars and rockets fired from prepared positions and requires less continuous exertion once the launch site is established; and improvised explosive devices (IEDs), which are typically pre-positioned on or near roadways in advance and triggered remotely or by command wire, requiring minimal real-time effort.

For the within-day analyses, I apply two data-cleaning steps that follow Condra et al. (2018) and address known reporting artifacts in SIGACTS time stamps. First, I drop all incidents reported as occurring at exactly midnight (00:00:00). A disproportionately large number of observations are coded at this exact time, which Condra et al. (2018) interpret as evidence that the midnight designation was assigned to events whose actual time was not recorded; observations at any other minute of the midnight hour (e.g., 12:24 AM) are retained. Second, although event times are typically recorded down to the minute, the minute-level distribution is skewed toward natural rounding numbers: events are more frequently listed on the 45th or 30th minute of an hour than on the 43rd or 31st minute, reflecting reporter rounding behavior rather than the precise timing of attacks. To avoid this minute-level reporting bias, I aggregate event times to the hour for the hour-of-day interaction profile and to half-day shifts (pre-iftar versus post-iftar) for the within-day reallocation tests.

Demonstrations

For data on civilian protests, I use the Armed Conflict Location & Event Data (ACLED) project in Africa over the period 1997-2023, involving 48 countries (Raleigh et al., 2023). The project started by focusing on Africa, allowing for coverage dating back to 1997, thus making it the only continent with the most extensive data. The rationale behind additionally focusing

[18]The use of high-frequency records to capture granular, circadian behavioral shifts closely parallels recent methodological advances in the economics of religion, which leverage high-frequency telecommunications metadata to track localized, prayer-time network dips (Dube et al., 2022).

on Africa in this part is its significant Muslim population, with over half a billion Muslims and at least 17 Muslim-majority countries, comprising nearly a third of the global Muslim population (Kettani, 2010). In a global survey examining the significance of religion within various religious traditions, Pew Research Center (2018) documents that Africa exhibits the highest average percentages of individuals who consider religion to be very important in their lives as well as the highest percentages of individuals who pray daily (around 80%). The countries are shown in Figure A.3.

Within ACLED, I restrict the outcome to *peaceful protests*, defined as gatherings in which demonstrators do not engage in violence or property destruction and are not met with force or intervention. The vast majority of recorded demonstrations are peaceful, and using this sub-event type isolates non-violent civilian political behavior as the conceptual counterpart to the political violence outcomes examined elsewhere in the paper.

I also use the demonstration variable in the SIGACTS dataset for Afghan provinces as a within-country complement to the ACLED cross-country evidence. Because these events are logged by on-the-ground military personnel rather than media stringers, the SIGACTS data provide consistent province-level coverage including remote districts where media coverage is sparse. The SIGACTS demonstration category is broader than ACLED's peaceful-protest definition, since military reporters did not consistently code participant identity, and I therefore treat the SIGACTS evidence as a within-country corroboration of the ACLED protest result.

Share of Muslims

I separately merge the UCDP and ACLED datasets with datasets on the Muslim population share in each country from the World Religion Project (WRP) (Maoz and Henderson, 2013) and the Hackett et al. (2025). The WRP provides data on the number of followers and total population in five-year intervals from 1985 to 2010. I interpolate these figures to create an annual cross-country dataset for the years between the WRP's five-year markers. For the period from 2010 to 2023, I interpolate data from the Pew Research Center, which offers similar data at ten-year intervals. For the armed conflict analysis, the monthly panel includes 31 countries with an average Muslim population share of at least 75%. For the demonstration analysis, 14 African countries meet the 75% Muslim population threshold over the sample period.

Individual survey outcomes

To investigate the individual-level mechanisms driving the decline in civilian demonstrations, I use four waves of the World Values Survey (waves 4 through 7) (Haerpfer et al., 2022). Restricting the sample to the 41 737 Muslim respondents across 23 Muslim-majority countries with exact interview dates, whose interviews were fielded between 2001 and 2022, I construct three binary indicators to capture shifts in religious and political engagement. First, to measure daily religious intensity, I construct a prayer frequency indicator coded as 1 for respondents

who report praying several times a day or once a day, and 0 otherwise.[19] Second, to capture political interest, I create an indicator coded as 1 if the respondent is "very" or "somewhat" interested in politics, and 0 otherwise. Finally, to measure protest willingness, I construct an indicator coded as 1 if the respondent "has done" or "might do" peaceful demonstrations, and 0 if they assert they "would never" participate.

Fasting hours

To explore whether the intensity of fasting mediates the relationship between Ramadan and conflict, I construct a measure of daily fasting duration for each country-year, calculated as the difference between civil twilight and sunset times at each capital city using data web-scraped from the U.S. Naval Observatory's Astronomical Applications Department.[20] Fasting hours vary across countries and years due to two factors: Ramadan's rotation through the Gregorian calendar, which shifts it between longer summer days and shorter winter days, and latitude, which amplifies seasonal daylight variation. Equatorial countries experience nearly constant fasting durations, while countries farther from the equator face swings of up to seven hours across Ramadan cycles. Because this variation is determined entirely by geography and astronomy, it is orthogonal to conflict conditions. I include this variable in selected specifications to test whether longer fasting hours independently affect armed conflict or protest activity; I find no significant relationship with either outcome.

In all balanced panels, hours, days or months with no reported incidents are coded as zero. All Gregorian dates are converted to the Hijri calendar using a popular Python package and cross-checked against independent sources.[21] Summary statistics for all the key variables presented in this section are available in Table A.1 and Table A.2.

4.2 Estimating Equations

To examine the effect of Ramadan on conflict frequency, I use a balanced panel at the country-month level, organized by the Hijri calendar. The baseline model, estimated on countries with a Muslim population share above 75%, is:

$$\log(y_{cmt} + 1) = \beta_1 \text{Ramadan}_{mt} + \gamma_g + \theta_{ct} + \epsilon_{cmt} \tag{4}$$

where y_{cmt} is the number of state-based armed conflicts or peaceful protests in country c, Hijri month m, and Hijri year t. Ramadan_{mt} is an indicator equal to 1 if month m in year t corresponds to Ramadan, and 0 otherwise. Since Ramadan falls in the same Hijri month across all countries, this variable does not vary by country. γ_g denotes Gregorian month fixed effects,

[19] The underlying item is WVS `F028B`, "How often do you pray." The threshold isolates intense daily observance in an already devout sample: 75.1% pray at least once a day, 83.1% at least several times a week, and 93.7% at least occasionally.

[20] Civil twilight occurs when the sun is 6° below the horizon, closely approximating the 15° angle traditionally used by Muslims to determine the start of fasting.

[21] I use the HijriDate Python package (available at `https://pypi.org/project/hijridate`) and cross-check dates using Islamic Philosophy Online (`https://www.muslimphilosophy.com/ip/hijri.htm`) from the Institute of Oriental Studies, Zürich University.

which absorb seasonal patterns tied to the solar calendar such as weather, agricultural cycles, and fighting seasons. θ_{ct} denotes country-by-Hijri-year fixed effects, which absorb all time-varying shocks specific to a given country and year, including economic conditions, political transitions, and national holidays.

Identification comes from the rotation of Ramadan through the Gregorian calendar. Because the Hijri calendar shifts approximately 10–12 days earlier each year, Ramadan falls in different Gregorian months across years, cycling through all seasons over a 33-year period. After netting fixed effects out, β_1 is identified from the year-to-year shift in which Gregorian month coincides with the fasting period. Because the rotation of Ramadan through the Gregorian calendar is governed by lunar astronomy, its timing is not determined by or responsive to conflict conditions in any given country or year.

The log transformation reduces skewness in the count data and allows interpretation of coefficients as approximate percentage changes. An alternative is Poisson pseudo-maximum likelihood (PPML), which directly models count data and accommodates zeros without a log transformation (Silva and Tenreyro, 2006; Chen and Roth, 2024). However, the identification strategy in this paper requires both Gregorian month fixed effects, which break the collinearity between Ramadan and solar-calendar seasonality that would otherwise confound identification, and country-by-Hijri-year fixed effects, which ensure the estimate is not driven by country-specific annual shocks.

This high-dimensional structure creates severe estimation problems for PPML on sparse conflict data: when an entire fixed-effect group contains only zeros, the likelihood has no finite maximum and the algorithm drops that group entirely, a well-documented consequence of perfect statistical separation in nonlinear models (Correia et al., 2020; Fernández-Val and Weidner, 2016). Separation is particularly costly in this setting, as it systematically excludes peaceful country-years that form the counterfactual against which the Ramadan effect is estimated. I therefore retain the log-linear OLS specification as the baseline throughout.[22].

To examine how the effect of Ramadan varies with the relative size of the Muslim population, I estimate the following specification on the full sample of countries:

$$\log(y_{cmt} + 1) = \beta_1 \text{Ramadan}_{mt} + \beta_2 \text{Ramadan}_{mt} \times \%\text{Muslim}_{ct} + \gamma_g + \theta_{ct} + \epsilon_{cmt} \tag{5}$$

where β_2 captures how the effect of Ramadan on conflict changes as the Muslim population share increases. Since the specification includes country-by-year fixed effects, the level of $\%\text{Muslim}_{ct}$ is absorbed and does not enter separately.

The linear interaction in Equation 5 imposes a constant marginal effect of Muslim population share on the Ramadan coefficient. To allow for nonlinearities, I also estimate a more flexible specification that captures the effect of Ramadan within discrete population-share categories:

[22]Columns 2 and 6 of Table 7 implement PPML within the same-date design for armed conflict and protests, respectively.

$$\log(y_{cmt}+1) = \beta_1 \text{Ramadan}_{mt} + \sum_{k=1}^{4} \theta_k \cdot (D_{k,ct} \times \text{Ramadan}_{mt}) + \gamma_g + \theta_{ct} + \epsilon_{cmt} \quad (6)$$

where $D_{k,ct}$ represents indicator variables for different Muslim population share categories.[23] The coefficient θ_1, for instance, captures the differential effect of Ramadan on conflict in countries with more than 75% Muslim population relative to the baseline category.

Subnational Intraday Specifications

To examine the intraday tactical substitution driven by the physiological constraints of fasting, I utilize high-frequency military data from Afghanistan. I structure the data as a panel at the province, Hijri month, and shift level. I first divide each day into two periods: a daylight fasting window from 05:00 to 17:59 and a nighttime post-iftar and pre-suhoor windows from 18:00 to 04:59.[24] After balancing the daily panel to include periods with zero incidents, I aggregate the data to the monthly level by shift to estimate the following:

$$\log(y_{pmst}+1) = \beta_1 \,\text{Ramadan}_{mt} + \beta_2 \,\text{PostIftar}_s + \beta_3 \,(\text{Ramadan}_{mt} \times \text{PostIftar}_s) + \theta_{pt} + \gamma_{g(mt)} + \epsilon_{pmst} \quad (7)$$

The dependent variable y_{pmst} is the count of attacks of a given type in province p during Hijri month m, Hijri year t, and shift s, where $s \in \{\text{day}, \text{night}\}$ denotes whether the attack occurred during the daytime fasting window (05:00–17:59) or the post-iftar and pre-suhoor window (18:00–04:59). These cutoffs correspond closely to the sample-averaged sunset (18:05) and civil twilight (05:13) times in Afghanistan over the 2002–2015 period, computed from US Naval Observatory data.

Ramadan_{mt} is an indicator equal to one when m is the ninth Hijri month, and PostIftar_s is an indicator equal to one for the nighttime shift. The coefficient of interest is β_3, the difference-in-differences estimate of the within-day Ramadan reallocation: the change in attack frequency during the post-iftar window in Ramadan months relative to non-Ramadan months, net of the average post-iftar level and the average Ramadan level. The total Ramadan effect during the post-iftar window, relative to the same window in non-Ramadan months, is given by $\beta_1 + \beta_3$; the corresponding effect during the daytime window is given by β_1 alone. The contrast between these two quantities indicates whether the Ramadan effect is concentrated after iftar (large β_3) or spread uniformly across the day (small β_3).

To map this within-day pattern precisely, I expand the temporal resolution to the hour level and estimate a flexible event study specification:

[23] $D_{1,ct}$, $D_{2,ct}$, $D_{3,ct}$, and $D_{4,ct}$ are indicators for countries where the Muslim population share exceeds 75% (31 countries for UCDP and 14 for ACLED), is between 50–75% (7 and 3), between 25–50% (8 and 6), and between 1–25% (39 and 19), respectively. The baseline category consists of countries with less than 1% Muslim population (22 and 6).

[24] These cutoffs approximate the average fasting window in Afghanistan over the 2002–2015 sample period.

$$\log(y_{pdht}+1) = \beta_1 \text{Ramadan}_{dt} + \sum_{j\neq 2} \alpha_j \text{Hour}_j + \sum_{j\neq 2} \delta_j (\text{Hour}_j \times \text{Ramadan}_{dt}) + \gamma_g + \theta_{pt} + \epsilon_{pdht} \tag{8}$$

where Hour_j are indicator variables for each hour of the day local time. The base category is 02:00 AM, which serves as a neutral nighttime reference point falling comfortably between post-sunset mobilization and the pre-dawn meal. The coefficients δ_j trace out the intraday trajectory of violence during Ramadan relative to this baseline hour. Plotting these coefficients provides a direct visual test of whether labor-intensive attacks surge exclusively after sunset during Ramadan.

Same-date Design

Gregorian month fixed effects absorb average monthly seasonality but cannot net out confounds tied to a specific calendar day. I therefore implement an same-date design design that exploits the precise rate at which Ramadan drifts through the solar calendar. Because the Islamic lunar year is about 11 days shorter than the Gregorian year, the last 10 days of Ramadan in year t fall on nearly the same Gregorian dates as the early post-Ramadan period in year $t+1$, by which point the lunar calendar has shifted forward and Ramadan has already concluded. For each treated day during Ramadan in year t, the same calendar date in year $t+1$ therefore serves as an untreated control sharing the same solar position. Figure 3 illustrates this construction using the 2017–2018 cycle. To my knowledge, this exact-date matching approach has not previously been applied in the Ramadan literature.

For the cross-country outcomes, I restrict the sample to these matched windows, collapse the data to the country-day level, and estimate a daily analogue of Equation 4, retaining Gregorian month fixed effects but replacing country-by-Hijri-year fixed effects with country-by-cycle-year fixed effects that group each treated window with its matched control. The specification is deliberately demanding. The sample shrinks to roughly 20 days per country-cycle, standard errors are clustered at the country level, and identification relies entirely on within-pair variation across adjacent years sharing the same calendar dates.

For the Afghan SIGACTS outcomes, I carry the same matched windows into the within-day structure of Equation 7, splitting each province-day into a fasting (pre-iftar) and a non-fasting (post-iftar) shift. The *Ramadan* × *Post-iftar* interaction then tests whether the within-day patterns hold within these exact-date windows.

The treated window deliberately covers the last 10 days of Ramadan, the religiously most intense period of the fasting month. Islamic tradition designates these days as the time when *Laylat al-Qadr*, the night on which the Qur'an was first revealed, occurs on one of the odd-numbered nights, and Muslims observe heightened prayer, congregation, and devotional intensity throughout this window. The physiological cost of sustained observance also accumulates over the weeks of the month, so by the final ten days the demands of three weeks of dawn-to-sunset abstention, together with the disrupted sleep of *suhur* and *tarawih*, are at their most acute. Both the ideological-mobilization and physiological mechanisms therefore pre-

dict the largest Ramadan effects in precisely this window, making the last ten days the most powerful test of the religious-observance hypothesis as well as the most natural treated period to match against the same calendar dates in the following year. The corresponding estimates appear in Section 5.5.

Fasting Hours

Following Campante and Yanagizawa-Drott (2015), I also test whether the duration of the daily fast influences the frequency of violence. I estimate the baseline equations by interacting the Ramadan indicator with the logarithm of daily fasting hours. I rely on national variation for this analysis rather than adopting a subnational grid approach (as in Hodler et al., 2024). Global subnational conflict panels are exceedingly sparse, georeferencing in standard datasets is often imprecise (Eck, 2012), and local demographic data on religious affiliation are systematically unavailable across the sample.

5 Main Results

5.1 Effects on Armed Conflicts

Table 1 presents the baseline results on the impact of Ramadan on state-based armed conflict. Columns (1) through (4) restrict the sample to the 31 countries with a Muslim population share exceeding 75%. The Ramadan coefficient is stable at 0.037 across all four specifications, significant at the 1% level, and unaffected by the progressive inclusion of Gregorian month fixed effects, country fixed effects, year fixed effects, and the most demanding country-by-year fixed effects. This stability indicates that the result is not driven by seasonality, cross-country differences in conflict levels, or country-specific annual shocks. In levels, the coefficient implies approximately 0.5 additional conflict events per predominantly Muslim country during Ramadan relative to other months, or 15 additional episodes across the sample in a single Ramadan. Given an average of about 7 fatalities per conflict incident per month in these countries, this translates into a conservative estimate of approximately 100 extra conflict-related deaths during each Ramadan.

Column (5) restricts this sample to the 14 countries that average more than one conflict event per month, where the effect nearly doubles to 0.068 and remains significant at the 1% level; with only 14 clusters, I confirm inference with a wild cluster bootstrap ($p = 0.006$). These countries are the most conflict-intense to begin with: their mean of about 25.9 conflict events per country-month is more than double the 11.8 in the full Muslim-majority sample, and their Ramadan-month fatalities of roughly 155 per country-month are likewise more than double the 71 observed there. Applied to this larger base, the coefficient implies about 1.9 additional conflict events per country-month, or roughly 26 additional episodes across the 14 countries in a single Ramadan and close to 900 over the 34 Ramadans between 1989 and 2022. At the same figure of about seven fatalities per incident used above, this amounts to on the order of 180 extra conflict-related deaths during each Ramadan, concentrated in these countries alone. This

amplification of the effect in the most violent settings anticipates the ACLED results discussed below, where the estimates also roughly double.

Columns (6) and (7) expand the sample to all 107 countries. In column (6), the Ramadan indicator and its linear interaction with Muslim population share are both statistically insignificant, suggesting that the relationship does not follow a simple linear pattern. Column (7) addresses this by interacting Ramadan with discrete population-share categories. The coefficient on the interaction with 31 countries exceeding 75% Muslim population indicates that the Ramadan period raises armed conflict frequency in these countries by approximately 3.5% relative to countries with less than 1% Muslim population ($p < 0.05$). All other population-share interactions are statistically insignificant and close to zero, confirming that the Ramadan effect is concentrated in countries where Islamic observance is most widespread.

The results withstand several sensitivity checks. Restricting the control group to months immediately adjacent to Ramadan yields similar estimates (Table A.3 reports the specification using three months before and after). A placebo test on 22 countries with less than 1% Muslim population produces precisely estimated null effects, confirming that the results are not driven by non-religious seasonal factors (Table A.4, columns 1–5). Replacing the Muslim population interactions with analogous Christian population variables in the same table (columns 6–7) shows that Ramadan's effect on conflict declines as the Christian share rises, consistent with the reference group of low-Christian countries being predominantly Muslim.

As a cross-dataset validation, I replicate the analysis using politically violent events from ACLED, restricted to incidents involving state and rebel groups to approximate the UCDP definition of state-based conflict. These results, presented in Table A.5, are consistent with the main findings, with effect sizes nearly doubling in magnitude and significant at the 1% level. Finally, the estimates are generally robust to excluding any single country from the sample (Figure A.4).

Group Ideology

The baseline results establish that Ramadan is associated with an increase in state-based armed conflict in Muslim-majority countries. A natural follow-up question is *which* groups drive this increase. If the mechanism operates through religious doctrine and historical precedent, as the conceptual framework suggests, then the Ramadan effect should be concentrated among groups that can frame armed struggle within a religious idiom, and absent among secular groups, whose objectives are divorced from any religious framing and whose strategic calculus is not anchored in Islamic precedent on warfare. The secular groups thus serve as a falsification benchmark, and their null also rules out a generic routine-disruption story: if Ramadan simply reshuffled daily rhythms in a way that mechanically altered all conflict, non-religious actors operating within the same cultural geography would exhibit an identical operational response.

To test these predictions, I manually classify all 139 rebel groups in the sample into two ideological categories based on each group's founding charter, stated objectives, and primary recruitment ideology, drawing on the UCDP Actor Dataset (Brosché and Sundberg, 2024) and

the Mapping Militants Project (Crenshaw and Robinson, 2025). The complete list and detailed coding logic for all groups are provided in Appendix C.[25]

The manual classification proceeds as follows:

(i) Religious (n=55) groups operate within an Islamic framework that supplies the doctrinal raw material to recast offensive combat during Ramadan as meritorious worship. The most active are the broad Syrian insurgent coalition, the Afghan Taliban, the Islamic State, al-Shabaab, and Tehrik-i-Taliban Pakistan. What unites the category is access to this doctrinal repertoire, which frames Ramadan combat as worship and is available to groups whose identity and objectives are cast in religious terms; secular-nationalist groups have no such access.[26]

(ii) Secular-nationalist (n=84) groups operate entirely outside any religious framework for armed struggle. Their stated objectives are ethno-nationalist, Marxist-Leninist, separatist, or factional, and religion plays no constitutive role. The most active are the Kurdistan Workers' Party (PKK) and its affiliates, the Free Aceh Movement (GAM), and the secular Sudanese insurgencies (the SPLM/A and the Sudan Revolutionary Front). These groups serve as the falsification benchmark: lacking any doctrinal basis to recast Ramadan combat as worship, they should show no systematic Ramadan effect even where they sustain high baseline violence.

Because the religious category is dominated by a few large contributors, I verify that the result does not hinge on any one of them. The broad Syrian insurgent coalition alone accounts for 48.5% of religious-group events, the Afghan Taliban for a further 26.6%, and the Islamic State for 11.3%, with al-Shabaab (3.3%) and Tehrik-i-Taliban Pakistan (2.9%) the next largest; I re-estimate the main specifications dropping each in turn and as a bloc. The Ramadan coefficient retains its sign, magnitude, and significance throughout, confirming that the escalation reflects the religious category as a whole rather than the behavior of any single organization.[27]

Table 2 examines the effect of Ramadan on conflict events and fatalities by group ideology, with events in Columns (1)–(2) and fatalities in Columns (3)–(4). Religious groups exhibit a 3.8% increase in conflict events during Ramadan (column 1) and a 3.9% increase in fatalities (column 3), both significant at the 5% level. The fatality response is comparable in magnitude to the event response, consistent with Berman and Laitin (2008)'s evidence that religious militant organizations achieve higher lethality per attack than secular counterparts because costly ritual requirements screen for high-commitment operatives. The corresponding estimates for secular-nationalist groups are 2.4% for events and 0.9% for fatalities, neither individually significant. Because the secular series has a base rate roughly eight times smaller, its confidence interval on the proportional effect runs from -0.9% to $+5.7\%$ and therefore contains the 3.8% estimated for religious groups. These columns establish that the escalation is present among religious groups and not detectable among secular ones.

[25] The classification covers all 139 organized armed groups identified as engaging in state-based conflict against government forces in 30 Muslim-majority countries in the sample period (1989–2022). State actors appearing as side B in the UCDP data (e.g., Government of Pakistan in interstate episodes) are dropped.

[26] The religious category is internally heterogeneous, with member organizations differing in the centrality and intensity of the doctrinal commitments they bring to armed struggle. The relevant theoretical condition is access to the repertoire that reframes combat as worship, which the category as a whole possesses; the predicted effect is a category average that, consistent with the framework, is driven by its most doctrinally committed members.

[27] These results are available upon request.

Two features of these results stand out. First, the ideology contrast is the paper's most direct test of the mechanism, though its sharpness is limited by the difference in base rates. Despite operating in the same countries and under the same religious calendar as religious factions, secular insurgencies such as the PKK exhibit no detectable escalation, indicating that the response requires a framework that recasts armed struggle as worship rather than a mere coincidence of geography. Second, the result weighs heavily against a generic time-reallocation channel that would drive all conflict seasonality. If mechanical disruptions to daily routines were the primary driver, they would alter the operational tempo of all armed actors in these environments regardless of ideology, which they do not.

The concentration of the escalation among religious groups also aligns cleanly with the "club model" of religious militancy (Berman and Laitin, 2008; Berman, 2011). While fighters across various groups may observe the fast, religious organizations couple this physical ordeal with a doctrinal reading that frames offensive warfare as worship. In this framework, the extreme sacrifice required to execute combat operations while fasting acts as a severe screening mechanism. It weeds out free-riders and tightens group cohesion, enhancing operational lethality specifically for organizations that demand both ritual purity and martial commitment.

Aggression Attribution

The preceding analysis establishes *which* groups are involved in the Ramadan conflict increase, but not *who initiates* the violence. The UCDP GED records both parties to each conflict event but does not systematically code which side was the aggressor. If religious-ideological rebels are driving the Ramadan increase by invoking Islamic precedents for offensive warfare, the effect should concentrate in rebel-initiated events. If instead governments intensify (preemptive) strikes during Ramadan, the coefficient would appear stronger on government-initiated events.

To distinguish aggressor from target, I classify each conflict event using a large language model.[28] Each event's source description, together with the identities of Side A (government) and Side B (rebel group), is passed to GPT-5-mini through the Generalized Attribute Based Ratings Information Extraction Library (GABRIEL) framework (Asirvatham et al., 2026), which returns one of three labels: Side A, Side B, or Neutral. Events whose descriptions do not unambiguously identify an aggressor are coded Neutral, a conservative default that trades sample size for attribution accuracy.[29] Neutral events constitute 57% of the sample and are excluded from the aggressor analysis. The remaining 43% split into 26% government-initiated and 17% rebel-initiated (see Table A.6 for examples). The exact label definitions, the instructions given to the model, and the construction of the classification sample are reproduced in Appendix B1.

[28] An alternative approach cross-references UCDP events against the Global Terrorism Database and codes events appearing in both as rebel-initiated (see Gassebner et al., 2023). This method is restricted to incidents meeting the GTD's narrower terrorism definition and miscodes conventional rebel-initiated military engagements. The LLM-based approach classifies each event on its own description, accommodating the full range of conflict types in UCDP.

[29] GABRIEL's `classify` function uses log-probability extraction at temperature zero, yielding deterministic and reproducible output. Events with missing source text or containing only the UCDP aggregation tag (approximately 1,390 of 156,685 observations) are automatically coded as Neutral.

Table 3 disaggregates by ideological category and aggressor type to unpack the mechanisms driving the escalation. Among religious groups, rebel-initiated events rise by 5% during Ramadan, significant at the 5% level (column 1), while government-initiated events against the same groups rise by a smaller 1.4%, significant only at the 10% level (column 2). The escalation is thus concentrated in rebel-initiated events, with the rebel coefficient roughly three times the government coefficient in log points and about 3.6 times larger as a proportional effect at each series' own mean (5.0% against 1.4%). The government estimate is the more precisely estimated of the two, and its small, marginally significant magnitude is consistent with reactive or anticipatory counterinsurgency rather than with a state-led escalation.

The secular-nationalist columns provide the falsification. Rebel-initiated events yield a precise zero (column 3), the cleanest possible rejection of a mechanical across-the-board time-reallocation alternative: if Ramadan simply rescheduled all violence, secular rebels would escalate alongside religious ones, and they do not. There is a 3.9% increase in government-initiated events against secular targets that is only marginally significant(column 4). Interpreted cautiously, this may reflect strategic targeting by the state: governments may opportunistically direct operations toward secular insurgents during Ramadan, when the domestic political cost of striking unobservant communities during a sacred period is lower.[30]

The results point to a nuanced causal chain. Ramadan systematically intensifies armed conflict in predominantly Muslim countries, but this intensification is concentrated in conflicts involving insurgencies that operate within a religious framework, and the surge is disproportionately driven by rebel-initiated violence rather than by a state response. Secular-nationalist insurgencies, lacking any doctrinal basis or motivation to recast Ramadan combat as worship, show no comparable shift.

5.2 Timing Attacks: Evidence from Afghanistan

How do insurgents operationally manage the Ramadan escalation given the physical constraints of fasting? Strict adherence to the dawn-to-sunset fast makes sustained close combat physiologically hard during peak fasting hours. If insurgent organizations rationally allocate scarce resources to survive (Shapiro, 2013), the high-exertion increase should be concentrated in post-iftar hours when fighters have eaten and rehydrated, while attacks requiring minimal real-time effort should show no such concentration.

The three principal attack types in the SIGACTS data sit at different points on this exertion spectrum and therefore provide a natural test of the mechanism. Direct fire is the most demanding: small-arms ambushes and rocket-propelled grenade engagements require fighters to maneuver into firing position, sustain accurate fire under return contact, and exfiltrate, all while bearing weapons and ammunition over uneven terrain. Indirect fire is intermediate. Mortars and rockets are launched from prepared positions at distance from the target, so once the firing point is established and the rounds are pre-positioned, the engagement itself is brief

[30] As an additional robustness check, I also classified the unstructured event descriptions using a standard zero-shot prompting approach and manual classification of 1000 incidents for training via the OpenAI API (`gpt-4o-mini`) rather than GABRIEL's log-probability extraction. The regression estimates remain highly robust to this alternative text classification strategy and are available upon request.

and the team can disperse before counter-battery fire arrives; the physical bottleneck is the setup, not the strike. IED explosions sit at the bottom of the gradient: the device is emplaced hours or days in advance and detonated either by command wire, pressure plate, or radio trigger, so the effort at the moment of attack is essentially zero.[31] If physiological constraints are the binding factor during Ramadan, the within-day concentration should track exactly this ordering: largest for DF, smaller for IDF, and smallest for IED explosions.

Table 4 has two panels. Panel A reports the monthly Ramadan effect on insurgent violence in Afghanistan; Panel B decomposes each province-Hijri-month into pre-iftar (dawn-to-sunset, fasting) and post-iftar (sunset-to-dawn) shifts. The first three columns disaggregate insurgent attacks by physical exertion: direct fire requires sustained close combat, indirect fire requires brief positioning effort, and IED explosions require none. If fasting drives the violence patterns, the post-iftar concentration should follow this ordering. Column 4 reports state-initiated direct fire against insurgents. Columns 5 and 6 disaggregate the column 1 direct-fire effect by target group (Coalition forces and Afghan state forces) to probe whether the Ramadan response varies with the technological capability of the opponent.

Column 1 shows that the monthly insurgent DF rises by 9.1% during Ramadan months (Panel A, significant at the 1% level), a sizeable aggregate effect consistent with the cross-country UCDP findings at the province level. The within-day decomposition in Panel B reveals that this aggregate increase is concentrated after sunset rather than spread uniformly across the day. The Ramadan day effect is null, while the Ramadan$\times$Post-Iftar interaction is 0.127, significant at the 1% level, so direct fire rises about 14.9% more in the post-iftar window than during the daytime fast. The post-iftar Ramadan effect itself ($\beta_1 + \beta_3 = 0.109$) is a rise of roughly 12.7% after sunset, exactly when fasting fatigue lifts and physical capacity returns, against an unchanged daytime baseline. At the pooled level this reads as addition rather than redistribution: the daytime count does not fall, so the post-iftar attacks appear on top of an unchanged daytime baseline. This pooled reading is provisional, however. As columns 5 and 6 show, the flat daytime coefficient masks two offsetting target-specific movements, and against Afghan forces the post-iftar rise is in fact a redistribution out of daylight hours.

This also distinguishes the physiological channel from a simpler fatigue story in which depletion suppresses fighting outright. Under outright suppression the daily total would fall; instead the monthly count rises (Panel A), so fasting reorganizes when attacks occur rather than whether they occur. Fatigue therefore governs the timing of action, while the elevated intent that lifts the daily level is the work of the doctrinal channel.

Column 2 reports indirect fire attacks such as mortars, rockets, and recoilless rifle fire launched from prepared positions some distance from the target. The monthly Ramadan coefficient is statistically zero (1.2% in Panel A), with no aggregate escalation in IDF activity during Ramadan months. Within day, the interaction is 0.047 (Panel B, significant only at the

[31] Throughout, I focus on IED *explosions* rather than total IED events recorded in SIGACTS, which would also include cache discoveries and pre-detonation finds by patrols. Pre-detonation discoveries reflect coalition counter-IED operations rather than insurgent attack decisions, so including them would conflate the supply of insurgent attacks with the demand from coalition search activity. Restricting to explosions isolates the insurgent decision margin.

10% level), a modest 7.% night-versus-day differential. The level effects in both windows are individually null ($\beta_1 = -0.031$, $\beta_1 + \beta_3 = 0.016$), so this is a weak relative tilt rather than a post-iftar increase. The differential is smaller than the direct-fire concentration in column 1, exactly as the exertion logic predicts.

Column 3 reports IED explosions. Monthly IEDs rise by 12.4% during Ramadan (Panel A, significant at the 1% level), the largest aggregate effect in the table. Within day, the picture flips relative to direct fire: the interaction collapses to an insignificant 0.025, while the Ramadan main effect is 0.094 (Panel B, significant at the 1% level). The daytime rise is thus 12.8%, and because the interaction is negligible the post-iftar rise is statistically indistinguishable from it, so IED explosions escalate by a similar amount in both shifts. Detonating a pre-positioned device requires no real-time physical exertion: the device is emplaced in advance, often days or weeks earlier, and triggered remotely or by command wire. Fasting does not constrain when devices are triggered, so the Ramadan escalation in IEDs scales up activity uniformly across the fasting and non-fasting hours alike. Across columns 1 through 3, the three insurgent attack types map onto the exertion ordering as cleanly as the data allow. The exertion gradient governs the within-day concentration of the increase, not its monthly magnitude: the largest monthly rise is for IEDs, the least exertion-intensive tactic, because the doctrinal channel raises the level of all attack types while the physiological constraint shapes only the timing of those that demand real-time exertion.

Column 4 shows that friendly direct fire, by ISAF and Afghan government forces combined, rises by 13% during Ramadan (Panel A, significant at the 1% level), yet shows none of the within-day concentration that marks the insurgent series.[32] The interaction in Panel B is 0.015 and insignificant, against 0.127 for insurgent DF in column 1. Friendly forces do not concentrate their Ramadan increase in the post-iftar window the way insurgents do, which rules out generic conflict-intensity confounds and the reading that coalition patrol movements drive the column 1 timing pattern. Friendly DF does rise by 8.9% pre-iftar (significant at the 10% level), plausibly reflecting reactive engagement with the elevated insurgent IED activity in the same window (column 3), though the small and marginally significant coefficient does not require a causal reading.

In proportional terms the state's increase exceeds the insurgents' 9.1%, because friendly direct fire has a much smaller base of 1.6 events per province-month against 20.4 for insurgent direct fire; in levels the coefficients imply about 1.9 additional insurgent attacks per province-month against about 0.2 additional friendly ones. The placebo point stands at the pooled level regardless: insurgents concentrate their increase sharply after iftar, friendly forces do not.

Column 5 reports insurgent direct fire against Coalition forces. Monthly DF on Coalition targets rises by 8.1% during Ramadan (Panel A, significant at the 1% level), in line with the aggregate column 1 effect. Within day, however, the post-iftar concentration is conspicuously absent: the interaction shows a 2.5% shift and is not significant. The Coalition-target Ramadan effect is a uniform rise across the day rather than a circadian shift toward post-iftar hours.

[32] SIGACTS records the target affiliation of each event but not, for Friendly Action events, the initiating actor. Insurgent direct fire can therefore be disaggregated by target (columns 5–6), whereas friendly direct fire (column 4) cannot be split into Coalition-led versus Afghan-led operations.

Insurgents attack Coalition forces more during Ramadan, but they do not move those attacks into the nighttime window.

Column 6 reports insurgent direct fire against Afghan state forces. Monthly DF on Afghan targets is statistically zero. The within-day decomposition shows that the Ramadan day effect in Panel B is a 5.2% pre-iftar decline significant at the 10% level, while the interaction shows a 15.2% post-iftar shift significant at the 1% level. The monthly null masks a pure circadian redistribution: daytime attacks on Afghan forces fall, nighttime attacks rise correspondingly, and the totals across the day cancel almost exactly to zero. The pooled column 1 result therefore combines two distinct patterns: its monthly increase is driven by the Coalition rise, since the Afghan monthly effect is null, while its post-iftar concentration ($\beta_3 = 0.127$) is driven by the Afghan reallocation, since the Coalition interaction is itself null.

The contrast between columns 5 and 6 is the central asymmetry in the table. Insurgents do not reallocate attacks against Coalition forces, but they reallocate sharply against Afghan forces. Pure fasting fatigue cannot generate this pattern, since fasting affects insurgents identically regardless of whom they attack. The asymmetry follows naturally once technological capability enters. Coalition forces possess night-vision optics, drone surveillance, and rapid air support, all of which raise the marginal cost of attacking them after dark; Afghan units lack equivalent night-fighting capability. Insurgents therefore optimize jointly: physiology pushes them toward post-iftar hours, and target vulnerability pushes them toward Afghan rather than Coalition forces in those hours. The within-day decomposition reveals not one mechanism but two: fasting physiology determines when insurgents attack, and technological asymmetry determines whom.

Figure 1 plots the hour-by-hour coefficients from Equation 8. The direct fire estimates (dark teal triangles) exhibit a sharp circadian profile. Coefficients rise through the hours following the pre-dawn suhoor meal, from 0.004 at hour 5 to 0.011 at hour 8, each individually significant at the 10% level or better. They then fall through midday, becoming indistinguishable from the base hour and turning negative in point estimate around hours 14 and 15, where sports-medicine evidence places the trough of fasted physical performance (Chaouachi et al., 2009). They rise again through the late evening, with hours 20 to 23 significantly elevated though smaller in magnitude than the morning rise. The largest evening point estimates fall at hours 17 and 18, immediately around iftar, but neither is individually distinguishable from the base hour.

Both windows in which the Ramadan increment is precisely estimated follow a meal. A fighter who has eaten suhoor is in the same physiological state in the morning as one who has eaten iftar is at night, so the two-peaked profile is a prediction of the exertion logic rather than a residual to be explained away. No account resting on darkness, on defender inattention, or on the publicity value of an attack predicts elevated close combat at seven in the morning.

The shape of the direct-fire profile also speaks against a cognitive-depletion account in which low blood glucose and eroded self-control raise impulsive aggression. Such a mechanism predicts that violence peaks in the late-afternoon trough of fasted performance, whereas

high-exertion attacks reach their minimum there and rise only once the fast is broken. The within-day pattern tracks restored physical capacity, not the nadir of glucose or mood.

The indirect fire coefficients (black squares) trace a similar but flatter trajectory, consistent with their intermediate exertion intensity — the morning bump and afternoon dip are visible but muted, and the post-iftar rebound is smaller. The IED-explosion coefficients (midnight blue circles) lack the post-iftar inflection entirely: they rise in the morning and remain elevated and roughly flat through the rest of the day, including during peak fasting hours when DF activity collapses. The hour-by-hour figure visualizes the same pattern that Table 4 captures in the half-day specification — the exertion gradient maps directly onto the within-day concentration profile, and the post-iftar concentration is sharpest precisely where physical capacity matters most.

5.3 Effects on Civilian Protests

Table 5 examines Ramadan's effect on civilian protest activity, beginning with cross-country evidence from ACLED. Column 1, restricted to the 14 African countries with Muslim population shares above 75%, shows a marginally significant 7.1% decline in peaceful protests during Ramadan (significant at the 10% level). The small sample limits statistical power, but the underlying pattern emerges clearly once the full 48-country sample is introduced. Column 2 interacts Ramadan with the continuous Muslim population share: the interaction coefficient of -0.117 (p=0.01) indicates that Ramadan's suppressive effect strengthens substantially as religious composition rises. The positive Ramadan main effect of 0.052 (significant at the 1% level) captures the baseline trend in non-Muslim countries, confirming that the calendar timing carries no inherent depressive effect where Ramadan lacks social salience. Column 3 replaces the linear interaction with discrete population-share categories. Countries with Muslim populations above 75% experience a 13.2% relative decline in demonstrations during Ramadan compared to the baseline group of countries below 1% Muslim (significant at the 5% level), and no other share category reaches conventional significance. The protest suppression is structurally concentrated where Muslim observance is widespread. The positive, statistically insignificant Ramadan coefficient in column 3 (0.062, $p > 0.10$) serves as a built-in placebo on the negligible-Muslim countries, showing no suppression where Ramadan lacks social salience.

Columns 4 and 5 turn to within-country evidence using the SIGACTS demonstration variable for Afghan provinces. Column 4 shows that monthly demonstrations fall by 15.6% during Ramadan at the province level (significant at the 1% level), corroborating the cross-country result within a predominanly Muslim setting using a non-media data source. Column 5 decomposes the monthly effect into pre-iftar and post-iftar half-day shifts. The Ramadan suppression is concentrated in the daytime: pre-iftar demonstrations fall by 23.1% (significant at the 1% level), while the combined post-iftar effect (β_1 + β_3 = -0.006) is statistically indistinguishable from zero. The post-iftar coefficient should not be read as a behavioral response. The Post-Iftar effect of -0.051 confirms that demonstrations cluster in daylight hours and are rare after sunset. The post-iftar baseline is already near a floor, leaving little for Ramadan to suppress in that window. The pattern is consistent with the time-allocation channel: Ramadan intensifies

religious observance and modified work routines precisely during the daytime hours when civilian protests typically occur, crowding out the conventional mobilization window.[33]

5.4 Individual Survey Evidence

Having documented that demonstrations decline at the country and subnational levels during Ramadan, I now ask whether the same pattern appears at the individual level using World Values Survey data from 23 Muslim-majority countries, where respondents' exact interview dates allow me to identify Ramadan exposure through matching to the Hijri calendar.

A natural concern in matching WVS respondents to the Hijri calendar is that the Ramadan and non-Ramadan interview groups may differ on observable characteristics in ways that confound the comparison. Appendix Table A.7 reports balance tests on eight demographic covariates. Five are statistically balanced: gender, marital status, number of children, education, and employment show no significant differences across the two groups. Three imbalances are detectable, all small in magnitude. Respondents interviewed during Ramadan are on average 3.1 years older, an offset of roughly 8% of the age mean; their reported income is 0.13 points lower on the 10-point scale, about 6% of the income standard deviation; and they are 1.8 percentage points more likely to report religion as "very important" rather than "rather important." The age and income imbalances are absorbed by the demographic controls in the main regressions. The religion-importance imbalance is small in magnitude and the regressions control directly for self-reported religious importance, which absorbs this residual compositional difference. Fieldwork intensity is well balanced: the average number of interviews per country-Hijri-year-Hijri-month cell is statistically indistinguishable across Ramadan and non-Ramadan periods (342 vs. 399), as is the average number of distinct interview days per cell (8.6 vs. 9.3), consistent with standardized fieldwork schedules driven by logistical and budgetary constraints rather than the religious calendar.

The analytical sample is restricted to Muslim respondents from 23 Muslim-majority countries who report religion as either "very important" or "rather important", a criterion met by approximately 95% of Muslim respondents in the sample. This individual-level restriction is conceptually analogous to the country-level restriction to Muslim-majority contexts: the Ramadan mechanism operates through religious observance during the holy month, and the relevant population is the one for whom the treatment is plausibly active. Respondents who report low or no religious importance are unlikely to alter their practice during Ramadan and would contribute attenuating noise to the estimates without adding identification leverage. Within this sample, country-by-Hijri-year fixed effects absorb differences in fieldwork intensity and respondent composition across survey waves, while Gregorian month fixed effects absorb seasonal scheduling patterns and any climatic or institutional rhythms that systematically vary across calendar months. What remains is variation in whether a given respondent

[33] The results withstand several sensitivity checks. Restricting the control group to months immediately adjacent to Ramadan yields similar estimates across both panels (Table A.9 reports the specification using three months before and after). The estimates are robust to excluding any single country from the sample (Figure A.5).

happened to be interviewed during Ramadan as opposed to an adjacent Hijri month within the same country-wave-season cell.

Table 6 presents the estimates for three individual-level outcomes, with each outcome reported in two columns: a specification restricted to a seven-month Hijri window centered on Ramadan (Jamada-Al-Thani through Dhul-Hijjah) and a specification using the full twelve-month sample. The motivation for the narrower window is to compare Ramadan-period respondents to interviews conducted in Hijri-adjacent months, where seasonality, fieldwork composition, and respondent demographics are closest to those during Ramadan; the full sample provides the broader robustness check.

Columns (1)–(2) show that high-intensity prayer increases by 5.1–5.2 percentage points during Ramadan, significant at the 10% level, off a baseline of roughly 76%. Daily or near-daily prayer is a habitual and largely rigid behavior, and the elevated baseline reflects the religious-importance restriction; that a 5 percentage-point shift is detectable even in this already-observant population confirms that Ramadan measurably heightens religious engagement at the individual level. Columns (3)–(4) show that interest in politics declines by 5.4–5.5 percentage points, significant at the 5% and 10% levels respectively, about a 12% reduction from the baseline mean. Columns (5)–(6) show that willingness to attend lawful peaceful demonstrations declines by 3.9–4.2 percentage points, significant at the 5% level, about an 11% reduction off baseline. The coefficients are nearly identical across the seven-month-window and full-sample specifications, indicating that the results do not depend on the specific Hijri-month comparison group and that the Gregorian month fixed effects already absorb the seasonality component the narrower window further isolates.

The pattern across the three outcomes is internally consistent and difficult to attribute to selection alone. For compositional shifts to explain the results, respondents interviewed during Ramadan would need to simultaneously exhibit higher religiosity, lower political interest, and lower protest willingness relative to those interviewed in adjacent weeks within the same country-wave-season cell, conditional on all observables. The demographic controls in the main regressions absorb the small observable imbalances documented in the balance test, including the residual religious-importance difference that operates in the same direction as the predicted effects. The more parsimonious interpretation is that Ramadan redirects individual attention from political engagement toward religious observance.

To assess whether the effects in Table 6 reflect individual religious observance rather than country-level fieldwork artifacts or seasonal patterns the fixed effects fail to absorb, I estimate the same six specifications on non-Muslim respondents living in the same 23 Muslim-majority countries (Appendix Table A.8). Non-Muslims share the same fieldwork timing, country-wave composition, and broader societal context as Muslim respondents but do not observe Ramadan, so the Ramadan indicator should have no effect on their religiosity or political engagement if the main results operate through the religious-observance mechanism. None of the six placebo coefficients reaches statistical significance, supporting the interpretation of the Ramadan effects as operating through individual religious observance rather than through country-level confounds.

5.5 Exact-Date Matching Evidence

Seasonality is the leading threat to the baseline estimates, since weather, agricultural cycles, and fighting seasons all track the solar calendar. The design addresses it on several fronts. No solar season can produce the intraday concentration of the high-exertion Ramadan increase in post-iftar hours in Afghanistan, nor the quasi-random survey evidence linking interview timing to immediate behavioral shifts. The panel spans nearly a full lunar cycle (34 years for UCDP, 27 for ACLED), so Ramadan's rotation through every solar month breaks its timing from any fixed Gregorian confounder, and the Gregorian month fixed effects absorb average monthly seasonality directly. The exact-date matching design provides the most stringent test of all.

Table 7 reports the results. Columns (1) and (2) give the cross-country day-level estimates for state-based armed conflict. The Ramadan coefficient is positive and significant in both, with the OLS estimate implying roughly a 3% daily increase per country during the last 10 days of Ramadan and the PPML estimate corresponding to an approximately 10% increase ($p < 0.01$).[34] Columns (3) and (4) probe the mechanism using within-day variation in Afghan SIGACTS direct-fire attacks, splitting each province-day into a fasting (pre-iftar) and a non-fasting (post-iftar) shift.

The *Ramadan* $\times$ *Post-iftar* interaction is positive and significant in both. Direct fire is therefore concentrated in the post-iftar window relative to the daytime fast during the last ten days, with the PPML interaction implying a post-iftar effect roughly 14% larger than the daytime effect. The daytime coefficient is itself a significant decline under OLS (-0.025) and a precise null under PPML, so the concentration reflects a genuine within-day reallocation in the former and a night-loaded increase in the latter. The pattern matches both the doctrinal salience of the final ten days, anchored by *Laylat al-Qadr* (the Night of Power), which creates a peak incentive structure for religious insurgents to mobilize offensive operations, and the physiological reality of combat under fasting conditions: rebels concentrate the most exertion-intensive operations in hours when they are fed and hydrated.

For demonstrations, columns (5) and (6) show that the day-level effect is negative and significant at the 1% level, with the OLS estimate implying a 9% decline and the PPML estimate implying a roughly 28% daily decline per country. The strengthening of the demonstration result in this narrower window is consistent with the time-allocation mechanism: civilian observance peaks in the final ten days, and the crowd-out of secular political activity should be sharpest precisely there. Columns (7) and (8) carry the within-day decomposition over to Afghan SIGACTS demonstrations. The Ramadan main effect is negative and significant in both OLS and PPML, indicating that fasting hours see fewer demonstrations in the daytime during the last ten days; the *Ramadan* $\times$ *Post-iftar* interaction is positive in sign but statistically insignificant, likely reflecting the low base rate of demonstrations in the Afghan panel. Taken together, both sides of the Ramadan effect, the increase in insurgent attacks and the decline in

[34] To illustrate the severity of the separation problem discussed in Section 4.1, applying PPML with the same fixed-effects structure to the matching country-month panel reduces the Muslim-majority sample from 22,196 to 7,214 observations, a loss of two-thirds, and drops 9 of 31 countries entirely. The Ramadan coefficient nonetheless remains positive and significant at the 1% level.

demonstrations, survive an identification strategy that perfectly differences out the seasonal component of any specific calendar date.[35]

6 Discussion

The central results are clear. Religious insurgent groups escalate attacks during Ramadan, concentrating the increase in labor-intensive operations in the post-iftar window when fasting fatigue lifts, while secular-nationalist insurgents operating in the same conflict environments show precisely estimated null effects. By contrast, Ramadan suppresses civilian protest at the country level, and individual survey evidence shows that respondents shift toward intensified prayer and away from political interest and demonstration willingness, with parallel placebo estimates among non-Muslim respondents in the same Muslim-majority countries returning statistically null effects. Both the conflict escalation and the civilian demobilization are concentrated in countries where Muslim observance is socially prevalent and disappear where Ramadan lacks social salience. Before concluding, I investigate the mechanisms that could in principle generate the patterns: doctrinal framing, opportunistic timing against a weakened state, intertemporal substitution, the physiological intensity of the fast, and differential media coverage.

6.1 Doctrinal Channel

The conflict estimates are consistent with the doctrinal framing channel, whereby religious groups recast Ramadan as a season of obligatory and uniquely meritorious combat. If the mechanism operates as described, it should leave a footprint in the groups' own discourse, with religious messaging intensifying during the holy month. I test this directly using a novel systematic archive of the Islamic State's Arabic-language weekly *al-Naba* scrapped from Zelin (2026), generalizing the single-issue illustration earlier to 533 issues published between December, 2015 and April, 2026, of which 46 fall in Ramadan.[36] As the most prominent religious-ideological organization in the sample and the one whose propaganda is most systematically disseminated, the Islamic State offers a natural setting in which to observe whether a group's discourse reorients around the sacred salience of the month. Appendix B describes the corpus and the segmentation of each issue into its constituent sections.

Within each issue I distinguish the discursive content, the editorials and feature essays in which the group argues its theology and politics, from the operational news that reports the week's attacks. I score every section on a single construct, *devotional and ritual emphasis*, defined as the extent to which the text foregrounds personal worship such as fasting, night prayer,

[35] The results are robust to excluding the Eid al-Fitr holiday from the control window. Both the armed conflict and demonstration coefficients are similar.

[36] A fully parallel test would need comparable, systematically dated messaging across religious and secular-nationalist groups, but no such corpus exists, as most armed groups publish no regular archived periodical. *al-Naba* is the closest approximation: the Islamic State is arguably the most prominent and propaganda-prolific religious-ideological group of the period, and the newsletter is a numbered weekly issued almost without interruption for over a decade, exactly the structure the within-Hijri-year comparison requires. The cost is external validity, so I read the text as a single-group probe of the mechanism and leave the cross-group contrast to the conflict panels.

Qur'anic recitation, and supplication rather than combat operations or political argument. The scoring uses the same GABRIEL framework (Asirvatham et al., 2026) applied to aggressor attribution above, which returns a rating from 0 to 100 for each section. The operational news functions as a within-issue placebo: a genuine doctrinal reorientation should appear in the feature content where religious arguments are made, not in factual battle reporting, whose register is fixed across the calendar. As in the conflict panels, I absorb Hijri-year fixed effects, so the estimate compares Ramadan to non-Ramadan content within the same year. The exact prompt and attribute definition are reproduced in Appendix B. Table A.10 reports the corpus composition and the distribution of the three constructs by section type and Ramadan status. Devotional emphasis in feature essays rises from roughly 50 outside Ramadan to nearly 80 during the month, while the operational series moves little.

Figure 4 shows the shift directly. Devotional and ritual emphasis in the feature essays is far higher during Ramadan, near 78 on the 0–100 scale, than in surrounding months, where it averages about 50, while operational news, a within-issue placebo, stays flat and the editorials stay low. Because feature-essay frequency is itself flat across the calendar, the surge reflects what the group writes about rather than how much, and the measure independently recovers the devotional calendar, rising in Sha'ban and again in Dhul-Hijjah. Reading the high-scoring issues shows what that content is: during Ramadan the essays turn to the substance of the month's worship, the virtues of the fast, the night prayer (*qiyam al-layl*), Qur'anic recitation, supplication, and the devotional example of the early Muslims, material of the kind carried by a dedicated piece such as "Our Predecessors in Ramadan: The Night Prayer" that a non-Ramadan issue does not run.[37] This devotional turn is the vehicle of the doctrinal-framing channel rather than a retreat from it. It meets a readership at the peak of its religious receptivity, and the group repeatedly yokes the worship to fighting, recasting the combatant's hardship, fasting and sleeplessness under arms, as ascetic worship whose merit the month multiplies rather than diminishes. In these essays devotion and militancy are fused, not opposed.

A companion measure points the same way. Appendix Figure A.6 shows that the editorials and feature essays cast the present as a uniquely blessed time for striving more strongly during Ramadan, the framing that sits closest to combat-as-worship. I treat it as secondary, since the construct bleeds into the operational reports, but it reinforces the same reorientation.

Together the measures show that the Islamic State reorients its own messaging toward the sacred during Ramadan, the messaging-side counterpart to the behavioral escalation documented above and consistent with the doctrinal-framing channel. The reorientation is not generic piety: devotional messaging peaks in both Ramadan and Dhul-Hijjah, yet the conflict escalation is unique to Ramadan (Figure 2), so heightened devotion alone does not mobilize violence. What singles out Ramadan is the combat-specific precedents and collective rituals of worship that the group invokes to recast the fasting month as a season of war.

[37] *al-Naba* no. 334.

6.2 Civilian Targeting Channel

The paper's central result, that armed conflict rises during Ramadan, runs against a terrorism literature documenting restraint, with insurgents committing fewer attacks on sacred dates to avoid public backlash (Reese et al., 2017; Hodler et al., 2024). The introduction reconciles the two by target: the doctrinal reading that sacralizes Ramadan combat licenses carrying the fight to the enemy, while killing civilians during a sacred period carries a reputational cost the same religious environment magnifies. This section tests that reconciliation. If it holds, the state-directed escalation of Section 5.1 should stop at the civilian boundary for the general run of groups and cross it only where doctrine erases the line between enemy and civilian. I take the question to two datasets of civilian-directed violence, which the state-based panels cannot address: UCDP one-sided events, in which an organized group deliberately kills civilians, and terrorist attacks on private citizens in the Global Terrorism Database (START, 2022). Perpetrators are classified by the ideology scheme of Section 5.1, the predominantly Muslim setting held fixed, under the same country-by-Hijri-year and Gregorian-month fixed effects. Appendix D gives the construction.

Table A.11 reports the estimates. For the whole religious category civilian targeting rises modestly, 2.8% in UCDP and 1.5% in the GTD (columns 1 and 5), both below the 3.8% increase of Table 2; secular-nationalist groups sit at an insignificant near-zero in both (columns 2 and 6), extending the ideology gradient to this margin. That category average is a mixture, not a uniform effect. Dropping the Islamic State collapses the religious increase to an insignificant 1.7% and 0.9% (columns 3 and 7), whereas the Islamic State alone raises civilian targeting by 5.2% and 5.1% (columns 4 and 8), above even the religious average for state-directed conflict. The aggregate is therefore escalation concentrated at one group set against no detectable increase at the rest, a split that survives across two differently constructed datasets and so is unlikely to reflect an artifact of either.

This inverts the state-margin pattern. Against the state the escalation is general and survives dropping any single religious group, the Islamic State included (Section 5.1); against civilians it disappears once that group is removed. Two forces produce the divergence. For most religious insurgents the reputational cost of killing civilians during a sacred month offsets the license it supplies, so the state-directed increase does not carry onto civilians, in keeping with the restraint Reese et al. (2017) document. The Islamic State is the exception: its takfiri doctrine designates civilian populations as legitimate targets, dissolving the constraint that binds the others. Its record matches the coefficient, the group having repeatedly cast Ramadan as a season of intensified attack and mounted mass-casualty operations against civilians during the month.[38]

The finding tightens the doctrinal account rather than qualifying it. The escalation crosses the civilian boundary only for the group whose doctrine sacralizes civilian killing and halts at the state boundary for the rest, so doctrine governs not only whether a group escalates during Ramadan but also which targets that escalation reaches. This is the target-side counterpart to

[38]The 2016 Ramadan campaign is the clearest instance, a series of mass-casualty bombings against civilians timed to the month (Amarasingam and Winter, 2017).

the discursive evidence of Section 6.1, where the Islamic State's own newsletter turns sharply devotional and martial during the month, and it fixes the paper's relationship to the terrorism literature: the restraint Reese et al. (2017) document is the conduct of the general run of groups, whose civilian targeting does not rise, not that of the Islamic State, whose does.

The civilian-margin null also closes off one account of the protest decline. A fear-based reading, under which rising civilian-directed violence deters public assembly, would require civilian targeting to climb across the predominantly Muslim countries where protest falls; outside the Islamic State it does not move, so the increase is far too narrow to demobilize entire societies. A direct test confirms the decoupling: state-based armed conflict and demonstrations are essentially uncorrelated across country-months in the ACLED data (available on request), so the months that carry more fighting are not the months that carry less protest. The protest decline therefore rests on the time-allocation channel, not on displacement by violence.

6.3 Alternative Accounts

State Capacity and Opportunistic Timing

A strategic alternative to the doctrinal account holds that the Ramadan increase reflects insurgents exploiting a temporarily weakened adversary rather than any sacralization of combat. State forces in Muslim-majority countries are themselves fasting, often operate on compressed schedules, and may reduce patrol tempo during the month, lowering the cost of attacking them. If this opportunity channel drove the results, three patterns should follow. First, the escalation should be available to any insurgent facing the same weakened state, regardless of the attacker's ideology. Second, state-initiated activity should fall, since fasting and reduced readiness constrain the state's own operations. Third, in the within-day data attacks should concentrate when the defender is least attentive, namely the post-iftar and tarawih hours, and this concentration should appear across attack types rather than only in the labor-intensive ones, since a distracted defender is easier to strike with any weapon.

The data contradict all three. The secular-nationalist null (Tables 2 and 3) shows that groups operating against the same fasting states do not escalate, so a weakened defender is not sufficient to generate the effect. State-initiated direct fire rises rather than falls during Ramadan (Table 4, column 4), inconsistent with a state too depleted to fight and more consistent with reactive engagement. Most directly, the post-iftar concentration is specific to high-exertion direct fire and absent for pre-positioned IED explosions (Table 4, columns 1 and 3): against the same fasting Afghan defenders, direct fire shifts sharply into the post-iftar window while IED explosions rise uniformly across the day. A distracted-defender mechanism cannot produce this split, since the defender's inattention would lower the cost of every attack type equally. The within-day asymmetry therefore identifies the attacker's own physiological constraint, not the defender's, as the binding factor.

Intertemporal Substitution

A pointed alternative to the seasonal-confound concern is that the Ramadan coefficient reflects strategic intertemporal substitution or generalized Islamic-calendar effects rather than within-Ramadan religious mobilization. Three variants of this concern need to be addressed. First, the Islamic calendar may shift the conflict baseline in ways unrelated to Ramadan, with the baseline specification absorbing those broader patterns into the Ramadan coefficient. Second, insurgents may strategically suppress operations in the months leading up to Ramadan to conserve resources or redirect violence into the holy month, artificially depressing the pre-Ramadan baseline and inflating the estimated jump. Third, the Ramadan trigger may reschedule a fixed amount of violence from adjacent months rather than generating excess conflict, in which case those adjacent months should display a corresponding dip. The same three concerns apply symmetrically to demonstrations.

These are standard econometric concerns about identification, and they merit empirical testing, but they ultimately conflict with tactical realities on the ground. The conflict literature consistently shows that the timing of insurgent operations is shaped primarily by logistics, terrain, weather, the operational tempo of opposing forces, and economic shocks (Kalyvas, 2006; Berman et al., 2011; Sexton, 2016), none of which respond meaningfully to a religious calendar more than a few weeks out. Insurgents lack the operational flexibility to substantially compress or delay attacks based on anticipated religious dates months in advance: materiel, intelligence cycles, and counterinsurgent activity dominate the timing decision. Demonstration timing is similarly driven by contemporaneous political shocks rather than anticipatory calendar planning. With those substantive constraints in view, the three concerns are nonetheless tested empirically in three complementary ways: the full Hijri-month event study in Figure 2, the adjacent-month linear combination, and the leads/lags specifications reported in Table A.12.

The event study includes indicators for each Hijri month with country-by-Hijri-year and Gregorian year-by-quarter fixed effects, with Dhul-Hijjah as the reference. In panel (a), Ramadan is the only Hijri month with an individually significant effect on armed conflict ($\beta = 0.040$, $p = 0.052$). A joint Wald test that all ten non-Ramadan, non-Dhul-Hijjah coefficients equal zero does reject ($F(10, 30) = 3.36$, $p = 0.005$), but the rejection reflects small, individually imprecise deviations rather than a meaningful calendar-wide baseline shift. No non-Ramadan coefficient has an absolute t-statistic above 1.1; the point estimates are scattered around zero with confidence intervals too wide to distinguish any single month from a null effect. Ramadan, by contrast, is precisely estimated, with an absolute t-statistic nearly double that of the largest non-Ramadan deviation, and is clearly separated from the band of background variation. The pattern that drives the joint rejection is a modest positive elevation in the pre-Ramadan religious months (Jamada al-Thani, Rajab, Sha'ban) and a modest negative deviation in earlier Hijri months, consistent with religious-preparation spillover around the holy month rather than a generic year-round shift.

The intertemporal displacement test is direct. The sum of the four Ramadan-adjacent month coefficients (Rajab, Sha'ban, Shawwal, Dhul-Qa'dah) is $+0.046$ ($p = 0.52$), positive in sign and statistically indistinguishable from zero. Under displacement the sum should be

negative and of comparable magnitude to the Ramadan coefficient; the data go in the opposite direction, ruling out the possibility that Ramadan conflict is reallocated from neighboring windows.

Table A.12 reports the leads/lags specifications in two variants: the first adds separate indicators for the one-month lead (Sha'ban) and lag (Shawwal); the second pools the months before and after Ramadan into two-month windows. Across all three columns for armed conflict, the Ramadan coefficient is preserved within 0.003 of its baseline magnitude, holding at $+0.040$ even in the most demanding pooled specification. The lead coefficients are positive and significant rather than negative, mirroring the Ramadan sign and consistent with voluntary preparatory observance documented in Islamic tradition. The two-month post-Ramadan coefficient is a precisely estimated zero, ruling out forward displacement: insurgents do not reduce activity in the months following Ramadan, as they would if Ramadan absorbed violence that would otherwise have occurred there.

For demonstrations in panel (b), Ramadan yields the largest negative point estimate across the Islamic calendar ($\beta = -0.100$, $p = 0.038$). The leads/lags specifications in Table **??** establish that the pre-Ramadan two-month window is a statistical zero, ruling out forward-loading of demonstrations into months preceding Ramadan. Delayed mobilization, the symmetric alternative under which civilians postpone Ramadan-suppressed protests into the following months, predicts a positive post-Ramadan coefficient of comparable magnitude to the Ramadan suppression. The observed post-Ramadan coefficient is negative and significant ($\beta = -0.072$, $p = 0.011$), the opposite sign from what delayed mobilization would generate. The negative Shawwal coefficient therefore cannot reflect rescheduled protests; it forms part of a symmetric pattern that brackets Ramadan with a parallel negative extension into Sha'ban ($\beta = -0.056$, $p = 0.072$ in the event study). This symmetry is consistent with religious-observance windows that flank the fasting month on both sides rather than with intertemporal substitution, and with the broader empirical regularity that protests respond to contemporaneous political triggers rather than to anticipated calendar dates. The Ramadan coefficient in the pooled leads/lags specification is -0.080 ($p = 0.051$), preserved in magnitude and sign relative to the baseline.[39]

Taken together, the event-study evidence, the adjacent-month linear combinations, and the leads/lags specifications in Table A.12 consistently support the interpretation that the Ramadan effect is contemporaneous excess activity uniquely tied to the holy month rather than a calendar-wide pattern, strategic anticipation, or simple intertemporal displacement.[40]

[39] A joint test that all non-Ramadan Hijri-month coefficients equal zero rejects in panel (b) ($F(10, 13) = 3.23$, $p = 0.026$), reflecting positive deviations in early Hijri months (M1, M3, M4) that are individually insignificant. As with conflict, this pattern reflects small calendar-level variation rather than a generic year-round shift in baseline protest activity, and the Ramadan effect remains the dominant and uniquely significant feature of the calendar.

[40] The main monthly Ramadan results are also robust to dropping the two Hijri months immediately before (Rajab and Sha'ban) or immediately after (Shawwal and Dhul-Qa'dah) Ramadan from the comparison period. This specification mechanically eliminates any anticipation or post-Ramadan-spillover concern by removing the adjacent months entirely. The Ramadan coefficients retain their sign, remain statistically significant, and are quantitatively similar to the baseline estimate.

Fasting Intensity

One might ask whether variation in fasting intensity, rather than Ramadan observance per se, drives the results. Hodler et al. (2024) argue that longer daylight fasts mechanically suppress violence in the following year through erosion of public support for religious extremism. The theoretical link between fasting duration and behavioral change is tenuous: metabolic adaptation stabilizes the body after roughly ten hours (Anton et al., 2018; de Cabo and Mattson, 2019; Lessan and Ali, 2019), countries with longer fasts compensate with shortened work schedules and other accommodations.

Table A.13 tests the fasting-intensity channel directly by restricting the sample to Ramadan months and regressing outcomes on log fasting hours, following the panel structure in Campante and Yanagizawa-Drott (2015) and Hodler et al. (2024). Fasting hours show no association with armed conflict in Muslim-majority countries, with the precisely-estimated null ruling out the Hodler suppression channel for the violence outcome. The non-Muslim placebo sample yields a similar null (column 2), and the pooled interaction specification shows no significant coefficient for the most-Muslim category (column 3), the group where the mechanism should operate most strongly under the Hodler hypothesis.

For demonstrations, the coefficient is significant but in an unexpected direction. Column 4 yields a positive coefficient, the opposite of the prediction that longer fasts suppress mobilization through exhaustion.[41] The non-Muslim placebo sample yields a precisely estimated null (column 5), and the interaction specification confirms that the most-Muslim category does not show the negative fasting-hours effect predicted by the Hodler mechanism (column 6). Taken together with the conflict results, the table indicates that the occurrence of Ramadan, not the duration of the daily fast, generates the observed effects on both armed conflict and civilian protest.

The result rules out a civilian-exhaustion account of the protest decline, distinct from time reallocation, in which the physical toll of long fasts keeps people off the streets. Were exhaustion the mechanism, suppression would deepen with fasting hours; instead the fasting-hours coefficient for protest is null to positive, locating the decline in the reallocation of time toward devotion rather than in physical depletion.

News Coverage

News coverage and media attention may fluctuate during religious holidays (Durante and Zhuravskaya, 2018; Eisensee and Strömberg, 2007), raising the concern that differential reporting during Ramadan could mechanically inflate or deflate recorded conflict events and demonstrations. Three features of the results argue against this. First, the armed conflict increase replicates in declassified military records from Afghanistan (SIGACTS) that bypass media re-

[41] This result should be interpreted cautiously. The ACLED Muslim-majority sample contains only 14 countries concentrated in North Africa above the equator (see Figure A.3), making the cross-country variation in fasting hours extremely limited. The positive sign likely reflects summer Ramadans coinciding with warmer weather and longer daylight, which naturally facilitate outdoor civic activity. The pooled interaction specification in column 6 shows no significant effect for the most-Muslim category, consistent with the column 4 estimate being driven by a narrow sample with little variation rather than by a structural fasting-hours channel.

porting entirely, with within-day reallocation patterns that no plausible reporting story can generate. Second, the demonstration decline is corroborated within the same SIGACTS data at the province level and reinforced by individual survey responses on prayer frequency, political interest, and protest willingness from the WVS, which are immune to news cycles. Third, the opposite-signed effects on armed conflict and demonstrations within the same media-sourced datasets are difficult to attribute to a single reporting shift: a Ramadan-induced decline in coverage would most likely suppress both outcomes uniformly, not raise one while lowering the other.

7 Conclusion

This paper estimates the causal effect of religious observance on armed conflict and civilian political behavior, exploiting the quasi-exogenous rotation of the Hijri lunar calendar through the Gregorian solar calendar to identify the Ramadan effect under stringent within-country fixed-effect structures. The central contribution is that a single global religious shock can move armed actors and ordinary citizens in opposite directions along the political-economy spectrum. Opposite as they are, the two responses are one relative-price logic seen from two sides: the same sacred-time shock raises the return to doctrinally sanctioned violence for the committed insurgent and the opportunity cost of political participation for the ordinary civilian.

The insurgent escalation is consistent with the club-good and costly-signaling logic of religious (rebel) organizations (Iannaccone, 1992; Berman and Laitin, 2008), in which sacred time activates a multiplier on doctrinally justified violence specific to groups that operate within a religious framework. The civilian demobilization reflects a binding time-allocation constraint in the spirit of Becker (1965) and Iannaccone (1990), in which the rising shadow cost of devotional time crowds out political participation along the intensive margin. The within-day, individual-level, and same-date design evidence collectively reject the leading alternative mechanisms.

One scope condition is worth flagging. The design identifies an intention-to-treat parameter, isolating the effect of the Ramadan *period* rather than compliance with fasting itself; recovering the average treatment effect on the treated would require individual-level fasting compliance data unavailable across the sample. This caveat does not challenge the internal or external validity of the estimates. The empirical strategy assembles cross-country conflict and protest panels, hourly military logs from Afghanistan, a decade of militant newsletters compiled from raw issues, and tens of thousands of individual survey responses, sources that differ in geography, construction, and reporting technology, and the same divergence, escalation among religious insurgents and demobilization among civilians, holds across all of them.

The findings carry implications for both empirical research and policy design. The asymmetric response across rebel ideologies indicates that static cross-sectional measures of religiosity are insufficient to characterize the equilibrium relationship between faith and violence; temporal interaction between religious observance and organizational ideology is important.

For policy, international mediators have repeatedly attempted to leverage Ramadan as a de-escalation window in Afghanistan, Yemen, and Syria, on the assumption that the holy month's spiritual significance creates an opening for peace. The ideology gradient suggests that sacred-time ceasefires may hold promise where insurgent actors lack a religious doctrinal basis for offensive warfare, but are least likely to succeed where they are most frequently attempted. Experimental work by Ginges and Atran (2013) documents that material side-payments offered in exchange for sacralized commitments backfire by signaling that the commitment is for sale, intensifying moral outrage among those who hold the value; the symmetric prediction here is that conventional Ramadan ceasefire packages extended to religious-ideological groups may harden rather than soften their operational posture.

The civilian-side result raises a complementary question for the political economy of authoritarian governance: if the observance of Ramadan demobilizes the street, autocratic regimes may treat the period as a window to advance unpopular reforms or tighten constraints on civil society with reduced risk of public backlash. Whether they act on it is a conjecture that future work can test.

The Ramadan-induced conflict escalation also carries downstream consequences for economic development, since armed violence disrupts labor markets, destroys infrastructure, and displaces productive activity (Federle et al., 2026; Novta and Pugacheva, 2021; Blattman and Miguel, 2010; Miguel et al., 2004). The conflict spikes documented here constitutes an unmeasured micro-foundation for the broader macroeconomic costs of Ramadan identified in prior work (Campante and Yanagizawa-Drott, 2015). The physiological constraints and doctrinal mandates that bifurcate mobilization during Ramadan offer a template for examining sacred time in other major faiths.

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Figures & Tables

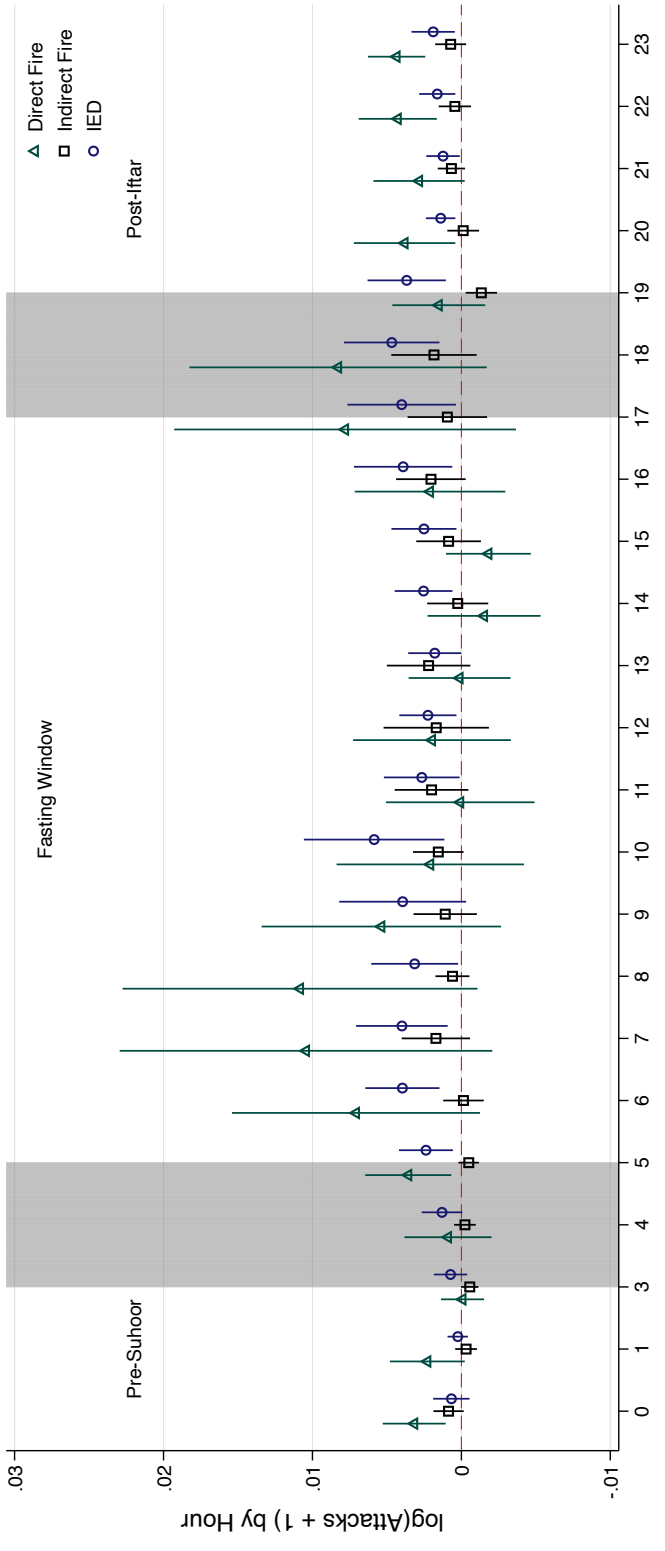


Figure 1: Within-Day Tactical Substitution During Ramadan by Attack Type: Direct Fire, Indirect Fire, and IEDs

This figure plots point estimates and 95% confidence intervals from the interaction between a Ramadan indicator and hour-of-day indicators, estimated separately for three attack-type outcomes at the province-day-hour level. The dependent variable in each model is the log-transformed hourly number of attacks plus one ($\ln(y+1)$). *The omitted base category is 2:00 AM (local time), representing a neutral nighttime resting state. Dark teal hollow triangles represent direct fire (DF) attacks involving small arms and rocket-propelled grenades, which require sustained physical exertion in close combat. Black hollow squares represent indirect fire (IDF) attacks (mortars and rockets fired from prepared positions), which involve less continuous exertion. Midnight blue hollow circles represent IED explosions, which are pre-positioned and triggered remotely or by command wire, requiring minimal real-time effort. The middle region denotes the approximate daylight fasting window, bordered on the left by the sample-averaged pre-dawn meal (Suhoor) and on the right by sunset (Iftar). All models include province, Hijri-year, and Gregorian month fixed effects to account for cross-province differences, annual conflict trajectories, and solar seasonality. Robust standard errors are clustered at the province level (34 provinces).*

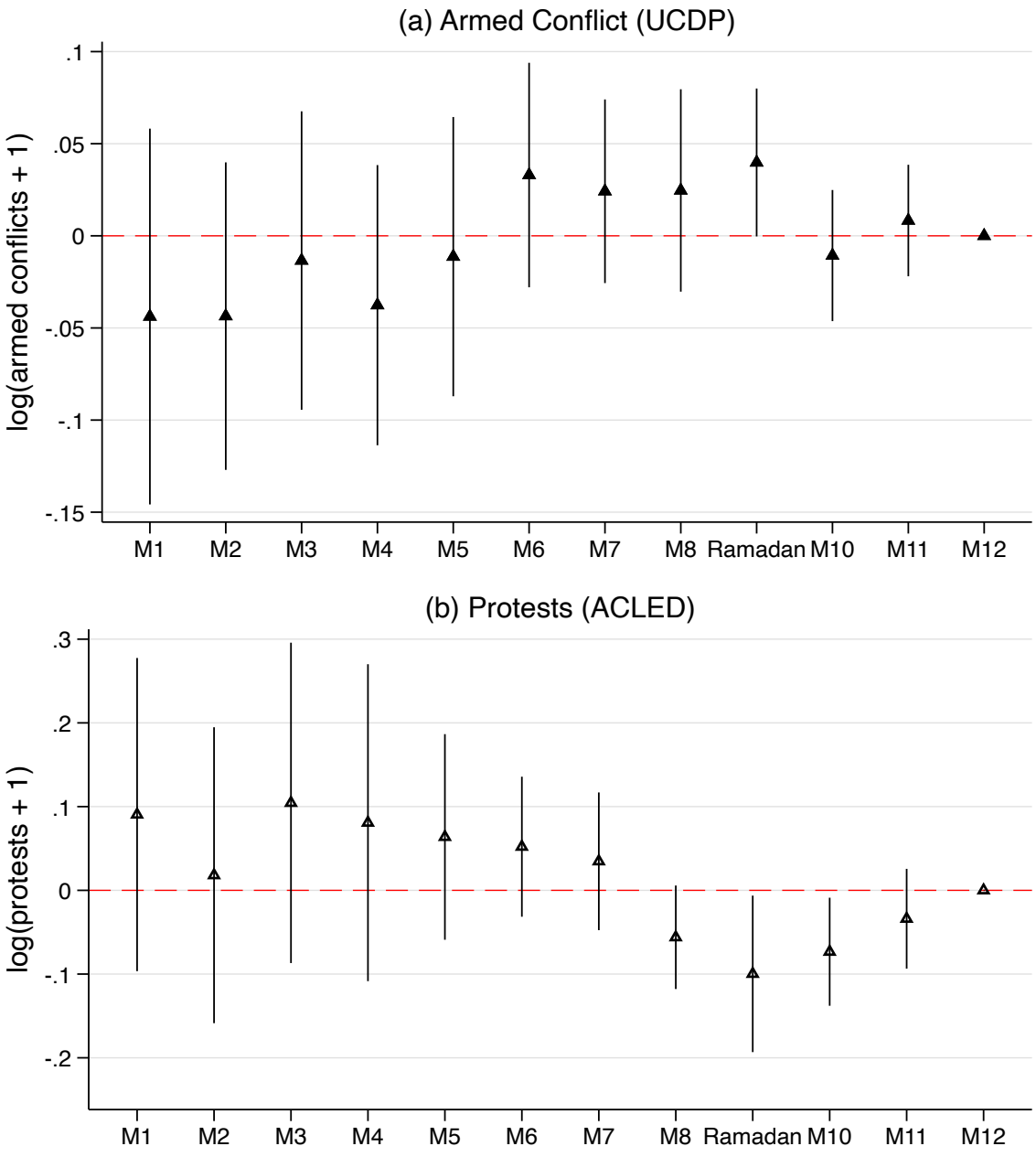


Figure 2: The Ramadan Effect Across All Hijri Months

Notes: This figure plots coefficients on all twelve Hijri month indicators from a single regression for each outcome, with Dhu al-Hijjah (M12) as the omitted base category. Panel (a) estimates the effect on log(state-based armed conflicts + 1) using UCDP data for 31 Muslim-majority countries (1989–2022). Panel (b) estimates the effect on log(demonstrations + 1) using ACLED data for 14 African Muslim-majority countries (1997–2023). Both specifications include country-by-Hijri-year and year-by-quarter fixed effects; the latter absorb year-specific seasonal shocks rather than just average seasonality, providing a more demanding test than the Gregorian month fixed effects used in the baseline regressions. Bars represent 95% confidence intervals based on robust standard errors clustered at the country level (31 clusters in panel a, 14 in panel b). Wider confidence intervals in panel (b) reflect the smaller sample.

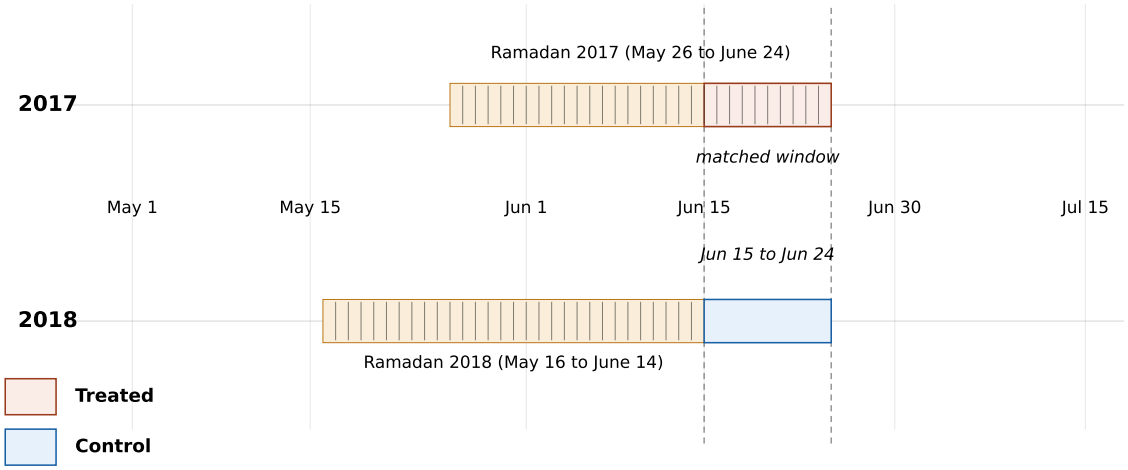


Figure 3: Exact-Date Matching Design

Notes: The Hijri calendar drifts approximately 10 days per year relative to the Gregorian calendar, so the last 10 days of Ramadan in year t fall on the same Gregorian calendar dates as the days immediately after Ramadan ends in year $t+1$. The figure illustrates the 2017–2018 cycle. In 2017 (top row), Ramadan ran from May 26 to June 24; the last 10 days, June 15 to June 24, constitute the treated window. In 2018 (bottom row), Ramadan ran from May 16 to June 14, and the same Gregorian dates, June 15 to June 24, constitute the control window. The two windows share the same solar position, absorbing any seasonal confound tied to a specific calendar day, such as weather, agricultural cycles, or recurring holidays, that month-level fixed effects cannot capture. The design pools all such consecutive-year pairs across the panel. Daily tick marks within the Ramadan blocks indicate individual days; the matched windows are highlighted with dashed vertical guides.

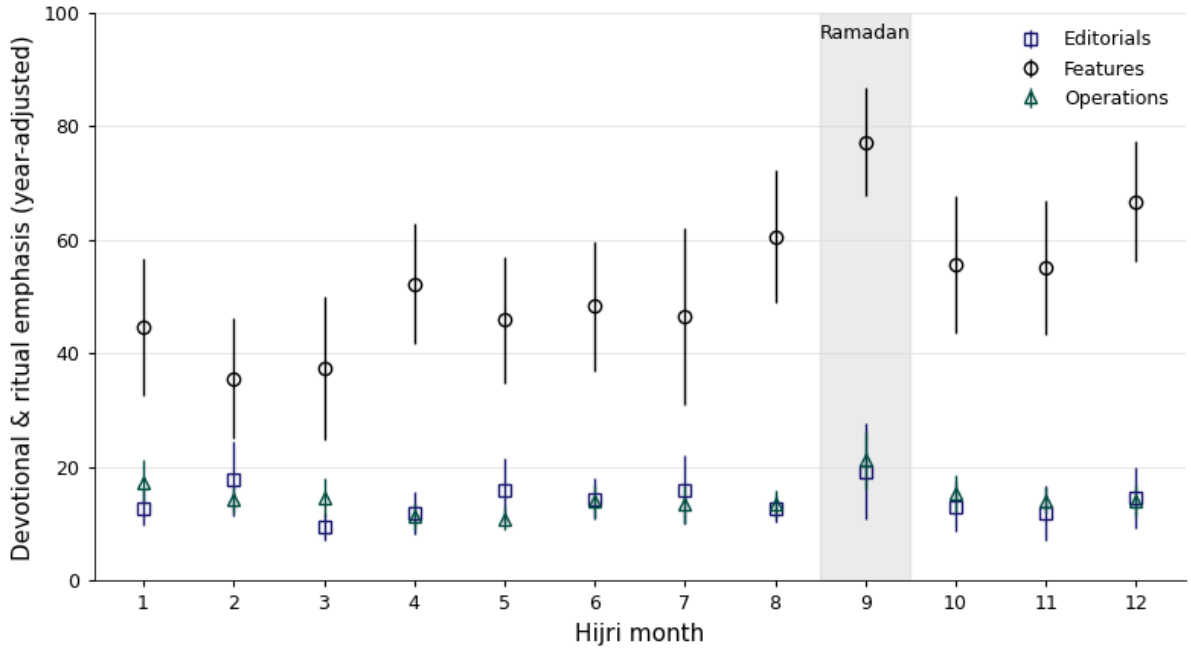


Figure 4: Devotional and Ritual Emphasis in the Islamic State's *al-Naba*, by Hijri Month

Notes: The figure plots devotional and ritual emphasis in the Islamic State's weekly *al-Naba* across 533 issues spanning December 2015 to April 2026, of which 46 fall in Ramadan, separately for editorials, feature essays, and operational news (the *Editorials*, *Features*, and *Operations* series): the signed lead argument, the standalone essays on doctrine, history, or governance, and the weekly attack reports by province, respectively. Devotional and ritual emphasis is a GABRIEL rating on a 0–100 scale of the extent to which a section foregrounds personal worship, such as fasting, night prayer, Qur'anic recitation, and supplication, rather than combat operations or political argument. To net out the pronounced secular drift in the newsletter's content, I residualize each section's score on Hijri-year fixed effects, re-center at the grand mean, and take the mean by Hijri month within each section type. The plotted points are these descriptive year-adjusted monthly averages, not coefficients from a fitted model; spikes span the mean plus or minus 1.96 standard errors across sections within the month and are descriptive, not clustered by Hijri year. Ramadan, the ninth Hijri month, is shaded. Devotional emphasis in the feature essays is far higher in Ramadan, near 78, than in other months, where it averages about 50; editorials remain low throughout, rising only slightly in Ramadan; and operational news, a within-issue placebo, is flat across the calendar. The profile also tracks the Islamic devotional calendar, with an anticipatory rise in Sha'ban (month 8) and a second peak in Dhul-Hijjah (month 12, the month of the Hajj). Appendix A details the corpus, the segmentation, and the prompt.

Table 1: The Relative Effects of Ramadan on State-Based Armed Conflict, 1989–2022

	Dependent Variable: log(armed conflict+1)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ramadan	0.037***	0.037***	0.037***	0.037***	0.068***	0.010	0.002
	(0.013)	(0.013)	(0.012)	(0.012)	(0.022)	(0.008)	(0.009)
					[0.006]		
Ramadan × % Muslim						0.022	
						(0.016)	
Ramadan× >75% Muslim							0.035**
							(0.015)
Ramadan× 50–75% Muslim							-0.012
							(0.026)
Ramadan× 25–50% Muslim							-0.001
							(0.033)
Ramadan× 1–25% Muslim							0.020
							(0.015)
Conflict mean	11.84	11.84	11.84	11.84	25.90	5.046	5.046
Sample	Muslim	Muslim	Muslim	Muslim	Muslim (Intense)	All	All
Observations	12648	12648	12648	12648	5712	43656	43656
Gregorian month FE	✓	✓	✓	✓	✓	✓	✓
Country FE		✓	✓				
Year FE			✓				
Country-by-year FE				✓	✓	✓	✓

Notes: Armed conflict is the count of state-based armed conflict events per country-month, from the UCDP Georeferenced Event Dataset (GED), 1989–2022. Ramadan equals one if the calendar month corresponds to Ramadan in the Hijri calendar. In columns (1)–(4) the monthly panel consists of the 31 countries that are on average at least 75% Muslim (World Religion Project and Pew). Column (5) restricts that sample to the 14 of those countries with a mean of more than one conflict event per month ("Intense"). In columns (6)–(7) the sample consists of 107 countries; in column (7) the reference group is the 22 countries with an average Muslim population of 1% or less. All specifications include Gregorian month fixed effects to absorb seasonal patterns. Conflict mean is the average of the outcome in levels. Robust standard errors clustered at the country level are in parentheses. Because column (5) has only 14 clusters, the value in square brackets is the p-value from the restricted wild cluster bootstrap (null imposed; Cameron et al. (2008); Roodman et al. (2019)), based on 9,999 replications with Rademacher weights. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2: The Ramadan Effect on Armed Conflict and Fatalities by Group Ideology

	log(Conflict Events + 1)		log(Deaths + 1)	
	(1)	(2)	(3)	(4)
Ramadan	0.034**	0.013	0.038**	0.008
	(0.012)	(0.009)	(0.017)	(0.014)
Group Ideology	Religious	Secular	Religious	Secular
Outcome mean (levels)	10.88	1.210	63.74	14.49
Observations	12240	12240	12240	12240
Gregorian month FE	✓	✓	✓	✓
Country-by-year FE	✓	✓	✓	✓

Notes: This table examines the effect of Ramadan on armed conflict events and fatalities by rebel group ideology in Muslim-majority countries. Rebel groups are classified into two categories: *religious* groups, which operate within an Islamic framework that supplies the doctrinal basis to cast offensive combat as meritorious worship, and *secular-nationalist* groups, whose stated objectives are ethno-nationalist, Marxist-Leninist, or factional and for which religion plays no constitutive role in the armed struggle. The religious category is broad and internally heterogeneous, ranging from transnational organizations whose principal objective is religious governance (e.g., the Islamic State, the Afghan Taliban, al-Shabaab, and al-Qaeda affiliates) to movements with a strong religious identity but more territorially bounded aims (e.g., Syrian insurgent coalitions, Hamas, and Hezbollah). Columns (1)–(2) use the log-transformed number of conflict events plus one as the dependent variable. Columns (3)–(4) use the log-transformed number of fatalities (best estimate) plus one. All specifications include country-by-Hijri-year and Gregorian month fixed effects. Outcome mean reports the average of the dependent variable in levels. Robust standard errors are in parentheses, clustered at the country level. Significance levels are denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 3: The Ramadan Effect on Conflict Initiation by Group Ideology and Aggressor

	log(Initiated Conflict Events + 1)			
	(1)	(2)	(3)	(4)
Ramadan	0.032**	0.010*	-0.000	0.009*
	(0.013)	(0.005)	(0.007)	(0.005)
Group Ideology	Religious	Religious	Secular	Secular
Aggressor	Rebel	Government	Rebel	Government
Outcome mean (levels)	1.878	2.730	0.226	0.302
Observations	12240	12240	12240	12240
Gregorian month FE	✓	✓	✓	✓
Country-by-year FE	✓	✓	✓	✓

Notes: This table isolates the effect of Ramadan on conflict initiation, disaggregated by rebel group ideology and the initiating actor. The dependent variable across all columns is the log-transformed number of initiated armed conflict events plus one. Aggressor status (Rebel vs. Government) was determined by parsing unstructured UCDP event descriptions with a large language model (GABRIEL log-probability extraction). Rebel groups are classified into *religious* and *secular-nationalist* categories based on their primary stated objectives; the religious-ideological category is broad, ranging from transnational jihadist organizations to movements with a strong religious identity but more territorially bounded aims. All specifications include country-by-Hijri-year and Gregorian month fixed effects. The sample is restricted to Muslim-majority countries. Robust standard errors are in parentheses, clustered at the country level. Significance levels are denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 4: Effect of Ramadan on Insurgent Violence in Afghanistan: Monthly Aggregates and Within-Day Timing

	Insurgent Attacks			Coalition Attacks	Insurgent DF by Target	
	log(DF+1)	log(IDF+1)	log(IED+1)	log(DF+1)	log(DF+1)	log(DF+1)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Monthly Aggregates						
Ramadan	0.083***	0.010	0.103***	0.076***	0.070***	-0.025
	(0.027)	(0.028)	(0.023)	(0.022)	(0.024)	(0.021)
Outcome mean (levels)	20.37	4.546	6.955	1.551	8.076	10.63
Observations	5,406	5,406	5,406	5,406	5,406	5,406
Panel B: Within-Day Decomposition (pre-iftar vs. post-iftar)						
Ramadan	-0.018	-0.031	0.094***	0.035*	0.028	-0.044*
	(0.024)	(0.028)	(0.021)	(0.018)	(0.021)	(0.023)
Post-Iftar	-0.367***	-0.195***	-0.509***	-0.084***	-0.258***	-0.281***
	(0.055)	(0.055)	(0.057)	(0.017)	(0.049)	(0.040)
Ramadan × Post-Iftar	0.127***	0.047*	0.025	0.015	0.020	0.119***
	(0.025)	(0.027)	(0.025)	(0.020)	(0.017)	(0.025)
Outcome mean (levels)	9.646	2.199	3.325	0.669	3.976	5.012
Observations	10,880	10,880	10,880	10,880	10,880	10,880
Target	State	State	State	Rebels	ISAF	Govt
Gregorian month FE	✓	✓	✓	✓	✓	✓
Province-by-Hijri-year FE	✓	✓	✓	✓	✓	✓

Notes: This table estimates the effect of Ramadan on insurgent violence in Afghanistan using the SIGACTS dataset (2002–2015). Panel A reports the monthly aggregate effect using a province-by-Hijri-month-by-Hijri-year panel. Panel B decomposes the monthly effect using a half-day shift panel that splits each province-Hijri-month into pre-iftar (dawn to sunset, encompassing the daytime fast) and post-iftar (sunset to dawn) windows. Columns 1–3 disaggregate rebel-initiated attacks by exertion type: direct fire (DF, small-arms and rocket-propelled grenade attacks requiring sustained close combat), indirect fire (IDF, mortars and rockets fired from prepared positions with less ongoing exertion), and improvised explosive device explosions (IED, pre-positioned and triggered remotely or by command wire, requiring minimal real-time effort). In columns 1–3, "State" targets comprise all government-side forces, namely Coalition forces (ISAF members and OEF allies) and Afghan State Forces (ANSF, including the Afghan National Army and Afghan National Police). Column 4 reports friendly direct fire (DF initiated by ISAF and Afghan government forces against insurgents). SIGACTS records the target affiliation of each event but not, for Friendly Action events, the initiating actor, so friendly DF in column 4 cannot be decomposed into Coalition-led versus Afghan-led operations. Columns 5 and 6 partition the column 1 DF result by target: column 5 restricts to enemy DF events with at least one Coalition target affiliation, and column 6 restricts to enemy DF events with at least one Afghan State Forces target affiliation. Because a single attack can record multiple target affiliations, the two categories are not mutually exclusive and need not sum exactly to column 1. In Panel B, the Ramadan main effect captures the pre-iftar (fasting-period) differential; the Ramadan × Post-Iftar interaction measures the additional post-iftar concentration during Ramadan relative to non-Ramadan months. The total post-iftar Ramadan effect is the sum of the main effect and the interaction. Post-iftar windows use sample-averaged sunset (18:05) and dawn (05:13) cutoffs. All specifications include province-by-Hijri-year and Gregorian month fixed effects. Outcome mean reports the average level of the dependent variable in the estimation sample. Robust standard errors are in parentheses, clustered at the province level (34 provinces). Significance levels: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 5: Effect of Ramadan on Civilian Protest Activity

	Cross-Country (ACLED)			Afghanistan (SIGACTS)	
	log(Peaceful Protests + 1)			log(Demonstrations + 1)	
	(1)	(2)	(3)	(4)	(5)
Ramadan	-0.065*	0.052***	0.062	-0.037***	-0.028***
	(0.031)	(0.019)	(0.045)	(0.013)	(0.009)
Ramadan × % Muslim		-0.117***			
		(0.039)			
Ramadan × >75% Muslim			-0.142**		
			(0.053)		
Ramadan × 50–75% Muslim			-0.039		
			(0.072)		
Ramadan × 25–50% Muslim			0.032		
			(0.054)		
Ramadan × 1–25% Muslim			-0.050		
			(0.047)		
Post-Iftar					-0.051***
					(0.015)
Ramadan × Post-Iftar					0.022**
					(0.009)
Outcome mean	7.569	4.215	4.215	0.304	0.136
Sample	Muslim	All	All	Afghanistan	Afghanistan
Observations	4,536	15,552	15,552	5,406	10,880
Gregorian month FE	✓	✓	✓	✓	✓
Country-by-Hijri-year FE	✓	✓	✓		
Province-by-Hijri-year FE				✓	✓

Notes: This table estimates the effect of Ramadan on civilian protest activity. Columns 1–3 use the ACLED dataset for 48 African countries (1997–2023). The outcome is the logarithm of peaceful protests plus one at the country-Hijri-month level, where ACLED defines peaceful protests as demonstrations in which participants do not engage in violence or property destruction and are not met with force or intervention. Column 1 restricts the sample to 14 countries with a Muslim population share above 75%. Columns 2 and 3 use the full sample, interacting the Ramadan indicator with the continuous Muslim population share (column 2) and with discrete share categories (column 3); the baseline category in column 3 is countries with less than 1% Muslim population. Columns 4 and 5 use the SIGACTS dataset for Afghan provinces (2002–2015). The outcome is the logarithm of demonstration events plus one at the province-Hijri-month level (column 4) and at the province-Hijri-month-shift level (column 5), where each province-month is split into pre-iftar (dawn to sunset) and post-iftar (sunset to dawn) windows. In column 5, the Ramadan main effect captures the pre-iftar (fasting-period) differential and the Ramadan × Post-Iftar interaction measures the differential between the post-iftar and pre-iftar Ramadan effects; the total post-iftar Ramadan effect is the sum of the two coefficients. All specifications include Gregorian month fixed effects. Columns 1–3 include country-by-Hijri-year fixed effects and columns 4–5 include province-by-Hijri-year fixed effects. Outcome mean reports the average level of the dependent variable in the estimation sample. Robust standard errors are in parentheses, clustered at the country level in columns 1–3 and at the province level in columns 4–5 (34 provinces). Significance levels: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 6: The Ramadan Effect on Spirituality and Political Engagement

	Spirituality/Prayer		Interest in Politics		Attending Demonstrations	
	(1)	(2)	(3)	(4)	(5)	(6)
Ramadan	0.052*	0.051*	-0.055**	-0.054*	-0.042**	-0.039**
	(0.025)	(0.026)	(0.026)	(0.026)	(0.018)	(0.017)
Outcome mean	0.770	0.751	0.433	0.480	0.342	0.368
Sample	±3 mo.	All	±3 mo.	All	±3 mo.	All
Observations	16,744	33,149	19,326	41,183	16,718	36,813
Gregorian month FE	✓	✓	✓	✓	✓	✓
Country-by-Hijri-year FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Notes: This table examines the effect of Ramadan on individual-level measures of spirituality and political engagement using data from 23 Muslim-majority countries from the World Values Survey, waves 4 through 7 (2001–2022). The analytical sample is restricted to Muslim respondents from Muslim-majority countries who report religion as either "very important" or "rather important" on the WVS importance-of-religion scale; approximately 95% of Muslim respondents in the WVS sample meet this criterion. The restriction is motivated by the mechanism under study: the Ramadan effect operates through religious observance during the holy month and is unlikely to affect respondents whose self-reported religious commitment is low. This individual-level restriction is conceptually analogous to the country-level restriction to Muslim-majority contexts. Observation counts vary across specifications because certain survey questions were not administered to respondents in all countries and waves. Columns (1)–(2) use a binary indicator for high-intensity prayer (praying several times a day or once a day and zero otherwise). Columns (3)–(4) use a binary indicator for political interest (reporting being "very interested" or "somewhat interested" in politics). Columns (5)–(6) use a binary indicator for demonstration willingness (reporting having attended or willingness to attend lawful peaceful demonstrations). Odd-numbered columns restrict the sample to interviews conducted in the seven Hijri months centered on Ramadan (Jamada-Al-Thani through Dhul-Hijjah); even-numbered columns use the full twelve-month sample. All specifications include country-by-Hijri-year and Gregorian month fixed effects and the full demographic control set: gender, age, age-squared, marital status, number of children, education, employment status, income, and self-reported importance of religion. Outcome mean reports the baseline average of the dependent variable. Robust standard errors are in parentheses, clustered at the country level. Significance levels are denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 7: Last 10 Days of Ramadan vs. Same Dates in Year $t+1$

	Y=Armed Conflict				Y=Demonstrations			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ramadan	0.009*	0.099***	-0.025***	-0.068	-0.020***	-0.327***	-0.004**	-0.938**
	(0.005)	(0.026)	(0.009)	(0.094)	(0.006)	(0.060)	(0.002)	(0.458)
Post-iftar			-0.126***	-1.240***			-0.005**	-1.431***
			(0.033)	(0.104)			(0.002)	(0.397)
Ramadan×Post-iftar			0.023**	0.129**			0.003	0.620
			(0.009)	(0.056)			(0.002)	(0.598)
Outcome mean (levels)	0.423	0.423	0.414	0.414	0.282	0.282	0.005	0.005
Estimator	OLS	PPML	OLS	PPML	OLS	PPML	OLS	PPML
Dep. variable	Log(Y+1)	# of Y	Log(Y+1)	# of Y	Log(Y+1)	# of Y	Log(Y+1)	# of Y
Observations	22,196	7,214	17,408	11,260	8,218	2,924	17,408	1,824
Country/Province × Cycle-year FE	✓	✓	✓	✓	✓	✓	✓	✓
Greg. month FE	✓	✓	✓	✓	✓	✓	✓	✓
Within-day			✓	✓			✓	✓

Notes: This table reports estimates from an exact Gregorian calendar matching design. Because the Islamic lunar year is approximately 10 days shorter than the Gregorian year, the last 10 days of Ramadan in year t fall on nearly the same calendar dates as the early post-Ramadan period in year $t+1$, which encompasses the 10 days of the month after Ramadan. Country (or province) by (cycle-)year fixed effects group each treated window with its matched control, ensuring that identification comes entirely from within-pair variation; Gregorian month fixed effects absorb residual cross-cycle seasonality. Columns (1)–(2) and (5)–(6) report the cross-country day-level results: state-based armed conflicts from UCDP and demonstrations from ACLED, respectively, restricted to countries where the average Muslim population share exceeds 75%. Columns (3)–(4) and (7)–(8) zoom in on Afghanistan using the SIGACTS incident database (direct-fire attacks and demonstrations), with the panel constructed at the province × Gregorian date × shift level. The shift indicator *Post-iftar* equals one for local hours 18:00–04:59 (the non-fasting window during Ramadan) and zero for the 05:00–17:59 fasting window. In within-day columns the *Ramadan* main effect captures the fasting-period differential, the *Post-iftar* coefficient captures the average evening lull, and the interaction measures the differential between the post-iftar and pre-iftar Ramadan effects.; the total post-iftar Ramadan effect is the sum of the main effect and the interaction. OLS specifications (odd columns) use $\log(Y+1)$ as the dependent variable; PPML specifications (even columns) model the raw event count directly and are robust to the prevalence of zeros in daily data (Silva and Tenreyro, 2006; Chen and Roth, 2024). PPML drops observations separated by fixed effects, reducing the effective sample. The outcome mean reports the unconditional average of the level variable across the estimation sample (per country-day in columns 1–2 and 5–6; per province-day-shift in columns 3–4 and 7–8). Robust standard errors are in parentheses, clustered at the country (columns 1–2, 5–6) or province (columns 3–4, 7–8) level. Significance levels: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Appendix A

Relative-Price Model of Sacred Time: Proofs and Extensions

This appendix collects the formal results the main text states. The payoff in equation (1), the first-order condition (2), and the comparative static (3) are as given there and are not restated; recall that $\phi \in [0,1]$ is the doctrinal compatibility of an action, the degree to which the reading an actor brings to that action lets it jointly produce worship alongside its political payoff. Compatibility is a property of an action, so a single actor may face different values of ϕ across the actions or targets available to it; the baseline fixes one action and writes ϕ for its compatibility, and Section A.2 makes the action-specificity explicit by indexing ϕ by target. Section A.1 shows that (1) has a unique interior optimum, derives (3), and proves the three-type Proposition 1. Section A.2 adds target choice and proves the civilian-boundary result, Corollary 1. Section A.3 adds the within-day technology and proves the timing and fast-length results, Corollary 2. Throughout I fix an action and suppress its index where no ambiguity results, and I take $B' > 0 > B''$, $c' > 0 < c''$, $\mu(R) \geq 1$ with $\mu' > 0$, and the schedules $\gamma, \lambda, \rho, \mu$ differentiable in R. I focus on an interior optimum; the signs extend to the boundary $a^* = 0$ in the obvious way.

A.1 Optimum and comparative static

Lemma 1. *The payoff $U(\cdot\,; R)$ in equation (1) is strictly concave in a. Any interior optimum is unique and satisfies the first-order condition (2), and the comparative static (3) holds.*

Proof. Differentiating (1) twice in a,

$$U_{aa}(a; R) = B''(a)\big[1 + \phi(\mu(R) - 1)\big] - c''(a).$$

The bracket $1 + \phi(\mu(R) - 1) \in [1, \mu(R)]$ is at least one, since $\phi \in [0,1]$ and $\mu(R) \geq 1$. With $B'' < 0$ and $c'' > 0$ this gives $U_{aa} < 0$ for every a, so U is strictly concave in a and any critical point is its unique global maximizer. At an interior optimum $U_a = 0$, which is (2).

Strict concavity gives $U_{aa} \neq 0$, so the implicit function theorem applies to $U_a(a^*(R); R) = 0$ and yields $da^*/dR = -U_{aR}/U_{aa}$. The cross-partial, holding a fixed, is

$$U_{aR} = B'(a^*)\,\phi\,\mu'(R) + \gamma'(R) - \lambda'(R)(1 - \phi) - \rho'(R).$$

Since $-1/U_{aa} > 0$, $\operatorname{sign}(da^*/dR) = \operatorname{sign}(U_{aR})$, which is (3). □

Proposition 1 (Divergent responses by type)**.** *Let each armed group carry the fight to the state, where the reputational cost is flat ($\rho' \approx 0$).*

(i) ***Religious insurgent*** *(compatible action, $\phi = 1$; professional, so $\lambda' \approx \gamma' \approx 0$):* $da^*/dR = B'(a^*)\mu'(R)/(-U_{aa}) > 0$.

(ii) ***Secular-nationalist insurgent*** *(incompatible action, $\phi = 0$; professional):* $U_{aR} = 0$, *so* $da^*/dR = 0$.

(iii) ***Civilian protest*** *(incompatible action, $\phi = 0$; individual, so $\lambda', \gamma' > 0$; nonviolent, so $\rho' \approx 0$):* $\operatorname{sign}(da^*/dR) = \operatorname{sign}[\gamma'(R) - \lambda'(R)]$, *which the model does not determine.*

Proof. Substitute each parameter configuration into the expression for U_{aR} in Lemma 1. In (i), $\phi = 1$ sets the time term to zero through the factor $(1 - \phi) = 0$, the professional profile sets $\gamma' \approx 0$, and the state target sets $\rho' \approx 0$, leaving $B'(a^*)\mu'(R) > 0$. In (ii), $\phi = 0$ sets the joint-production term to zero through the factor ϕ, the professional profile sets $\gamma' \approx \lambda' \approx 0$, and the state target sets $\rho' \approx 0$, so all four terms vanish. In (iii), $\phi = 0$ removes the joint-production

return, $\rho' \approx 0$ removes the reputational term, and the individual profile retains both γ' and λ', leaving $\gamma'(R) - \lambda'(R)$. □

Cases (i) and (ii) share the professional profile and the state target and differ only in the compatibility ϕ of their action, so every channel other than the joint-production return is held fixed across them. The null in (ii) is therefore overdetermined rather than knife-edge: it holds because sacred time activates no margin a secular professional group values, not because offsetting forces happen to cancel.

A.2 Target choice and the civilian boundary

Let a group split violence between two targets, the state and civilians, choosing $(a^S, a^C) \geq 0$ to maximize $U^S(a^S; R) + U^C(a^C; R)$, where each component has the form (1) with a target-specific compatibility ϕ^S, ϕ^C and reputational cost ρ^S, ρ^C. Because compatibility is a property of an action, the same group generally faces different values on the two margins. Additive separability lets Lemma 1 apply to each margin on its own. For a religious group, combat against the state is construed as worship, $\phi^S = 1$, and carries no rising reputational cost during the month, $\rho^{S\prime} \approx 0$. Mainstream doctrine renders harming non-combatants incompatible with worship, $\phi^C = 0$, while the reputational cost of doing so rises sharply in sacred time, $\rho^{C\prime} > 0$.

Corollary 1 (Escalation stops at the civilian line, except under takfiri doctrine)**.** *For a religious insurgent, $da^{S*}/dR > 0$ while $da^{C*}/dR \leq 0$. If doctrine reclassifies a category of civilians as legitimate targets, so that on that category $\phi^C = 1$ and $\rho^{C\prime} \approx 0$, then civilian-directed violence against that category rises, $da^{C*}/dR > 0$.*

Proof. Apply Lemma 1 to each margin. On the state margin, $\phi^S = 1$, the professional profile, and $\rho^{S\prime} \approx 0$ leave $B'(a^{S*})\mu'(R) > 0$, as in Proposition 1(i). On the civilian margin, $\phi^C = 0$ removes the joint-production return and the professional profile removes the time and coordination terms, leaving $-\rho^{C\prime}(R) < 0$, so $da^{C*}/dR < 0$ at an interior optimum and ≤ 0 in general. Under reclassification the civilian margin has $\phi^C = 1$ and $\rho^{C\prime} \approx 0$, matching the state margin, so its sign is that of $B'(a^{C*})\mu'(R) > 0$. □

This separates two claims the reduced statement conflates. The religious group escalates against the state because the state carries no reputational tax during the month, not because doctrine erases the reputational cost in general. Doctrine raises compatibility on the civilian margin only where it reclassifies the target, which is why the civilian margin moves for a takfiri group alone.

A.3 Within-day timing and fast length

The monthly problem in (1) sets the level of violence; a nested choice sets its timing and tactical composition, and the two are governed by different primitives. Partition the day into fasting hours, collected in the set F, and post-iftar hours, collected in N. A unit of violence is produced by either a high-exertion tactic, such as a direct-fire assault, or a low-exertion tactic, such as a pre-positioned device that requires negligible effort at the moment of execution. Only high-exertion tactics carry the physiological toll of abstention, and only during fasting hours, so the per-unit effort costs are

$$c_H(h) = \bar{c}_H + \kappa \mathbf{1}\{h \in F\}, \qquad c_L(h) = \bar{c}_L,$$

with the fasting surcharge $\kappa > 0$. The effort term $c(a)$ in (1) is the cost-minimized envelope of this technology at scale a.

Assumption 1 (A fast-length-invariant method always exists)**.** *For each unit of violence a method whose cost does not depend on the number of fasting hours $|F|$ is available: a low-exertion tactic at any hour, at cost $\bar{c}_L$, or a high-exertion tactic after iftar, at cost $\bar{c}_H$. The surcharged method, high exertion during fasting hours, is therefore weakly dominated and is not used whenever an alternative delivers the same output at no higher cost.*

Corollary 2 (Timing shifts; the level does not scale with fast length)**.** *Under Assumption 1:*

(a) high-exertion violence concentrates in the post-iftar hours N, while low-exertion violence is spread across the day;

(b) the monthly level a^* is set by the jointly produced return, hence by $\mu(R)$, and is invariant to the number of fasting hours, which shifts only the day-night composition: $\partial a^*/\partial|F| = 0$;

(c) against a target with night-fighting capability, modeled as an extra cost $\eta \geq \kappa$ on high-exertion night operations, the post-iftar concentration in (a) does not occur, while the level effect in (b) is unchanged.

Proof. (a) For high exertion, $c_H(h) = \bar{c}_H$ on N lies strictly below $\bar{c}_H + \kappa = c_H(h)$ on F, so a cost-minimizing producer places high-exertion output in N wherever night capacity permits. Low-exertion cost is independent of the hour, so its placement is not pinned down and it is spread across the day.

(b) By Assumption 1 the marginal unit of violence uses a method whose cost is independent of $|F|$, so the envelope marginal cost $c'(a^*)$ does not depend on $|F|$. The outer first-order condition (2) pins a^* through $c'(a^*)$ and the schedules in R, none of which involves $|F|$, so $\partial a^*/\partial|F| = 0$. Lengthening the fast raises the cost only of the dominated method and reallocates production toward low exertion by day and high exertion after iftar, without moving the total. The level responds to sacred time only through $\mu(R)$, that is, through the Ramadan indicator rather than through fast duration, and a regression of the monthly total on daily fasting hours recovers a null.

(c) With the night penalty, high-exertion cost on N is $\bar{c}_H + \eta$, at least $\bar{c}_H + \kappa$, the high-exertion cost on F, so the post-iftar hours no longer offer a cost advantage for high exertion and the reallocation in (a) does not occur. The penalty enters only the composition margin, not the envelope marginal cost relevant to the outer problem, so the level result in (b) is unaffected. □

Part (b) reaches the fasting-hours null by the right route. A model in which violence could be produced only by high exertion, and high exertion only at night, would tie the total to the length of the night and predict a total that falls as the fast lengthens, not a null. Assumption 1 is what replaces that negative gradient with zero, so the observed null is informative about the production technology and not merely about aggregation. Part (c) is the adversary asymmetry: where the enemy fields night vision and air support, the fast-length-invariant high-exertion method disappears, the within-day signature vanishes, and yet the level can still rise through the jointly produced return.

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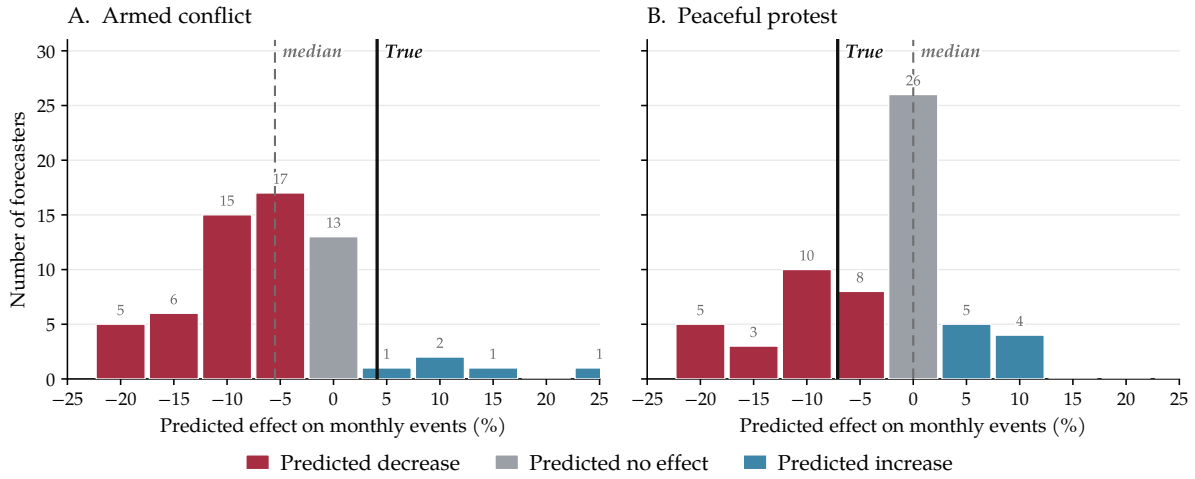


Figure A.1: Expert forecasts versus realized effects of Ramadan

The figure plots expert forecasts of Ramadan's effect on two outcomes in predominantly Muslim countries, elicited through the Social Science Prediction Platform (study ID sspp-2026-0012-v1) and completed by 61 forecasters (in-progress and preview responses excluded). Panel A is the monthly count of state-based armed conflict events between governments and rebel groups; Panel B is the monthly count of peaceful protests in predominantly Muslim countries in Africa, each relative to non-Ramadan months. Each forecaster chose a direction (decrease, no effect, or increase) and a magnitude between -25% and +25%; bars show the resulting signed forecasts (sign from the direction response, magnitude from its absolute value, nulls set to zero) in width-5 bins, colored by predicted direction. The gray dashed line marks the median forecast and the solid black line the realized estimate from the paper (labeled True): +4.1% for armed conflict and -7.1% for peaceful protest. A plurality predicted that Ramadan reduces both outcomes (46 of 61 for armed conflict, 29 of 61 for protest), a prior the estimates reverse for armed conflict and exceed in magnitude for protest.

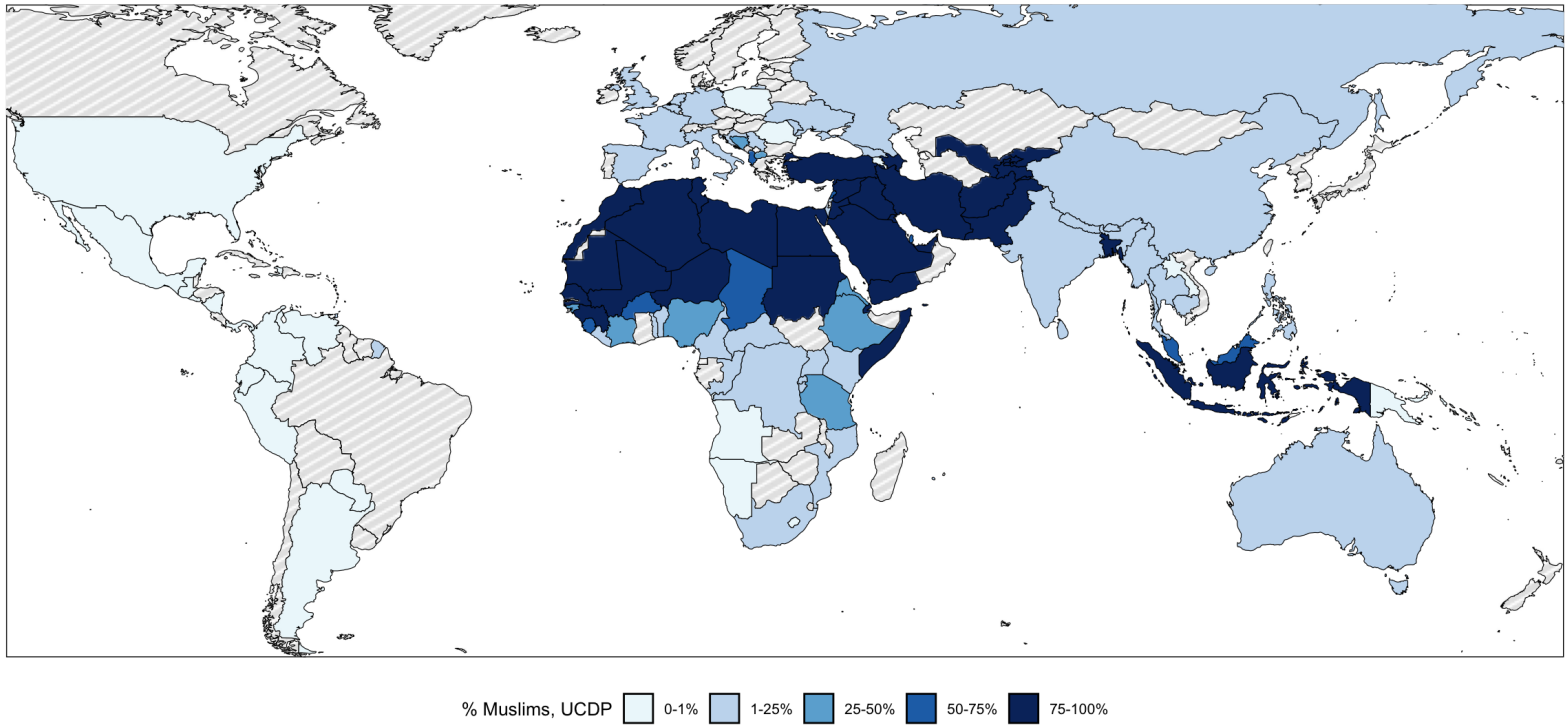


Figure A.2: Countries by Share of Muslim Population

Notes: There are 107 in-sample countries in the UCDP dataset. Hatched countries in gray do not appear in the dataset. Countries are grouped according to their average share of Muslim population from 1989 to 2022.

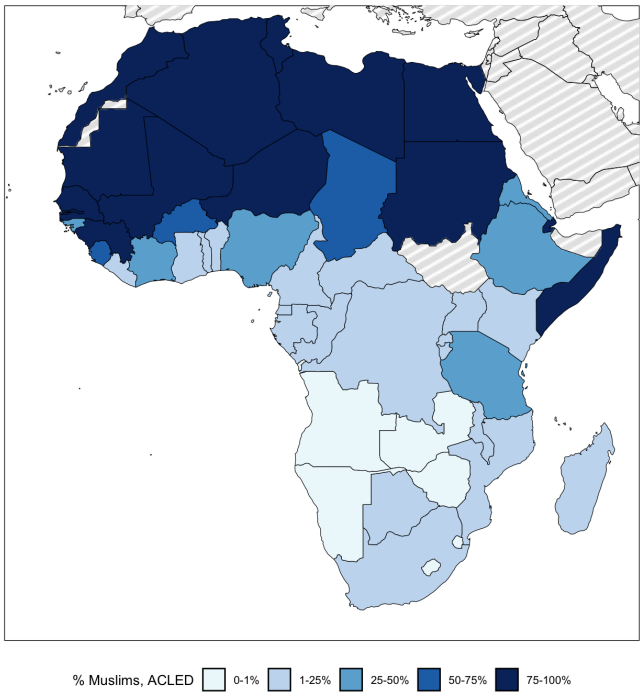


Figure A.3: African Countries by Share of Muslim Population

Notes: There are 48 in-sample countries in the ACLED dataset. Hatched countries in gray do not appear in the dataset. Countries are grouped according to their average share of Muslim population from 1997 to 2023.

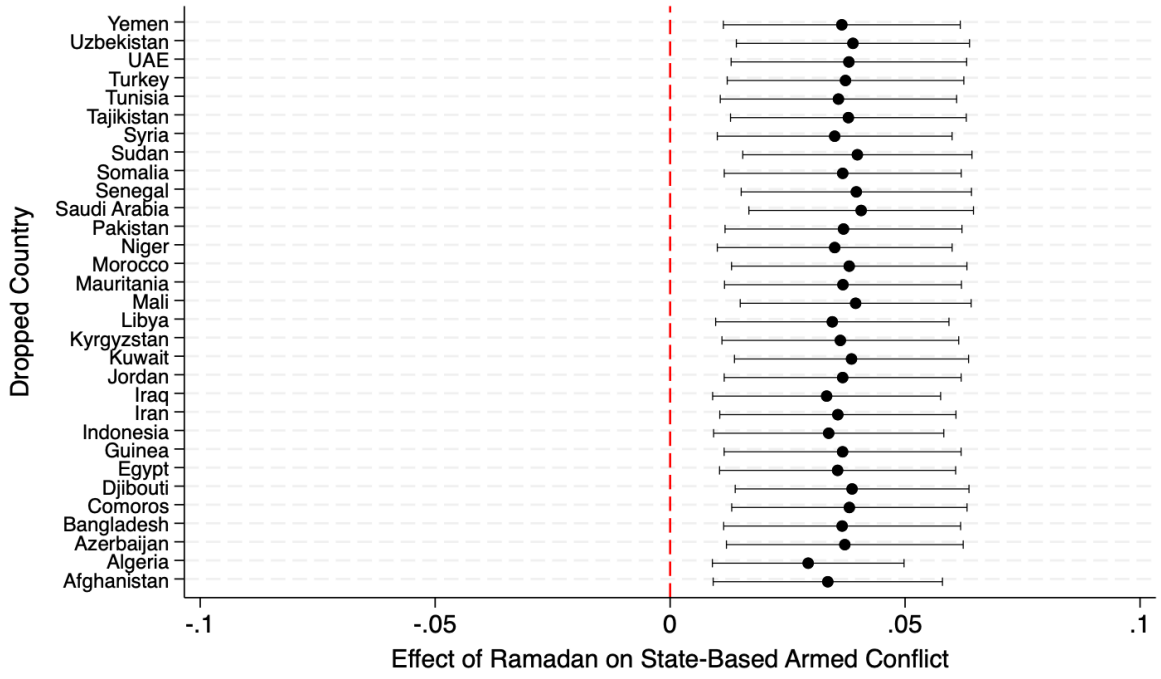


Figure A.4: Relative Effects of Ramadan on Armed Conflict in Muslim Countries Excluding 1 Country

Notes: This figure shows a leave-one-country-out sensitivity analysis of the effect of Ramadan on the intensity of state-based armed conflict, based on UCDP data from 1989–2022. The outcome is the natural logarithm of the number of conflict events plus one, measured monthly. Each point reports the Ramadan coefficient from a separate regression excluding one of the 31 Muslim-majority countries (defined as having a Muslim population share above 75%). All regressions include Gregorian month and country-by-year fixed effects. Standard errors are clustered at the country level. The red vertical dashed line denotes the zero-effect benchmark. This robustness check assesses the influence of individual countries on the overall result.

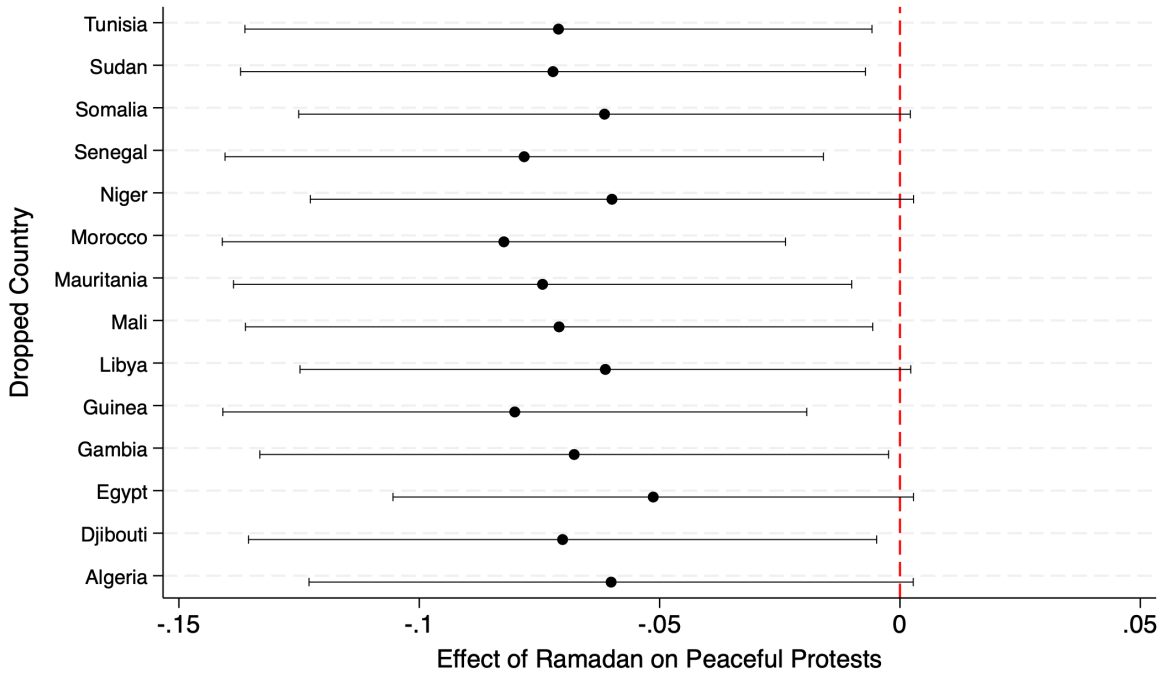


Figure A.5: Relative Effects of Ramadan on Demonstrations in Muslim Countries Excluding 1 Country

Notes: This figure shows a leave-one-country-out sensitivity analysis of the effect of Ramadan on the intensity of peaceful protests, based on ACLED data from 1997–2023. The outcome is the natural logarithm of the number of protests events plus one, measured monthly. Each point reports the Ramadan coefficient from a separate regression excluding one of the 14 Muslim-majority countries (defined as having a Muslim population share above 75%). All regressions include Gregorian month and country-by-year fixed effects. Standard errors are clustered at the country level. The red vertical dashed line denotes the zero-effect benchmark. This robustness check assesses the influence of individual countries on the overall result.

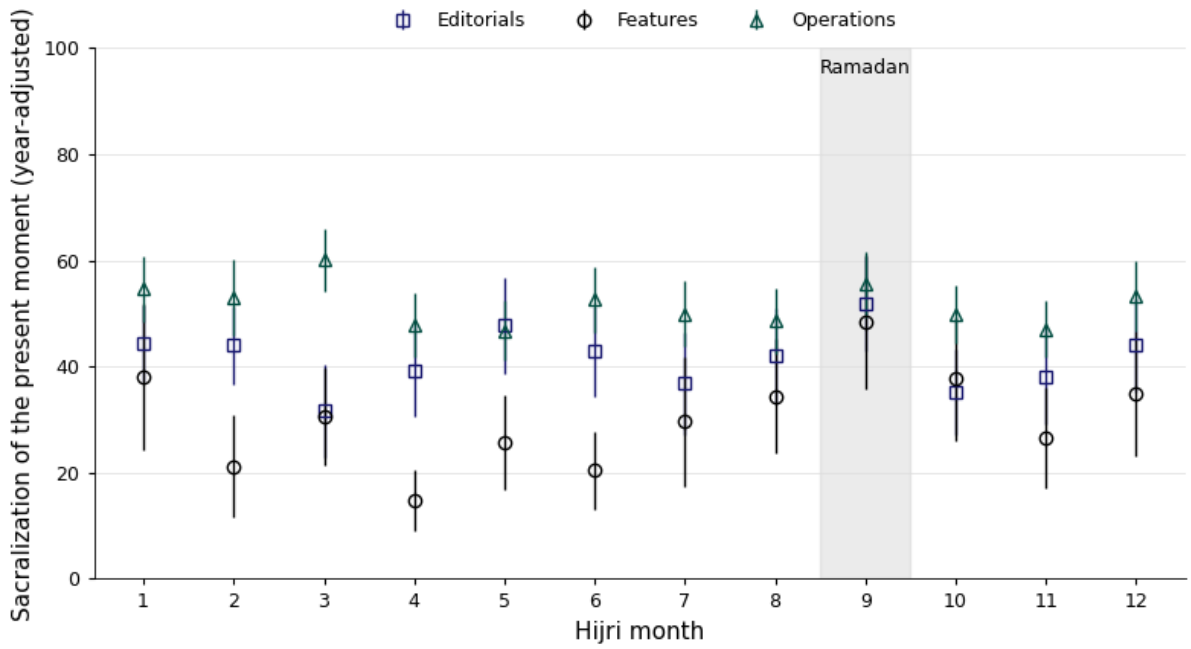


Figure A.6: Sacralization of the Present Moment in the Islamic State's *al-Naba*, by Hijri Month

Notes: The figure plots sacralization of the present moment in the Islamic State's weekly *al-Naba* by Hijri month across 533 issues (46 in Ramadan), separately for editorials, feature essays, and operational news (the *Editorials*, *Features*, and *Operations* series): the signed lead argument, the standalone essays on doctrine, history, or governance, and the weekly attack reports by province, respectively. Sacralization of the present moment is a GABRIEL rating on a 0–100 scale of the extent to which a section presents the current period as a specially blessed or rewarding time for striving, by the text's own argument rather than any date it reports. As in Figure 4, I residualize each section's score on Hijri-year fixed effects, re-center at the grand mean, and take the mean by Hijri month; the plotted points are these descriptive year-adjusted monthly averages, and spikes span the mean plus or minus 1.96 standard errors across sections (descriptive, not clustered by Hijri year). Ramadan is shaded. Editorial and feature-essay sacralization both rise during Ramadan, consistent with the doctrinal-framing channel. The construct is reported as a secondary measure, however, because it bleeds into the operational news, which scores moderately high in every month even though factual battle reports have no doctrinal reason to cast the present as a blessed time.

Table A.1: Summary Statistics: Armed Conflict

Variable	(1) N	(2) Mean	(3) S.D.	(4) Min	(5) Max
Panel A — UCDP Cross-Country Hijri Month (Muslim Share > 75%, 31 countries)					
Log(State Conflicts+1)$_{cmt}$	12,648	0.729	1.298	0	7.602
Panel B — UCDP by Rebel Ideology (Muslim Share > 75%, 30 countries)					
Log(Religious Events+1)$_{cmt}$	12,240	0.496	1.201	0	7.602
Log(Secular-Nationalist Events+1)$_{cmt}$	12,240	0.260	0.698	0	4.595
Panel C — UCDP by Aggression Attribution (Muslim Share > 75%, 30 countries)					
Rebel-Initiated Events					
Log(Religious Events+1)$_{cmt}$	12,240	0.284	0.796	0	6.250
Log(Secular-Nationalist Events+1)$_{cmt}$	12,240	0.086	0.349	0	3.466
Government-Initiated Events					
Log(Religious Events+1)$_{cmt}$	12,240	0.247	0.798	0	6.479
Log(Secular-Nationalist Events+1)$_{cmt}$	12,240	0.096	0.391	0	3.892
Panel D — SIGACTS Afghanistan					
D.1 Province-Month Panel					
Log(Rebel Attacks+1)$_{pmt}$	5,542	2.252	1.803	0	7.581
Log(Direct Fire+1)$_{pmt}$	5,542	1.833	1.638	0	7.268
Log(IED Attacks+1)$_{pmt}$	5,542	1.608	1.556	0	6.645
D.2 Province-Month-Shift Panel (Pre/Post Iftar)					
Log(Rebel Attacks+1)$_{pmst}$	11,084	1.717	1.583	0	7.401
Log(Direct Fire+1)$_{pmst}$	11,084	1.356	1.416	0	7.090
Log(IED Attacks+1)$_{pmst}$	11,084	1.139	1.313	0	6.506
D.3 Province-Day-Hour Panel					
Log(Rebel Attacks+1)$_{pdht}$	3,804,192	0.038	0.182	0	3.434
Log(Direct Fire+1)$_{pdht}$	3,804,192	0.023	0.138	0	3.367
Log(IED Attacks+1)$_{pdht}$	3,804,192	0.017	0.118	0	2.944

Notes: This table presents summary statistics for all armed conflict variables. Subscripts follow the regression specifications: c denotes country, m Hijri month, t Hijri year, p province, s shift, d Gregorian day, and h hour. Panel A reports descriptives for state-based armed conflict from the UCDP GED (1989–2022) for 31 countries with a Muslim population share above 75%. The full sample covers 107 countries (43,656 observations). Panel B disaggregates log conflict events by rebel group ideology. Panel C further decomposes events by LLM-based aggression attribution using the GABRIEL framework. Panel D reports statistics from the declassified SIGACTS dataset covering insurgent attacks in Afghanistan (2002–2015) at three levels of temporal aggregation. Column (1) reports the number of observations, (2) and (3) the mean and standard deviation, and (4) and (5) the minimum and maximum values.

Table A.2: Summary Statistics: Demonstrations, Survey, Fasting Hours, and Raw Counts

Variable	(1) N	(2) Mean	(3) S.D.	(4) Min	(5) Max
Panel A — ACLED Cross-Country Hijri Month (Muslim Share $>$ 75%, 14 countries)					
Log(Demonstrations+1)$_{cmt}$	4,536	1.082	1.361	0	5.730
Log(Political Violence+1)$_{cmt}$	4,536	0.742	1.166	0	5.652
Panel B — World Values Survey (Individual-Level, Muslim Respondents)					
High-Frequency Prayer (Dummy)$_i$	35,449	0.732	0.443	0	1
Interviewed during Ramadan (Prayer Sample)$_i$	35,449	0.121	0.326	0	1
Participation in Demonstrations (Dummy)$_i$	39,049	0.364	0.481	0	1
Interviewed during Ramadan (Demo Sample)$_i$	39,049	0.106	0.308	0	1
Interest in Politics (Dummy)$_i$	43,582	0.483	0.500	0	1
Interviewed during Ramadan (Politics Sample)$_i$	43,582	0.099	0.299	0	1
Panel C — Fasting Hours (Ramadan-Only Sample)					
C.1 ACLED Sample (Muslim Share $>$ 75%, 14 countries)					
Log(Demonstrations+1)$_{ct}$	1,296	0.855	1.159	0	5.537
Log(Fasting Hours)$_{ct}$	1,296	2.526	0.063	2.318	2.719
C.2 UCDP Sample (Muslim Share $>$ 75%, 31 countries)					
Log(State Conflicts+1)$_{ct}$	3,710	0.494	1.058	0	7.298
Log(Fasting Hours)$_{ct}$	3,710	2.527	0.113	2.062	2.917
Panel D — Raw Event Counts (Levels)					
D.1 UCDP Armed Conflict (Muslim Share $>$ 75%)					
State Conflicts$_{cmt}$	12,648	11.904	80.440	0	2,001
Fatalities$_{cmt}$	12,648	79.768	507.713	0	20,214
Religious Events$_{cmt}$	12,240	10.879	81.562	0	2,001
Secular-Nationalist Events$_{cmt}$	12,240	1.210	5.478	0	98
D.2 SIGACTS Afghanistan					
Rebel Attacks$_{pt}$	5,542	45.931	130.828	0	1,960
Direct Fire$_{pt}$	5,542	26.487	76.880	0	1,433
IED Attacks$_{pt}$	5,542	19.444	59.471	0	768
D.3 ACLED Demonstrations (Muslim Share $>$ 75%)					
Demonstrations$_{cmt}$	4,536	9.789	28.352	0	307

Notes: This table presents summary statistics for civilian demonstrations, individual-level survey outcomes, fasting intensity, and raw count levels for all conflict variables. Subscripts indicate the level of observation: c denotes country, m Hijri month, t Hijri year, p province, and i individual respondent. Panel A reports descriptive statistics from the ACLED dataset. Panel B reports individual-level responses from Muslim participants across four waves of the World Values Survey (1999–2022). Panel C reports cross-sectional fasting hours calculated as the time between civil twilight and sunset at each capital city, restricted strictly to Ramadan months to test for physiological intensity mechanisms. Panel D provides the unlogged raw counts (levels) corresponding to the core armed conflict and demonstration samples. Column (1) reports the number of observations, (2) and (3) the mean and standard deviation, and (4) and (5) the minimum and maximum values.

Table A.3: The Relative Effects of Ramadan on State-Based Armed Conflicts, 1989–2022 (Months 6–12)

	Dependent Variable: log(armed conflict+1)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ramadan	0.030**	0.034***	0.034***	0.030**	0.030**	0.008	0.003
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.008)	(0.009)
Ramadan × % Muslim						0.017	
						(0.016)	
Ramadan× >75% Muslim							0.025*
							(0.015)
Ramadan× 50–75% Muslim							-0.020
							(0.024)
Ramadan× 25–50% Muslim							-0.011
							(0.025)
Ramadan× 1–25% Muslim							0.015
							(0.014)
Conflict mean	12.19	12.19	12.19	12.19	12.19	5.192	5.192
Sample	Muslim	Muslim	Muslim	Muslim	Muslim	All	All
Observations	7378	7378	7378	7378	7378	25466	25466
Gregorian month FE		✓	✓	✓	✓	✓	✓
Country FE			✓	✓			
Year FE				✓			
Country-by-year FE					✓	✓	✓

Notes: The control group of months includes the three months preceding and following Ramadan (Hijri months 6–12). Armed conflict is the count of state-based armed conflict events per country-month, drawn from the UCDP Georeferenced Event Dataset (GED), 1989–2022. Ramadan equals one if the calendar month corresponds to Ramadan in the Hijri calendar. In columns (1)–(5), the monthly panel sample consists of the 31 countries with at least 75% Muslims on average for the given period (World Religion Project and Pew). In columns (6)–(7), the sample consists of 107 countries. In column (7), the reference group consists of 22 countries with an average Muslim population of 1% or less. All specifications except column (1) include Gregorian month fixed effects to absorb seasonal patterns. Conflict mean is the average of the outcome in levels. Robust standard errors are in parentheses, clustered at the country level. Significance levels are denoted by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.4: The Relative Effects of Ramadan on Conflict in Non-Muslim Countries, 1989–2022

	Dependent Variable: log(armed conflict+1)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ramadan	0.002	0.002	0.002	0.002	0.002	0.029**	0.058***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.020)
Ramadan × % Christian						-0.028*	
						(0.016)	
Ramadan× >75% Christian							-0.044**
							(0.022)
Ramadan× 50–75% Christian							-0.069***
							(0.024)
Ramadan× 25–50% Christian							-0.070**
							(0.035)
Ramadan× 1–25% Christian							-0.034
							(0.024)
Conflict mean	0.885	0.885	0.885	0.885	0.885	5.046	5.046
Sample	Non-Muslim	Non-Muslim	Non-Muslim	Non-Muslim	Non-Muslim	All	All
Observations	8976	8976	8976	8976	8976	43656	43656
Gregorian month FE		✓	✓	✓	✓	✓	✓
Country FE			✓	✓			
Year FE				✓			
Country-by-year FE					✓	✓	✓

Notes: This table serves as a placebo test, estimating the effect of Ramadan on state-based armed conflict in countries where Ramadan observance is minimal or nonexistent. Armed conflict is the count of state-based armed conflict events per country-month, drawn from the UCDP Georeferenced Event Dataset (GED), 1989–2022. Ramadan equals one if the calendar month corresponds to Ramadan in the Hijri calendar. In columns (1)–(5), the monthly panel sample consists of 22 countries with at most 1% Muslims on average for the given period (World Religion Project and Pew). In columns (6)–(7), the sample consists of 107 countries. In column (7), the reference group consists of 12 countries with an average Christian population of 1% or less. All specifications except column (1) include Gregorian month fixed effects to absorb seasonal patterns. Conflict mean is the average of the outcome in levels. Robust standard errors are in parentheses, clustered at the country level. Significance levels are denoted by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.5: The Relative Effects of Ramadan on Political Violence, 1997–2023 (ACLED)

	Dependent Variable: log(Political Violence +1)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ramadan	0.065***	0.079***	0.079***	0.076***	0.076***	-0.001	0.006
	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.016)	(0.017)
Ramadan × % Muslim						0.070***	
						(0.025)	
Ramadan× >75% Muslim							0.065**
							(0.024)
Ramadan× 50–75% Muslim							-0.029
							(0.056)
Ramadan× 25–50% Muslim							0.020
							(0.055)
Ramadan× 1–25% Muslim							0.005
							(0.023)
Political Violence mean	5.260	5.260	5.260	5.260	5.260	3.437	3.437
Sample	Muslim	Muslim	Muslim	Muslim	Muslim	All	All
Observations	4536	4536	4536	4536	4536	15552	15552
Gregorian month FE		✓	✓	✓	✓	✓	✓
Country FE			✓	✓			
Year FE				✓			
Country-by-year FE					✓	✓	✓

Notes: Political violence is the count of state-based armed conflict events per country-month, drawn from the ACLED dataset, 1997–20223. In columns (1)–(5), the sample consists of 14 African countries with at least 75% Muslims on average for the given period in the World Religion Project (WRP) and PEW database. In columns (6)–(7), the sample and the control group consist of 48 and 6 African countries, respectively. Political violence mean is the average of the outcome in levels. Robust standard errors are in parentheses, clustered at the country level. Significance levels are denoted by * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A.6: Examples of LLM Aggressor Classification from UCDP Source Text

Side A (State)	Side B (Rebel)	UCDP Source Article Text	Class.
Gov. of Somalia	Al-Shabaab	"Xinhua News Agency, 2022-09-23, Somali forces kill 15 al-Shabab militants"	1
Gov. of Pakistan	TTP	"Agence France Presse, 2014-01-22, Bomb blast kills five in northwest Pakistan"	2
Gov. of Syria	Syrian insurgents	"SOHR, 2014-04-19, 203 were killed yesterday"	0
Gov. of Syria	Syrian insurgents	"VDC, 2013-09-20, Unidentified"	0
Gov. of Afghanistan	Hizb-i Islami (Khalis)	"The Globe and Mail, 1989-03-20, Rebel toll 215 in siege at Jalalabad, Kabul says"	1
Gov. of Afghanistan	Taleban	"Reuters, 1995-05-08, Afghan forces claim gains against Taleban militia"	1
Gov. of Syria	Syrian insurgents	"SOHR, 2014-01-05, Nasra Front executes soldiers from regular forces"	2
Gov. of Tunisia	JAK-T	"Agence France Presse, 2016-11-06, IS claims killing of Tunisian soldier"	2
Gov. of Turkey	PKK	"Xinhua News Agency, 2007-06-22, Two PKK members killed in operations in eastern Turkey"	1
Gov. of Uzbekistan	IMU	"AP, 2000-08-07, Militants invade Uzbekistan villages, clash with troops"	2
Gov. of Yemen	AQAP	"Agence France Presse, 2014-08-06, 'Qaeda ambush' kills 5 Yemen soldiers: security"	2

Notes: This table provides illustrative examples of how the GABRIEL LLM framework classified unstructured text from the UCDP GED dataset. Classifications are defined as: 1 = Side A (Government) initiated, 2 = Side B (Rebel) initiated, and 0 = Neutral/Indeterminate. The model conservatively defaults to 0 when the text describes casualties without clear attribution.

Table A.7: Balance Test on Demographic Covariates: Ramadan vs. Non-Ramadan Interviews

	Non-Ramadan	Ramadan	Difference	p-value
Female	0.511	0.517	-0.006	0.513
	(0.500)	(0.500)		
Age	38.135	41.262	-3.127***	0.000
	(13.652)	(14.713)		
Married	0.683	0.678	0.005	0.560
	(0.465)	(0.467)		
Number of children	1.943	1.949	-0.006	0.851
	(1.724)	(1.919)		
Education	1.759	1.770	-0.011	0.448
	(0.821)	(0.807)		
Employed	0.531	0.523	0.008	0.398
	(0.499)	(0.500)		
Income (1–10 scale)	4.756	4.629	0.127***	0.001
	(2.068)	(2.110)		
Religion very important	0.862	0.879	-0.018***	0.003
	(0.345)	(0.326)		
N	15,567	3,759	19,326	

Notes: This table reports balance tests on demographic covariates for the analytical sample used in Table 6. The sample consists of Muslim respondents in 23 Muslim-majority countries from the World Values Survey (1999–2023) who report religion as either "very important" or "rather important" on the WVS importance-of-religion scale (approximately 95% of Muslim respondents in the sample) and who were interviewed in the seven Hijri months centered on Ramadan (Jamada-Al-Thani through Dhul-Hijjah). The Difference column reports the mean difference (Non-Ramadan − Ramadan) from a two-sample t-test with unequal variances; the p-value column reports the corresponding two-sided p-value. Standard deviations are in parentheses below the means. The Employed indicator equals 1 for respondents reporting full-time, part-time, or self-employed work and 0 for retirees, housewives, students, unemployed respondents, and other categories. The Religion very important indicator equals 1 for respondents reporting religion as "very important" and 0 for those reporting "rather important." Ramadan-period interviews account for 19.5% of the seven-month window, above the 14.3% share expected under uniform fieldwork timing within the window. The average number of interviews per country-Hijri-year-Hijri-month cell is statistically indistinguishable across Ramadan and non-Ramadan periods (342 vs. 399, p=0.69), as is the average number of distinct interview days per cell (8.6 vs. 9.3, p=0.76). Significance levels are denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.8: Placebo Test: Non-Muslims in Muslim-Majority Countries

	Spirituality/Prayer		Interest in Politics		Attending Demonstrations	
	(1)	(2)	(3)	(4)	(5)	(6)
Ramadan	-0.033	-0.039	-0.045	-0.072	-0.154	-0.161
	(0.059)	(0.058)	(0.050)	(0.061)	(0.108)	(0.103)
Outcome mean	0.544	0.595	0.526	0.497	0.370	0.412
Sample	±3 mo.	All	±3 mo.	All	±3 mo.	All
Observations	3,330	6,115	3,460	6,321	3,308	6,109
Adj. R^2	0.219	0.331	0.097	0.084	0.089	0.118
Gregorian month FE	✓	✓	✓	✓	✓	✓
Country-by-Hijri-year FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Notes: This table reports placebo estimates of the Ramadan effect on non-Muslim respondents living in the same 23 Muslim-majority countries used in the main analysis. The sample consists of non-Muslim respondents from the World Values Survey (2001–2022). Because non-Muslims living in Muslim-majority countries do not observe Ramadan but share the same fieldwork timing, country-wave composition, and broader societal context as the Muslim sample, the Ramadan indicator should have no effect on individual-level religiosity or political engagement if the main results documented in Table 6 operate through individual religious observance rather than country-level fieldwork artifacts. Columns (1)–(2) use a binary indicator for high-intensity prayer (praying several times a day or once a day and zero otherwise). Columns (3)–(4) use a binary indicator for political interest (reporting being "very interested" or "somewhat interested"). Columns (5)–(6) use a binary indicator for demonstration willingness (reporting having attended or willingness to attend lawful peaceful demonstrations). Odd-numbered columns restrict the sample to interviews conducted in the seven Hijri months centered on Ramadan; even-numbered columns use the full twelve-month sample. All specifications include country-by-Hijri-year and Gregorian month fixed effects and the full demographic control set: gender, age, age-squared, marital status, number of children, education, employment status, income, and self-reported importance of religion. Outcome mean reports the baseline average of the dependent variable. Robust standard errors are in parentheses, clustered at the country level. Significance levels are denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.9: The Relative Effects of Ramadan on Civilian Protest Activity (Months 6–12)

	Cross-Country (ACLED)			Afghanistan (SIGACTS)	
	log(Peaceful Protests + 1)			log(Demonstrations + 1)	
	(1)	(2)	(3)	(4)	(5)
Ramadan	-0.056**	0.042**	0.060	-0.036***	-0.025**
	(0.024)	(0.019)	(0.042)	(0.013)	(0.009)
Ramadan × % Muslim		-0.094***			
		(0.035)			
Ramadan × >75% Muslim			-0.125**		
			(0.049)		
Ramadan × 50–75% Muslim			-0.049		
			(0.076)		
Ramadan × 25–50% Muslim			0.046		
			(0.053)		
Ramadan × 1–25% Muslim			-0.056		
			(0.045)		
Post-Iftar					-0.047***
					(0.013)
Ramadan × Post-Iftar					0.018
					(0.012)
Outcome mean	7.384	4.185	4.185	0.277	0.123
Sample	Muslim	All	All	Afghanistan	Afghanistan
Observations	2,646	9,072	9,072	3,094	6,188
Gregorian month FE	✓	✓	✓	✓	✓
Country-by-Hijri-year FE	✓	✓	✓		
Province-by-Hijri-year FE				✓	✓

Notes: This table re-estimates the effect of Ramadan on civilian protest activity, restricting the comparison window to the three Hijri months preceding and following Ramadan (Hijri months 6–12). Columns 1–3 use the ACLED dataset for 48 African countries (1997–2023). The outcome is the logarithm of peaceful protests plus one at the country-Hijri-month level, where ACLED defines peaceful protests as demonstrations in which participants do not engage in violence or property destruction and are not met with force or intervention. Column 1 restricts the sample to 14 countries with a Muslim population share above 75%. Columns 2 and 3 use the full sample, interacting the Ramadan indicator with the continuous Muslim population share (column 2) and with discrete share categories (column 3); the baseline category in column 3 is countries with less than 1% Muslim population. Columns 4 and 5 use the SIGACTS dataset for Afghan provinces (2002–2015). The outcome is the logarithm of demonstration events plus one at the province-Hijri-month level (column 4) and at the province-Hijri-month-shift level (column 5), where each province-month is split into pre-iftar (dawn to sunset) and post-iftar (sunset to dawn) windows. In column 5, the Ramadan main effect captures the pre-iftar (fasting-period) differential and the Ramadan × Post-Iftar interaction measures the additional reallocation toward post-iftar hours during Ramadan; the total post-iftar Ramadan effect is the sum of the two coefficients. All specifications include Gregorian month fixed effects. Columns 1–3 include country-by-Hijri-year fixed effects and columns 4–5 include province-by-Hijri-year fixed effects. Outcome mean reports the average level of the dependent variable in the estimation sample. Robust standard errors are in parentheses, clustered at the country level in columns 1–3 and at the province level in columns 4–5 (34 provinces). Significance levels: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.10: The *al-Naba* corpus and section-level content measures

			Mean (SD), 0–100 scale	
Section	Period	*N*	Devotional emphasis	Sacralization
Feature essays	Non-Ramadan	274	50.1 (31.6)	28.0 (26.4)
	Ramadan	28	78.1 (26.8)	49.1 (34.5)
Editorials	Non-Ramadan	365	13.6 (13.8)	40.4 (26.3)
	Ramadan	33	19.5 (27.2)	51.6 (28.1)
Operational news	Non-Ramadan	487	13.9 (10.6)	51.1 (23.4)
	Ramadan	46	21.4 (18.8)	55.3 (22.8)

Notes. The sample comprises 533 issues of the Islamic State's weekly *al-Naba*, spanning 22 December 2015 through 16 April 2026, of which 46 fall during Ramadan. Each issue is segmented into sections; the table reports the three running-prose section types after dropping sections with fewer than 500 extracted characters. *N* is the number of scored sections in each cell. Cells report the mean and, in parentheses, the standard deviation of each GABRIEL construct, rated on a 0–100 scale (Appendix A). Feature-essay frequency is flat across the Hijri calendar, ranging from 21 to 30 essays per month with 28 in Ramadan, so the Ramadan contrast in devotional emphasis reflects content rather than essay supply.

Table A.11: Effect of Ramadan on Civilian Targeting

	UCDP One-Sided Violence				GTD: Attacks on Private Citizens			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ramadan	0.027***	0.000	0.017	0.051***	0.015**	0.007	0.009	0.050**
	(0.009)	(0.008)	(0.011)	(0.016)	(0.006)	(0.004)	(0.006)	(0.020)
Group ideology	Religious	Secular	Religious	Religious	Religious	Secular	Religious	Religious
Group sample	All groups	All groups	Excl. IS	IS only	All groups	All groups	Excl. IS	IS only
Outcome mean (levels)	0.595	0.118	0.351	0.800	0.666	0.096	0.450	1.025
Observations	11,016	11,016	9,384	4,080	18,120	18,120	18,120	3,806
Countries	27	27	23	17	30	30	30	22
Gregorian month FE	✓	✓	✓	✓	✓	✓	✓	✓
Country-by-Hijri-year FE	✓	✓	✓	✓	✓	✓	✓	✓

Notes: This table estimates the effect of Ramadan on civilian-directed violence, in contrast to the state-directed conflict of Table 2. The outcome is the logarithm of civilian-targeting events plus one at the country-Hijri-month level. Columns 1–4 use UCDP one-sided violence, in which an organized non-state group deliberately kills civilians, over 1989–2022; columns 5–8 use attacks on private citizens (GTD target type 14) over 1970–2020. Perpetrating groups are classified as Religious or Secular-nationalist following the scheme in Appendix C. Columns 1, 2, 5, and 6 use the full set of classified groups; columns 3 and 7 exclude the Islamic State; columns 4 and 8 retain the Islamic State alone. Secular-nationalist estimates are reported only for the full sample, as neither the Islamic-State-excluded nor the Islamic-State-only split applies to secular groups. The country counts fall across the religious columns because the samples restrict to Muslim-majority countries in which the relevant groups are active: dropping the Islamic State removes countries where it is the only classified religious perpetrator (27 to 23 in UCDP), and the Islamic-State-only panel retains only the countries in which it operates (17 in UCDP, 22 in GTD). GTD counts exceed UCDP counts because GTD records attacks meeting a civilian-directed terrorism definition without UCDP's 25-death annual inclusion threshold, and because GTD names a broader set of perpetrators; the GTD panel drops the missing 1993 database year and groups responsible for fewer than five incidents, and incidents attributed to groups of unknown ideology are excluded. Appendix D details the construction of both panels. All specifications include Gregorian month and country-by-Hijri-year fixed effects and restrict to Muslim-majority countries. Outcome mean (levels) reports the average level of the dependent variable in the estimation sample. Robust standard errors clustered at the country level are in parentheses. Significance levels: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.12: Anticipation, Displacement, and the Uniqueness of Ramadan

	Armed Conflict (UCDP)			Demonstrations (ACLED)		
	(1)	(2)	(3)	(4)	(5)	(6)
Ramadan	0.037***	0.038***	0.040***	-0.069**	-0.080**	-0.080*
	(0.012)	(0.013)	(0.014)	(0.031)	(0.034)	(0.038)
Sha'ban (1-month lead)		0.026**			-0.032	
		(0.012)			(0.029)	
Pre-Ramadan (2-month window)			0.026**			0.012
			(0.010)			(0.028)
Shawwal (1-month lag)		-0.012			-0.081**	
		(0.015)			(0.028)	
Post-Ramadan (2-month window)			-0.006			-0.072**
			(0.014)			(0.024)
Specification	Baseline	Triple	Pooled	Baseline	Triple	Pooled
Outcome mean (levels)	5.046	5.046	5.046	4.215	4.215	4.215
Observations	12648	12648	12648	4536	4536	4536
Gregorian month FE	✓	✓	✓	✓	✓	✓
Country-by-Hijri-year FE	✓	✓	✓	✓	✓	✓

Notes: This table reports leads/lags specifications that test whether the Ramadan effect reflects strategic anticipation, intertemporal displacement, or a generalized Hijri-calendar pattern, rather than within-Ramadan religious mobilization. Columns (1)–(3) use the log-transformed number of state-based armed conflict events plus one as the dependent variable, drawing on UCDP-GED data for 31 Muslim-majority countries (1989–2022). Columns (4)–(6) use the log-transformed number of peaceful protests plus one, drawing on ACLED data for 14 African Muslim-majority countries (1997–2023). All columns restrict the sample to countries with a Muslim population share above 75%. Columns (1) and (4) reproduce the baseline Ramadan-only specification from Equation 4. Columns (2) and (5) add separate indicators for the one-month lead (Sha'ban) and one-month lag (Shawwal). Columns (3) and (6) replace these with pooled indicators for the two-month window before Ramadan (Rajab and Sha'ban) and the two-month window after Ramadan (Shawwal and Dhul-Qa'dah). Under strategic anticipation or intertemporal displacement, the lead and lag coefficients should be negative and of comparable magnitude to the Ramadan coefficient; positive or null leads and lags reject these accounts. All specifications include country-by-Hijri-year and Gregorian month fixed effects. Outcome mean reports the average of the dependent variable in levels. Robust standard errors are in parentheses, clustered at the country level. Significance levels are denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.13: The Effect of Fasting Intensity on Armed Conflicts and Demonstrations

	Dependent Variable: log(armed conflict+1)			Dependent Variable: log(demonstrations+1)		
	(1)	(2)	(3)	(4)	(5)	(6)
RFH	-0.753	0.301	0.262	6.430***	1.008	0.591
	(3.224)	(0.183)	(0.181)	(2.052)	(6.820)	(3.203)
RFH × >75% Muslim			0.477			4.585
			(2.061)			(3.895)
RFH × 50–75% Muslim			-0.682			-13.941***
			(1.309)			(4.791)
RFH × 25–50% Muslim			-1.958*			1.729
			(1.180)			(3.547)
RFH × 1–25% Muslim			-0.077			-2.097
			(0.555)			(4.118)
Outcome Mean (levels)	12.52	0.891	5.636	8.566	2.469	5.730
Sample	Muslim	Non-Muslim	All	Muslim	Non-Muslim	All
Observations	945	770	3,710	378	162	1,296
Country FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Share-by-year FE			✓			✓

Notes: This table tests whether fasting intensity, measured as the logarithm of daily Ramadan fasting hours (RFH), predicts armed conflict or demonstrations. The sample is restricted to the month of Ramadan only, so each country contributes one observation per Hijri year. Fasting hours vary across country-years because Ramadan rotates through Gregorian seasons: the same country experiences longer fasts when Ramadan falls in summer and shorter fasts when it falls in winter. All regressions include controls for annual population levels. Columns (1) and (4) restrict to Muslim-majority countries (Muslim population share above 75%), columns (2) and (5) to non-Muslim countries (below 1%) as a placebo. Columns (3) and (6) pool all countries and interact RFH with indicators for Muslim population share categories; the omitted baseline is countries with less than 1% Muslim population. Country fixed effects absorb time-invariant latitude differences, and Hijri year fixed effects absorb which Gregorian season Ramadan falls in globally. Share-by-year FE controls for the muslim population share bin dummies and their interactions with year dummies. The RFH coefficient is identified from the interaction of latitude and seasonal timing: within a given year, countries at different latitudes experience different fasting durations, and within a given country, fasting duration varies as Ramadan rotates across seasons. Robust standard errors are in parentheses, clustered at the country level (31 countries in column 1, 22 in column 2, 106 in column 3, 14 in column 4, 6 in column 5, and 48 in column 6). Significance levels are denoted by * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix B

B1. Aggression Attribution

This appendix documents the construction of the aggressor-attribution variable used in Section 5.1: the UCDP GED sample and the underlying source text, the GABRIEL-based classification of each event's responsible party, the exact label definitions and instructions submitted to the model, the validation exercises, and the descriptive composition of the classified sample. The complete classification pipeline is in the replication package.

Source and sample

The conflict data are the event-level records of the UCDP Georeferenced Event Dataset (GED) [version/citation], restricted to the estimation sample described in the data section. Each event names the two parties to the dyad in the `side_a` and `side_b` fields and summarizes the incident in a free-text `source_article` field. In the UCDP convention Side A is the government or state actor and Side B is the non-state armed group; I preserve this assignment throughout, so that a Side A label denotes a government-initiated event and a Side B label a rebel-initiated one. The sample contains 156,685 events. An event is sent to the classifier only if its `source_article` field is non-empty and not equal to the literal aggregation placeholder (`"AGGREGATION"`); the roughly 1,390 events that fail this test carry no usable narrative and are assigned `Neutral` automatically without reaching the language model. Each remaining event is classified individually.

The classification task

I assign a responsible party to each event with GABRIEL (Asirvatham et al., 2026), the same large-language-model framework used for the devotional-emphasis measure in Appendix B2, here invoking its classification routine (`classify`) rather than its rating routine. For each event the model receives a single text block that combines the two party names with the incident description and returns exactly one of three labels, `Side A`, `Side B`, or `Neutral`, together with a probability for each ([`gpt-5-mini`], a single run; see the replication package for the exact model string and decoding settings). The assigned label is the highest-probability label, and I retain the maximum label probability as a classification-confidence score. Following Asirvatham et al. (2026), the routine reads the model's probabilities over the label tokens rather than a free-form generation, so the assignment is deterministic and reproducible. I map the labels to numeric codes (Side A $= 1$, Side B $= 2$, Neutral $= 0$) and merge them back to the full event panel, preserving the auto-assigned `Neutral` for the events withheld above.

The instructions make `Neutral` a deliberately conservative default. The model is told to label an event `Neutral` whenever no clear aggressor can be determined or both sides engaged in mutual combat, and to default to `Neutral` when in doubt. The label definitions identify the party that initiated or was responsible for the violence rather than strictly the party that struck first, and they instruct the model, where a report records casualties on one side without naming an attacker, to infer the opposing side as the responsible party. After classification, `Neutral` events constitute 57% of the sample and are dropped from the aggressor regressions; the remaining 43% divide into 26% government-initiated (Side A) and 17% rebel-initiated (Side B).

Prompt and label definitions

The label definitions and additional instructions submitted to GABRIEL's `classify` routine are reproduced verbatim:

```
labels:
"Side A":  "Side A initiated or is responsible for the violence described in
the event"
"Side B":  "Side B initiated or is responsible for the violence described in
the event"
"Neutral":  "No clear aggressor can be determined, or both sides engaged in
mutual combat"

additional instructions:
Determine which side initiated the violence based on the event description.
If the description explicitly states or strongly implies one side attacked,
classify that side as aggressor.  If the description lists casualties of one
side without attribution, infer the opposite side as the aggressor.  If both
sides engaged in mutual combat (e.g., 'clashes between'), classify as Neutral.
When in doubt, classify as Neutral.
```

Each event is presented to the model as a single text block combining the two party names with the incident description:

```
Side A: {side_a}
Side B: {side_b}
Event:  {source_article}
```

GABRIEL embeds the label definitions, the additional instructions, and this text in its standard classification template, which instructs the model to assign the passage to exactly one label and to report a probability for each. The complete template, including the decoding settings, is documented in Asirvatham et al. (2026) and reproduced in the replication package. Table A.6 reproduces representative event descriptions alongside their assigned labels for each of the three categories.

Validation

I benchmark the classifier against human coding. I hand-code a random sample of 1000 events for the responsible party, reading only the source description and blind to the model's label, and compare these codes against the GABRIEL assignments. Restricting to events a human coder can adjudicate, GABRIEL and the human agree on the aggressor in nearly 100% of cases, and the model's `Neutral` rate tracks the human "cannot determine" rate. The aggressor regressions are robust to restricting the sample to high-confidence classifications and to re-classifying the same descriptions with a standard zero-shot prompt through the OpenAI API ([`gpt-4o-mini`]) in place of GABRIEL's probability-based routine. I do not benchmark against the Global Terrorism Database cross-reference of Gassebner et al. (2023), which recovers only the subset of events meeting the GTD's narrower terrorism definition and miscodes conventional rebel-initiated engagements.

Limitations

Three caveats bound the interpretation. First, the source descriptions are drawn from media and agency reporting and inherit any reporting bias in who is named as the attacker; unlike the within-issue placebo in Appendix B2, no such design is available here, so I read the aggressor split as evidence on the locus of escalation rather than as a bias-free measure of initiation. Second, the classifier identifies the party responsible for the violence rather than strictly the party that moved first, and where a report gives casualties without naming an attacker it infers the opposing side as responsible; this inference is reasonable for most incident reports but can misattribute events in which the initiating side itself sustained the reported casualties, and such cases bias against detecting rebel-initiated escalation, so I read the headline split as conservative. Third, the language-model label is measured with error; I mitigate this with the

conservative `Neutral` default and the human validation above, and I confirm that the headline Ramadan estimates are unchanged under the alternative classifier and the high-confidence subsample.

B.2 The *al-Naba* Corpus

This appendix documents the construction of the *al-Naba* corpus, the segmentation of each issue into sections, the GABRIEL-based devotional-emphasis measure, the estimating equation, the validation exercises, and the descriptive statistics. The complete extraction and scoring pipeline is in the replication package.

Source and corpus

al-Naba ("the News") is the Islamic State's flagship Arabic-language weekly, issued by its central media office since late 2015. I obtain every issue from the primary-source archive maintained by Zelin (2026), yielding 534 issues (numbers 10 through 543) released between December 2015 and April 2026, of which 46 fall during Ramadan. Issues are distributed as Arabic-language PDFs of roughly eight to twelve pages. I extract the text layer of each PDF with the `PyMuPDF` library and apply standard Arabic orthographic normalization, unifying alif and ya variants and stripping elongation and diacritics for matching while retaining the raw text for scoring. Each issue's masthead carries its Hijri release date, which I convert to and from the Gregorian calendar with the `hijridate` package and cross-check against an independent converter; the Ramadan indicator equals one for issues dated to the ninth Hijri month. One issue (no. 346) is distributed as a scanned image with no text layer and is dropped; throughout I retain only sections with at least 500 extracted characters, which removes this issue and a handful of near-empty fragments. To confirm the text layer is faithful, I compare the extracted characters against a raw re-extraction for every page: the median capture rate is 1.00 and never falls below 0.975, the only systematic gap being text rendered inside raster infographics, which the section analysis does not use.

Issue structure and section segmentation

A typical issue follows a stable template: a front-page lead, a signed editorial, one or more feature essays (*maqalat*) on doctrine, history, or governance, several pages of operational news reporting the week's attacks by province, a weekly statistical infographic (*hasad*) tallying claimed operations, and a back-page devotional panel. I segment each issue into these components with a content-based classifier that partitions the extracted text into blocks and assigns each block to a section type using competing lexical signals: the editorial is identified by its masthead heading or, failing that, by position and register; the remaining prose is sorted into feature essays and operational news. The analysis uses the three running-prose sections, editorials, feature essays, and operational news, and discards the infographic and back panel, which are not continuous text. After the 500-character filter the corpus contains 1232 sections: 398 editorials, 302 feature essays, and 532 operational sections. Editorials are present in 74.5% of issues and feature essays in 56.6%; operational news appears in nearly all. The segmentation is heuristic. I verify it by manual inspection of a random sample of issues, and the identifying contrast below is within-issue, so any classifier error that is symmetric across the Hijri calendar cannot generate the Ramadan pattern.

The devotional-emphasis measure

I score section content with GABRIEL (Asirvatham et al., 2026), the same large-language-model rating framework used for aggressor attribution, here invoking its rating routine rather than its classification routine. For each section, GABRIEL submits the full text together with

the attribute definitions and a fixed rubric to the language model ([`gpt-5-mini`]; see the replication package for the exact model string and decoding settings), which returns an integer from 0 to 100 for each attribute. All attributes are scored in a single call per section, and I take one rating per section. The framework preserves each section's covariates, issue number, Hijri date, and section type, alongside the scores.

My primary construct is *devotional and ritual emphasis*, the extent to which a section foregrounds personal worship rather than combat or political argument. I define the construct in deliberately general terms and include no cue tied to the treatment: the definition names no month, no date, and no historical battle, so the rater cannot infer Ramadan from the prompt and inflate the score mechanically. I additionally score another construct that I report for transparency here but do not use as the headline measure, *sacralization of the present moment*; the full definitions appear below.

A note on the unit of analysis motivates the section-level design. Scoring whole issues fails by construction. *al-Naba* is uniformly militant prose, so an attribute such as religious justification of violence saturates near the ceiling and carries no usable variance, and the Ramadan offensive mechanically loads each issue with additional operational reporting, which dilutes any issue-level average of religious content and pushes it in the wrong direction. Measuring at the section level isolates the discursive content, where doctrine is articulated, from the operational reporting that serves as a within-issue placebo: a genuine doctrinal reorientation should surface in the feature essays, not in factual battle reports, whose register is fixed across the calendar. I report the whole-issue null and the ceiling-bound constructs in the descriptive table so that the section-level design is transparent rather than chosen on the result.

Prompt and attribute definitions

The three attribute definitions submitted to GABRIEL are reproduced verbatim:

```
"devotional and ritual emphasis": "How strongly the text foregrounds personal
acts of worship such as fasting, night prayer, Quran recitation, supplication,
or spiritual self-purification, as opposed to combat operations or political
argument."
```

```
"sacralization of the present moment": "How strongly the text presents the
current period as a specially blessed or rewarding time for striving, based
on the text's own argument rather than any date it reports."
```

GABRIEL embeds these definitions in its standard rating template, which instructs the model to read the full passage start to finish, rate each attribute independently on a 0–100 integer scale using the full range, draw no cross-attribute inference, and return the ratings as JSON. The complete template is reproduced in the replication package and documented in Asirvatham et al. (2026).

Appendix C

This appendix lists the 139 organized rebel groups in the sample with their assigned ideological category and a brief justification for each, and documents the procedure used to assign them to one of two categories: religious ideological or secular-nationalist.

Decision criteria. The dividing line between the two categories is religious identity. *Religious identity* is present when the founding charter, recruitment base, or organizational rhetoric explicitly treats Islamic identity as constitutive of group membership, beyond the incidental fact that the population from which fighters are drawn is Muslim. Groups satisfying this criterion are coded as religious; groups failing it, whose objectives are ethno-nationalist, separatist, Marxist-Leninist, or factional and for which religion plays no constitutive role, are coded as secular-nationalist. The classification rests on stated objectives and foundational documents rather than tactical behavior alone, since organizationally similar operational profiles can arise from very different ideological bases.

The religious category is internally heterogeneous, and I record a second dimension to characterize that variation. *Doctrinal mandate for offensive warfare* is present when a group's principal stated objective is the establishment of religious governance, whether sharia rule, an Islamic state, or a caliphate, and the group frames armed struggle itself as religiously obligatory rather than as an instrumental means to a political end. Groups with a strong religious identity but more territorially bounded aims, for which religion supplies cohesion, recruitment, and external solidarity rather than the doctrinal justification for combat, satisfy religious identity without this mandate. The relevant theoretical condition for the Ramadan mechanism is access to the doctrinal repertoire that recasts combat as worship, which the religious category as a whole possesses; the doctrinal-mandate dimension orders groups within that category from its most doctrinally committed members to its more territorial ones, and motivates the strict-sample robustness check reported in the main text.

The boundary with secular-nationalist groups is rarely ambiguous. The internal variation within the religious category is, by contrast, occasionally contested for individual groups. Where a group's placement along the doctrinal-mandate dimension is genuinely unclear, two pieces of behavioral evidence are informative: known operational alliances with secular factions, and formal participation in established state governance structures. Both sit uneasily with a strict doctrinal mandate for offensive religious warfare, since either would require subordinating religious-governance objectives to political pragmatism, and both therefore place a group toward the more territorial end of the religious category. Neither, however, removes a group from the religious category, since religious identity can remain constitutive even where the doctrinal mandate is weak or contested.

Sources. Classification draws on three layers of evidence. The UCDP Actor Dataset (Brosché and Sundberg, 2024) provides the canonical organizational identifier used throughout the conflict data. The Mapping Militants Project at Stanford's Center for International Security and Cooperation (Crenshaw and Robinson, 2025) provides standardized profiles of major armed organizations, including founding ideology, organizational lineage, and primary recruitment networks. Where these sources are silent, ambiguous, or contested, I consult the group's own founding charter or manifesto and contemporaneous reporting.

Coding procedure. Each group was evaluated against the religious-identity criterion: a group failing it is classified as secular-nationalist, and a group satisfying it is classified as religious. For religious groups, I additionally record whether the doctrinal mandate for offensive warfare is present, a designation that does not affect the two-category assignment used in the main analysis but identifies the doctrinally committed subset used in the strict-sample robustness check.

Religious-Ideological

1. **Afghan Taliban (Taleban)** — Deobandi Islamist movement founded in 1994 in Kandahar; established the Islamic Emirate of Afghanistan in 1996 and again in 2021. Primary stated objective is establishing governance based on sharia under the authority of an Amir al-Mu'minin (Commander of the Faithful). The group's founding charter declares that sovereignty belongs only to God and designates sharia as the sole source of legislation. Ideology rooted in Hanafi jurisprudence and the Deobandi tradition; armed jihad is invoked as an obligatory religious duty. The ideology of the Taliban is considered a shift from traditional Islamist views held by anti-Soviet mujahedeen fighters in the 1980s and early 1990s. It can be characterized as a combination of strict anti-modern Pashtun tribal ideology mixed with certain radicalized Deobandi interpretations of Islam. The UN Security Council grouped the Taliban with Al-Qaeda.

2. **Tehrik-i-Taliban Pakistan (TTP)** — Deobandi jihadist umbrella organization formed in December 2007 from approximately 40 militant factions in Pakistan's Federally Administered Tribal Areas (FATA). Stated objectives include enforcing a strict Deobandi interpretation of sharia throughout Pakistan and ultimately establishing an Islamic caliphate. The group explicitly frames its armed struggle as defensive jihad and seeks to replace Pakistan's secular constitution with religious law. The TTP claims that its jihad against the Pakistani government is an act of self-defense against an apostate and puppet regime of the United States.

3. **TTP – Tariq Afridi faction (TTP - TA)** — Splinter faction of the TTP operating in Pakistan's tribal regions, retaining the parent organization's ideological orientation. Same doctrinal basis as the TTP: enforcement of sharia and armed jihad against the Pakistani state on explicitly religious grounds.

4. **Islamic Movement of Uzbekistan (IMU)** — Islamist militant organization co-founded in 1998 by Tahir Yuldashev and Juma Namangani in Afghanistan. Declared jihad to overthrow the secular government of Uzbekistan and establish an Islamic state governed by sharia. Later expanded its goal to the creation of a caliphate across all of "Turkestan" (Central Asia from the Caspian Sea to western China). Closely affiliated with al-Qaeda; received substantial financial backing from Osama bin Laden and fought alongside the Taliban.

5. **Jamaat-ul-Ahrar (JuA)** — Splinter faction that broke from the TTP in August 2014, merging elements of TTP's Mohmand Agency branch with Ahrar-ul-Hind. Retained the TTP's core objective of imposing sharia in Pakistan. Its founding emir, Omar Khalid Khorasani, explicitly called for overthrowing the Pakistani government, seizing its nuclear weapons, and waging jihad until a global caliphate is established. The group pledged to continue attacks until sharia law was implemented nationwide.

6. **Lashkar-e-Islam (LeI)** — Deobandi militant group founded in 2004 in Pakistan's Khyber Agency (now Khyber District) by Mufti Munir Shakir. Established with the explicit purpose of enforcing strict Deobandi sharia in Khyber Agency. Under the subsequent leadership of Mangal Bagh Afridi, the group set up parallel Islamic courts, mandated mosque attendance, imposed Islamic dress codes, and banned activities it deemed un-Islamic. LeI only accepted sharia as legitimate law and refused to recognize elected Pakistani officials. Before 2008, LeI was primarily a religious reformist organization. After Mangal Bagh assumed leadership, LeI sought to gain extensive control over the Khyber District and the Khyber Pass. During this period, LeI began conducting more suicide and violent attacks against members of the Pakistani state. Since 2014, this goal has largely been com-

promised because of LeI's relocation to Afghanistan. However, LeI still launches attacks and raises funds from Afghanistan with the hope of returning to the Khyber District.

7. **Ansar al-Islam (Jama'at Ansar al-Islam)** — Kurdish Salafist-jihadist group formed in December 2001 in Iraqi Kurdistan from the merger of Jund al-Islam and a splinter faction of the Islamic Movement of Kurdistan. Founded with the stated objective of expelling non-Muslim influences from Kurdistan and governing all territory under strict sharia. Established an "Islamic Emirate of Kurdistan" where it implemented Taliban-style governance: barring women from education and employment, banning music and television, and threatening amputation, flogging, and stoning for religious offenses. Funded by al-Qaeda and closely affiliated with its network.

8. **Ittihad-i Islami (High Council of Afghanistan Islamic Emirate)** — Islamic Union for the Liberation of Afghanistan, a Wahhabist mujahideen faction founded in 1981 by Abdul Rasul Sayyaf. The only major Afghan mujahideen party to embrace Wahhabi theology explicitly and in its entirety. Sayyaf, a Saudi-trained theologian with an MA from Al-Azhar University, maintained close ties to the Saudi religious establishment and to Osama bin Laden. The organization was strongly committed to sharia governance and, in the post-Taliban era, secured control over parts of Afghanistan's judiciary to advance that agenda.

9. **Forces of Mullo Abdullo** — Armed faction led by Abdullo Rahimov (known as Mullo Abdullo), a veteran Islamist field commander of the UTO during Tajikistan's 1992–1997 civil war. Mullo Abdullo rejected the 1997 peace agreement and fled to Afghanistan, where he sheltered with the Taliban and maintained links to the Islamic Movement of Uzbekistan. He returned to Tajikistan in 2009 with a multinational band of insurgents and proclaimed jihad against the Rahmon government. His forces carried out a major ambush in the Rasht Valley in September 2010 that killed at least 28 Tajik military personnel. Tajik authorities identified him as an al-Qaeda-linked commander.

10. **East Turkestan Islamic Movement (ETIM)** — Uyghur jihadist organization founded in 1997 by Hasan Mahsum in Xinjiang, China; also known as the Turkistan Islamic Party (TIP). The group's stated objective is the creation of an independent Islamic state of "East Turkestan" governed by sharia. Since its establishment, ETIM has maintained close organizational ties with al-Qaeda and the Taliban, with its leader Abdul Haq reportedly serving on al-Qaeda's shura council from 2005. The group relocated its headquarters to Taliban-controlled Kabul in 1998, trained fighters in al-Qaeda camps in Afghanistan, and later deployed several thousand fighters to Syria's civil war under the Turkistan Islamic Party banner. Its propaganda calls explicitly for armed jihad against the Chinese state, framing the struggle in religious terms against "atheist" occupation.

11. **Forces of the Caucasus Emirate (Imirat Kavkaz)** — North Caucasus jihadist umbrella organization founded in October 2007 by Chechen militant leader Doku Umarov. Umarov's declaration of the Caucasus Emirate marked a decisive shift from Chechen separatist nationalism toward a transnational jihadist agenda. The group's stated objective was the establishment of an Islamic state governed by sharia across the entire North Caucasus, encompassing Chechnya, Dagestan, Ingushetia, Kabardino-Balkaria, and other republics. Umarov explicitly rejected the secular nationalist goals of the earlier Chechen independence movement and declared armed jihad against Russia as a religious obligation. The organization conducted suicide bombings against civilian targets in Moscow and elsewhere, and was designated a terrorist organization by the United States, the United Nations, and Russia.

12. **Islamic State (IS)** — Salafi-jihadist organization that emerged from al-Qaeda in Iraq (founded 2004 by Abu Musab al-Zarqawi) and declared a global caliphate in June 2014 under Abu Bakr al-Baghdadi. The group's central objective is the establishment and expansion of a caliphate governed by a literalist interpretation of sharia. The declaration of the caliphate explicitly invoked religious authority, claiming sovereignty over all Muslims worldwide and demanding their allegiance. IS implemented comprehensive sharia governance in territories it controlled across Iraq and Syria, including religious courts, enforcement of hudud punishments, and systematic persecution of religious minorities. The group frames its armed struggle as an obligatory religious duty incumbent upon all Muslims.

13. **Al-Qaeda** — Transnational Salafi-jihadist organization founded in 1988 by Osama bin Laden and Abdullah Azzam in Peshawar, Pakistan. Al-Qaeda's stated objectives center on a global armed jihad to expel Western influence from Muslim lands and ultimately establish Islamic governance under sharia across the Muslim world. The group's founding ideology frames armed struggle as an individual religious obligation (fard ayn) for all Muslims. Al-Qaeda's 1998 fatwa explicitly invoked Quranic authority to call for attacks on Americans and their allies worldwide. The organization has served as the ideological and operational nucleus for a network of regional affiliates (AQAP, AQIM, al-Shabaab, JNIM) that share its religious-ideological framework.

14. **Al-Qaeda in the Arabian Peninsula (AQAP)** — Regional al-Qaeda affiliate formed in January 2009 from the merger of the Saudi and Yemeni branches of al-Qaeda, based in Yemen. AQAP's stated objective is the establishment of Islamic governance under sharia across the Arabian Peninsula and the expulsion of Western influence from Muslim lands. The group operates within al-Qaeda's global jihadist framework, framing armed struggle as a religious obligation. AQAP has pursued both local insurgency against the Yemeni government and transnational attacks, including the 2009 attempted bombing of a U.S. airliner and the 2015 attack on the offices of Charlie Hebdo in Paris.

15. **Al-Qaeda in the Islamic Maghreb (AQIM)** — Regional al-Qaeda affiliate that formally adopted its current name in 2007, evolving from Algeria's Salafist Group for Preaching and Combat (GSPC, founded 1998). AQIM's objectives include the establishment of an Islamic caliphate across North and West Africa and the expulsion of Western presence from Muslim lands. The group pledged allegiance to al-Qaeda's central leadership and adopted its transnational jihadist agenda. AQIM has conducted kidnappings, bombings, and armed attacks across Algeria, Mali, Mauritania, Niger, and Burkina Faso, and its Saharan branch later merged into JNIM.

16. **Armed Islamic Group of Algeria (GIA)** — Salafi-jihadist organization founded in 1992 during the Algerian Civil War following the military's cancellation of the 1991 elections that the Islamic Salvation Front (FIS) was poised to win. The GIA's stated objective was the violent overthrow of the Algerian secular state and the establishment of an Islamic state governed by sharia. The group rejected any political compromise and pursued an uncompromising takfiri ideology, declaring all who did not support its armed struggle to be apostates. The GIA conducted mass civilian massacres, assassinations, and bombings throughout the 1990s.

17. **Takfir wa'l Hijra** — Egyptian jihadist group (formally Jama'at al-Muslimin) founded in the 1960s–1970s by Shukri Mustafa, a former Muslim Brotherhood member radicalized during imprisonment. The group's ideology centers on the concept of takfir (excommunication of other Muslims deemed insufficiently pious) and hijra (withdrawal from corrupt society). It declared Egyptian society to be in a state of pre-Islamic ignorance

(jahiliyya) and sought to establish a purified Islamic community that would eventually overthrow the secular state. The group carried out the 1977 kidnapping and murder of a former Egyptian minister of religious endowments.

18. **Al-Gama'a al-Islamiyya (Egyptian Islamic Group)** — Egyptian Islamist militant organization active primarily from the 1970s through the late 1990s. The group's stated objective was the overthrow of the Egyptian secular state and the establishment of an Islamic state governed by sharia, drawing ideological inspiration from Sayyid Qutb's writings. Al-Gama'a al-Islamiyya carried out attacks on government officials, Coptic Christians, secular intellectuals, and foreign tourists, most notably the 1997 Luxor massacre that killed 62 people. Its spiritual leader, Omar Abdel-Rahman, was convicted for his role in the 1993 World Trade Center bombing conspiracy.

19. **Ansar Bayt al-Maqdis** — Sinai-based jihadist group that emerged around 2011 in the security vacuum following the Egyptian revolution. Initially focused on attacks against the Israel-Egypt gas pipeline and Israeli targets, the group expanded to attack Egyptian military and police forces in the Sinai Peninsula. In November 2014, Ansar Bayt al-Maqdis pledged allegiance to the Islamic State and rebranded as "Wilayat Sinai" (Sinai Province). The group seeks to establish Islamic governance in the Sinai through armed jihad against the Egyptian state, which it considers apostate.

20. **Signed-in-Blood Battalion (al-Muwaqi'un bi-l-Dima)** — AQIM splinter group formed in 2012 by veteran jihadist Mokhtar Belmokhtar after his expulsion from AQIM's leadership. The group operated within a Salafi-jihadist framework and is most known for the January 2013 attack on the In Amenas gas facility in Algeria, which killed 39 foreign hostages. Belmokhtar framed the attack as retaliation for France's military intervention in Mali. The group subsequently merged with MUJAO to form al-Murabitun in August 2013.

21. **Movement for Unity and Jihad in West Africa (MUJAO)** — West African jihadist organization that split from AQIM in 2011. MUJAO's stated objective was to spread jihad across West Africa, particularly targeting what it considered apostate governments and Western interests. The group occupied the city of Gao in northern Mali in 2012, where it imposed strict sharia governance including amputations and public floggings. MUJAO merged with Belmokhtar's Signed-in-Blood Battalion to form al-Murabitun in August 2013.

22. **Al-Murabitun** — Jihadist organization formed in August 2013 through the merger of MUJAO and the Signed-in-Blood Battalion, led by Mokhtar Belmokhtar. Al-Murabitun's stated goal was to spread jihad across North and West Africa. The group reaffirmed its allegiance to al-Qaeda in 2015 and conducted joint operations with AQIM in Mali, Burkina Faso, and Ivory Coast, including the November 2015 Radisson Blu hotel attack in Bamako. In March 2017, al-Murabitun merged with AQIM's Saharan branch and other groups to form Jama'at Nusrat al-Islam wal-Muslimin (JNIM).

23. **Al-Shabaab** — Somali Salafi-jihadist organization that emerged from the militant wing of the Islamic Courts Union following the 2006 Ethiopian intervention, formally pledging allegiance to al-Qaeda in 2012. Al-Shabaab's stated objective is the establishment of an Islamic state governed by sharia across Somalia and the broader Horn of Africa. The group has implemented strict sharia governance in territories under its control, including religious courts, hudud punishments, and bans on music, cinema, and secular education. Al-Shabaab frames its armed struggle as jihad against the "apostate" Somali government and its foreign backers, particularly the African Union Mission in Somalia (AMISOM).

24. **Hizbul Islam** — Somali Islamist alliance formed in 2009 from the merger of several factions, led by Sheikh Hassan Dahir Aweys. Hizbul Islam sought to establish Islamic governance in Somalia and opposed the Transitional Federal Government and the Ethiopian military presence. The group imposed sharia in areas under its control and rejected any political accommodation with the Western-backed government. In December 2010, Hizbul Islam formally merged with al-Shabaab after losing most of its territory to the larger organization.

25. **Ansar Dine** — Malian Salafist Islamist group founded in late 2011 by Iyad ag Ghaly, a veteran Tuareg political and military leader. Ansar Dine's stated objective is the implementation of sharia law across all of Mali, distinguishing it from the secular Tuareg separatist movement (MNLA) with which it briefly cooperated. During the 2012 occupation of northern Mali, the group imposed strict sharia governance in Timbuktu and other cities, destroying Sufi shrines designated as UNESCO World Heritage Sites. In March 2017, Ansar Dine merged into JNIM under ag Ghaly's overall leadership.

26. **Jama'at Nusrat al-Islam wal-Muslimin (JNIM)** — Al-Qaeda-affiliated jihadist umbrella organization formed in March 2017 from the merger of Ansar Dine, AQIM's Saharan branch, al-Murabitun, and the Macina Liberation Front, led by Iyad ag Ghaly. JNIM's stated purpose is to unite jihadist efforts across the Sahel under al-Qaeda's global framework. The group pursues the establishment of sharia governance, the expulsion of French and Western military forces, and the overthrow of what it considers apostate governments in Mali, Burkina Faso, and Niger. JNIM has become the dominant jihadist force in the Sahel, conducting attacks across a vast operational area.

27. **Macina Liberation Front (FLM / Katiba Macina)** — Fulani-dominated jihadist organization founded in 2015 by the radical preacher Amadou Koufa, operating primarily in central Mali. The FLM seeks to impose sharia governance in the Macina region (the historic Fulani heartland of the inner Niger Delta) and draws on the legacy of the 19th-century Macina Empire, a Fulani theocratic state. While the group recruits heavily along Fulani ethnic lines and taps into longstanding grievances over land rights and intercommunal marginalization, it operates under JNIM's al-Qaeda-affiliated umbrella and explicitly frames its struggle in religious terms. Koufa's preaching calls for armed jihad and the rejection of secular state authority.

28. **Jama'atu Ahlis Sunna Lidda'awati wal-Jihad (Boko Haram)** — Nigerian Salafi-jihadist organization founded around 2002 by Mohammed Yusuf in Maiduguri, Borno State. The group's name translates roughly to "People Committed to the Propagation of the Prophet's Teachings and Jihad," and it rejects Western secular education and governance as incompatible with Islam. Following Yusuf's extrajudicial killing in 2009, the group launched a full-scale insurgency under Abubakar Shekau, seeking to establish an Islamic state governed by sharia in northeastern Nigeria and the broader Lake Chad Basin.

29. **Al-Itihaad al-Islamiya (AIAI)** — Somali Salafi-jihadist organization active primarily in the 1990s, seeking to establish an Islamic state in Somalia and unite ethnic Somali territories in the Horn of Africa. Founded in the early 1980s and influenced by Wahhabi ideology, AIAI drew support from Saudi and Gulf donors and operated training camps in Somalia. The group imposed sharia governance in areas under its control, notably in the Gedo and Luuq regions. AIAI was linked to al-Qaeda and was accused of involvement in the 1998 U.S. embassy bombings in East Africa. Following Ethiopian military operations and internal fragmentation, many former AIAI members later joined the Islamic Courts Union and subsequently al-Shabaab.

30. **Islamic Front for Armed Jihad (FIAA / FIDA)** — Islamist militant group that split from Algeria's GIA in 1993 during the Algerian Civil War. The group pursued the establishment of an Islamic state in Algeria through armed jihad, sharing the broader Islamist insurgency's goal of replacing the secular government with sharia-based governance. It operated during the most violent phase of Algeria's civil conflict. The Islamic Front for Armed Jihad (FIDA) was notorious during the Algerian Civil War for a very specific tactical choice: they primarily assassinated secular intellectuals, journalists, feminists, and secular politicians. Their violence was not aimed at capturing territory or redressing an ethnic grievance; it was explicitly designed to purge Algerian society of secular and Western ideological influence to pave the way for a strict Sharia state.

31. **Jama'at al-Islamiyya al-Gama'a (JIG)** — Algerian Islamist militant faction active during the Algerian Civil War. Operating as part of the broader constellation of armed jihadist groups that emerged in the 1990s, the group rejected secular state authority and sought to establish strict Islamic governance in Algeria through armed struggle, framing its violent campaign against the state as a religious mandate rather than a conventional political dispute.

32. **Palestinian Islamic Jihad (PIJ)** — Palestinian Islamist militant organization founded in 1981 as an explicit break from the secular nationalist factions of the PLO. PIJ was established precisely to place Islamic religious mandate at the center of the Palestinian armed struggle, and its founding ideology invokes jihad as a religious obligation rather than a strategic instrument. Unlike Hamas, PIJ maintains no formal political wing or social services apparatus, reflecting an organizational structure oriented almost entirely around religiously framed armed resistance. While its operational theater is territorially bounded to the Palestinian context, its primary justification for violence is doctrinal rather than nationalist, placing it in the religious-ideological category.

33. **Abu Sayyaf Group (ASL)** — A violent jihadist militant network founded in 1991 in the southern Philippines. While operating within the ethno-religious geography of Mindanao, the group split from the broader Moro separatist movement specifically to pursue a hardline transnational jihadist agenda. The group rejected political autonomy in favor of establishing an independent Islamic state governed by strict sharia, maintained deep historical ties to al-Qaeda, and later officially pledged allegiance to the Islamic State.

34. **Jama'atu Ansaril Muslimina Fi Biladis Sudan (Ansaru)** — A Salafi-jihadist militant organization based in northeastern Nigeria that splintered from Boko Haram in 2012. Translating to the "Vanguard for the Protection of Muslims in Black Africa," the group is formally aligned with Al-Qaeda in the Islamic Maghreb (AQIM). Its explicitly stated objectives are the restoration of the historical Islamic Sokoto Caliphate across West Africa and the violently enforced defense of Muslims against Western and secular influence.

35. **Alliance for the Re-liberation of Somalia / Union of Islamic Courts (ARS/UIC)** — Broad Somali Islamist coalition. The Islamic Courts Union rose to power in Mogadishu in 2006 by providing governance and security in the absence of a functioning state, before being ousted by the Ethiopian military intervention in December 2006. The ARS was subsequently formed in Asmara in 2007 as an opposition umbrella. The ICU imposed sharia in areas under its control, but its primary appeal was the restoration of order and Somali self-governance against foreign intervention. The coalition included moderates alongside hardliners, and the ARS later split, with the Djibouti faction under Sheikh Sharif Sheikh Ahmed joining the transitional government and eventually assuming the presidency. Islam provided the organizational framework and legitimacy, but the movement's objectives centered on Somali sovereignty and state-building rather than transnational jihad.

36. **Islamic Salvation Army (AIS)** — Armed wing of Algeria's Islamic Salvation Front (FIS), active during the Algerian Civil War (1992–2002). The AIS was formed after the military annulled the 1991 elections that the FIS was poised to win. Its armed struggle sought to restore the political rights of Algeria's Islamist constituency rather than to impose religious governance through jihad. The AIS targeted primarily military and state installations, maintained a conventional insurgent posture, declared a unilateral ceasefire in 1997, and formally disbanded in 2000 under a government amnesty. Islam defined the movement's identity and constituency, but the armed campaign was driven by political exclusion.

37. **Harakat Sawa'id Misr (HASM)** — Militant group formed in Egypt in 2015 following the military ouster of President Mohamed Morsi. HASM has been linked by Egyptian authorities to the Muslim Brotherhood, though the Brotherhood denies the connection. The group targets Egyptian security officials and government installations, framing its struggle as nationalist resistance against an illegitimate regime. HASM's slogans and communiqués employ nationalist rather than jihadist language, and the group has not articulated goals of establishing sharia governance or a caliphate. Islam serves as an organizational identity rooted in the Brotherhood tradition, but the armed campaign is oriented toward political regime change.

38. **Jondullah (Jundallah)** — Sunni Baloch militant organization founded in 2003 by Abdolmalek Rigi in Iran's Sistan-Baluchestan province. The group's stated objectives center on securing recognition of Baloch cultural, economic, and political rights within Iran. Rigi framed the struggle as a fight for equal citizenship for Sunni Baloch, explicitly denying separatist or radical sectarian aims. However, the group recruited through Sunni religious seminaries and increasingly adopted sectarian rhetoric. Sunni Islam serves as a key component of group identity and a basis for external solidarity, but the underlying grievances are ethnic marginalization and economic underdevelopment of the Baloch population. Not to be confused with the Pakistani organization of the same name, a TTP-linked sectarian group that pledged allegiance to IS in 2014.

39. **Jaish al-Adl** — Successor organization to Jondullah, emerging in 2012 after the execution of Abdolmalek Rigi. Inherited Jondullah's organizational base and membership while adopting a more explicitly Salafi posture. Frames its insurgency as defending Sunni Baloch from Shia state oppression, blending Baloch nationalist objectives with Salafi ideology. Primarily targets Iranian Revolutionary Guards and security personnel through ambushes, assassinations, and kidnappings.

40. **Rohingya Solidarity Organisation (RSO)** — Rohingya insurgent group founded in 1982 following the Tatmadaw's mass displacement operations against the Rohingya in Arakan (Rakhine) State, Myanmar. The RSO's stated objectives center on Rohingya self-determination, restoration of political rights, and return to ancestral lands in Arakan. The group split from the more moderate Rohingya Patriotic Front as its religiously oriented faction and cultivated ties with Islamist networks in Pakistan and Bangladesh, recruiting fighters through religious channels. However, its manifesto frames the armed struggle around ethnic persecution and racial discrimination rather than religious governance, with no stated goal of establishing sharia or an Islamic state. Islam serves as a component of group identity and a basis for external solidarity rather than the primary ideological framework for armed struggle.

41. **United Tajik Opposition (UTO)** — Coalition of Islamist, democratic, nationalist, and regionalist factions formed in 1993 during the Tajikistani Civil War, led by Sayid Abdulloh Nuri. The dominant component was the Islamic Renaissance Party of Tajikistan (IRPT),

which gave the coalition its Islamic identity and facilitated support from Afghan mujahideen. However, the UTO's objectives centered on political power-sharing, regional representation for marginalized Gharmi and Pamiri populations, and opposition to the post-Soviet Kulobi-Khujandi ruling elite. The coalition included secular democrats and Pamiri autonomists alongside Islamists. The IRPT never demanded an Islamic state and transitioned to legal party politics after the 1997 peace agreement, underscoring that religion served primarily as a component of group cohesion rather than the central justification for armed struggle.

42. **Hamas** — Sunni Islamist militant organization and Palestinian nationalist movement founded in 1987. While its founding charter is steeped in Islamic rhetoric and frames the liberation of Palestine as a religious duty, its primary operational objective is territorial and nationalist: the establishment of an independent Palestinian state. Religion serves as a powerful mobilizing identity and ideological framework, but the conflict is fundamentally rooted in territorial disputes rather than a transnational jihadist mandate.

43. **Hezbollah** — Lebanese Shia militant organization and political party founded in 1982 with Iranian Revolutionary Guard support in response to the Israeli invasion of Lebanon. Hezbollah's founding 1985 Open Letter declared allegiance to Ayatollah Khomeini's wilayat al-faqih and called for an Islamic republic in Lebanon, placing its origins squarely in religious-ideological territory. However, the organization underwent substantial ideological evolution, and its 2009 manifesto dropped the Islamic state objective entirely in favor of Lebanese sovereignty, resistance to Israeli occupation, and confessional power-sharing within the existing political system. Hezbollah operates an extensive social services network, holds parliamentary seats, and functions as the primary political representative of Lebanon's Shia community. Its armed struggle is framed around national resistance and defense of the Shia community rather than the imposition of religious governance, and its operational alliances with secular actors such as the Syrian Social Nationalist Party and the Free Patriotic Movement reflect a pragmatic political orientation. Shia religious identity remains central to recruitment, internal cohesion, and external patronage networks, but it operates as a marker of communal solidarity rather than the doctrinal basis for violence.

44. **Hizb-i Islami-yi Afghanistan (Hekmatyar faction)** — Afghan Islamist party founded by Gulbuddin Hekmatyar in 1977 as an offshoot of the Muslim Youth movement at Kabul University. Hizb-i Islami's founding charter explicitly calls for an Islamic state in Afghanistan, and the party received substantial Pakistani ISI and Saudi funding during the anti-Soviet jihad on the basis of its Islamist credentials. However, Hekmatyar's operational behavior consistently prioritized Pashtun factional interests over ideological objectives. During the 1992–1996 civil war, Hizb-i Islami fought other Islamist mujahideen factions with equal or greater intensity than it had fought the Soviets, allied with the secularist Dostum militia against the Islamist Rabbani government, and shelled Kabul in campaigns that followed ethnic-factional fault lines rather than ideological ones. Hekmatyar's eventual reconciliation with the Afghan government in 2016 and entry into electoral politics further suggest that Islamic governance was instrumentally deployed rather than constitutively central. The party's recruitment base drew overwhelmingly from eastern Pashtun (particularly Ghilzai) networks, and its conflicts tracked tribal and regional rivalries as much as ideological commitments.

45. **Hizb-i Islami-yi Afghanistan (Khalis faction)** — Splinter faction established by Yunus Khalis in 1979 following a break with Hekmatyar over leadership and organizational style. Khalis, a religious scholar from Nangarhar, oriented his faction more explicitly around traditional religious authority than Hekmatyar's university-educated cadre, and

the faction maintained closer ties to local ulema networks in eastern Afghanistan. Nevertheless, its operational footprint was heavily concentrated among Pashtun communities in Nangarhar and Paktia provinces, and its armed struggle during the anti-Soviet jihad and subsequent civil war followed regional and tribal patterns consistent with localized power competition rather than a unified project of religious state-building. Several prominent Khalis commanders, including Jalaluddin Haqqani, later defected to the Taliban, suggesting that the faction functioned more as a vehicle for eastern Pashtun mobilization than as a cohesive ideological movement.

46. **Jam'iyyat-i Islami-yi Afghanistan** — Afghan Islamist party founded by Burhanuddin Rabbani in 1971, with Ahmad Shah Massoud as its most prominent military commander. Jam'iyyat's founding ideology drew on the Muslim Brotherhood tradition and called for Islamic governance, and Rabbani served as president of the Islamic State of Afghanistan from 1992 to 1996. However, the party's recruitment and operational base was overwhelmingly Tajik, centered in the Panjshir Valley and northeastern Afghanistan. During the civil war, Jam'iyyat's alliances and enmities tracked ethnic geography with striking consistency: cooperation with Hazara and Uzbek factions against Pashtun-dominated groups, regardless of the latter's Islamic credentials. Massoud's resistance to the Taliban was framed as much around Tajik survival and anti-Pashtun domination as around competing visions of Islamic governance. The party's ethnic character was sufficiently pronounced that its post-2001 political successor, the National Coalition of Afghanistan, operated as a de facto vehicle for Tajik political representation.

47. **Hizb-i Wahdat** — Afghan political-military organization founded in 1989 through the unification of several Hazara Shia factions, led by Abdul Ali Mazari. The party's name translates to "Party of Unity," reflecting its primary objective of consolidating Hazara political representation in a context of severe ethnic marginalization. Hazara communities had faced systematic discrimination under successive Pashtun-dominated governments, and Hizb-i Wahdat's armed struggle centered on securing Hazara political rights, territorial autonomy in the Hazarajat, and protection against ethnic violence. Iran provided patronage on the basis of Shia solidarity, and the party's religious identity was inseparable from its ethnic one, as the Hazara are Afghanistan's largest Shia community. However, Hizb-i Wahdat's conflicts were driven by ethnic survival and power-sharing demands rather than any project of imposing Shia governance, and the party fought Sunni Islamist groups (the Taliban, Hizb-i Islami) and allied with secular or Sunni actors (Dostum's Junbish-i Milli) on the basis of ethnic-strategic calculus.

48. **United Islamic Front for the Salvation of Afghanistan (UIFSA / Northern Alliance)** — Military-political coalition formed in 1996 to resist the Taliban, bringing together Jam'iyyat-i Islami, Hizb-i Wahdat, and Junbish-i Milli-yi Islami under the nominal leadership of Rabbani's government. The coalition's name invoked Islamic unity, and its component factions each carried Islamic credentials of varying degrees. However, the UIFSA's formation was driven entirely by the shared existential threat posed by the Taliban's military advance against non-Pashtun regions, and its internal cohesion derived from ethnic complementarity (Tajik, Hazara, Uzbek) rather than ideological agreement. The coalition included Dostum's Junbish-i Milli, a largely secular Uzbek militia, alongside Shia and Sunni Islamist factions whose theological positions were mutually incompatible. The UIFSA's armed struggle was framed around national sovereignty and resistance to Taliban domination rather than any shared vision of Islamic governance.

49. **Mahaz-i Milli-yi Islami-yi Afghanistan (National Islamic Front)** — Afghan mujahideen party founded by Pir Sayyid Ahmad Gailani in 1978. Gailani, a hereditary Sufi pir of the Qadiriyya order, derived his authority from traditional religious lineage rather than

Islamist ideology, and his political orientation was notably moderate and pro-Western within the mujahideen spectrum. The party advocated for the restoration of the Zahir Shah monarchy and a constitutional system, positioning it closer to nationalist traditionalism than to the Islamist state-building projects of Hizb-i Islami or the Taliban. Its recruitment base drew on Gailani's Sufi network and southern Pashtun tribal affiliations. Islam functioned as a source of traditional authority and communal identity rather than as a programmatic ideology for governance, and Gailani consistently favored negotiated political settlements over maximalist religious objectives.

50. **National Resistance Front (NRF)** — An Afghan military-political alliance formed in 2021 as the de facto successor to the Northern Alliance. Operating primarily out of the Panjshir Valley and led by Ahmad Massoud, the group is structurally an ethno-nationalist resistance movement dominated by ethnic Tajiks. While entirely composed of devout Muslims, its armed struggle is fundamentally oriented toward territorial defense, anti-Taliban resistance, and the establishment of a decentralized, pluralistic Afghan republic, sharply contrasting with the Taliban's theocratic project.

51. **Supreme Council for Islamic Revolution in Iraq (SCIRI)** — An Iraqi Shia political party and militia founded in Iran in 1982. Despite its name, following the 2003 US invasion of Iraq, SCIRI integrated heavily into the newly established Iraqi political system. Its primary objectives shifted from a strict ideological revolution to securing and consolidating the political, territorial, and institutional dominance of Iraq's Shia majority against Sunni and Baathist rivals

52. **al-Mahdi Army** — An Iraqi Shia militia formed in 2003 by the populist cleric Muqtada al-Sadr. While intensely religious in its rhetoric and drawing legitimacy from the Sadr clerical lineage, the militia functioned primarily as a militant Iraqi nationalist and communal defense organization. Its armed struggle was driven by opposition to the US occupation and the defense of impoverished Shia neighborhoods in Baghdad and southern Iraq against Sunni militant groups.

53. **Syrian Insurgents** — A broad, fragmented coalition of armed factions fighting against the Assad regime during the Syrian Civil War. Similar to the United Tajik Opposition (UTO), while the most militarily dominant elements of this umbrella (such as Ahrar al-Sham or HTS) maintain strict Islamist ideologies, the overarching category includes a spectrum of actors—from secular Free Syrian Army defectors to localized defense militias. Across the coalition, Sunni Islamic identity serves as a unifying mechanism against the Alawite-dominated government, but the primary shared objective is contesting political and territorial control of the Syrian state.

54. **Kashmir Insurgents** — A broad umbrella classification encompassing the constellation of armed groups fighting the Indian state in Jammu and Kashmir since 1989. While the coalition includes hardline jihadist factions (like Lashkar-e-Taiba) alongside more secular-leaning liberation fronts (like the JKLF), the conflict is fundamentally driven by the territorial dispute over the Kashmir region. Islamic identity serves as a powerful mobilizing force and a boundary marker against the Hindu-majority Indian state, utilized to pursue either an independent Kashmiri state or integration with Pakistan.

55. **Ansarallah (Houthi movement)** — A Zaydi Shia political and militant movement operating in Yemen. Emerging in the 1990s as a theological revivalist movement to protect Zaydi cultural identity against perceived Sunni/Wahhabi encroachment, it evolved into a powerful insurgent force. While adopting radical religious rhetoric and receiving backing from Iran, its armed struggle is deeply rooted in Yemeni ethno-political dynamics,

primarily seeking territorial control, economic resources, and political dominance within the Yemeni state.

Secular Nationalist

1. **Mujahedin-e Khalq (MEK)** — An Iranian dissident militant organization founded in 1965. Originally rooted in a unique syncretism of Marxist-Leninist ideology and Islamic traditionalism, the group participated in the 1979 revolution but quickly took up arms against the newly established Islamic Republic. Its armed struggle against Tehran is fundamentally political and regime-change oriented, and the organization officially campaigns for a secular, democratic Iranian state.

2. **Popular Front for the Liberation of Palestine - General Command (PFLP-GC)** — A Palestinian nationalist militant organization founded in 1968 by Ahmed Jibril following a split from the main PFLP. The group maintains a strict secular, Marxist-Leninist ideological orientation. While operating within the heavily religiously contested geography of the Levant and receiving state backing from Syria and Iran, its foundational ideology and stated objectives are centered entirely on secular Palestinian nationalism and armed resistance against Israel, devoid of any Islamist state-building mandate.

3. **Kurdistan Workers' Party (PKK)** — A Kurdish militant and political organization founded in 1978 by Abdullah Öcalan. Originating as a strict Marxist-Leninist revolutionary movement, its initial objective was the establishment of an independent, socialist Kurdish state in southeastern Turkey. While its ideology later evolved toward "democratic confederalism," the organization remains staunchly secular. Its armed struggle is driven purely by Kurdish ethno-nationalism and the demand for political autonomy, consistently rejecting religious framing.

4. **Kurdistan Freedom Hawks (TAK)** — A radical Kurdish militant faction that emerged as a splinter group from the PKK. Sharing the secular-nationalist roots of its parent organization, TAK conducts urban terrorism and bombings across Turkey in pursuit of Kurdish ethno-nationalist retaliation against the Turkish state. It operates outside of any religious-ideological framework.

5. **Democratic Union Party (PYD)** — A Kurdish political party and militant organization (via its armed wing, the YPG) operating primarily in northern Syria. As the Syrian affiliate of the PKK's broader transnational network, it adheres to Abdullah Öcalan's secular ideology of democratic confederalism. Its armed conflict against the Syrian government and various jihadist groups (including the Islamic State) is driven by the defense of Kurdish territorial autonomy and the establishment of a secular, decentralized administrative region (Rojava).

6. **Party of Free Life of Kurdistan (PJAK)** — An Iranian Kurdish militant group founded in 2004 as part of the PKK's broader umbrella network. Following the same secular-nationalist and democratic confederalist ideology as the PKK and PYD, the group conducts an armed insurgency against the Iranian government to secure self determination and cultural rights for the Kurdish minority in northwestern Iran, explicitly rejecting the theocratic framework of the Islamic Republic.

7. **Democratic Party of Iranian Kurdistan (KDPI)** — A Kurdish nationalist party and militant group operating in Iran, founded in 1945. As one of the oldest Kurdish political organizations, it maintains a strictly secular and left-leaning orientation. Its armed struggle against both the Pahlavi monarchy and the subsequent Islamic Republic has been driven

entirely by the goal of securing Kurdish autonomy and federalism within a democratic, secular Iran.

8. **Kurdistan Democratic Party (KDP)** — A prominent Iraqi Kurdish political party and paramilitary organization (Peshmerga) founded in 1946 by Mustafa Barzani. Functioning as a secular, traditionalist ethno-nationalist movement, its historical armed struggle against the Iraqi state was waged to achieve Kurdish self-determination, territorial autonomy, and the protection of Kurdish cultural identity, culminating in the establishment of the Kurdistan Region of Iraq.

9. **Patriotic Union of Kurdistan (PUK)** — An Iraqi Kurdish political party and paramilitary organization founded in 1975 by Jalal Talabani following a split from the KDP. The group adopted a more secular, socialist, and progressive ideological platform compared to the traditionalist KDP. Its armed insurgency against the Ba'athist Iraqi regime was fundamentally rooted in Kurdish ethno-nationalism and the pursuit of political autonomy.

10. **Communist Party of Turkey/Marxist-Leninist (TKP-ML)** — A radical Turkish insurgent organization founded in 1972. Adhering strictly to Maoist and Marxist-Leninist ideology, the group's armed struggle is aimed at the violent overthrow of the Turkish state to establish a communist regime. Its motivations and operational framework are entirely secular and rooted in revolutionary class struggle.

11. **Maoist Communist Party (MKP)** — A Turkish revolutionary insurgent group that emerged as a splinter faction from the TKP-ML. The group pursues a hardline Maoist ideological agenda, conducting armed attacks against Turkish state targets with the objective of sparking a communist revolution. It operates completely outside of any religious or ethno-religious parameters.

12. **Peace at Home Council (Yurtta Sulh Konseyi)** — A clandestine faction within the Turkish Armed Forces that orchestrated the violent, failed coup d'état attempt on July 15, 2016. In their official broadcast declaration, the plotters framed their armed takeover as a necessary intervention to restore the secular, democratic, and constitutional order of the Turkish Republic, making their stated ideological justification explicitly secular-nationalist.

13. **Revolutionary People's Liberation Party/Front (DHKP-C)** — A radical Marxist-Leninist militant organization operating in Turkey, founded in 1978 (originally as Revolutionary Left). The group pursues the violent overthrow of the Turkish government to establish a socialist state. It conducts assassinations and bombings motivated purely by secular, anti-imperialist, and communist ideology.

14. **Popular Front for the Liberation of Palestine (PFLP)** — A Palestinian Marxist-Leninist and revolutionary socialist organization founded in 1967 by George Habash. The group's ideology is fundamentally secular, viewing the Israeli-Palestinian conflict through the lens of anti-imperialism and class struggle rather than religious duty. It pursues the establishment of a secular, democratic Palestinian state.

15. **Balochistan Liberation Army (BLA)** — A secular ethno-nationalist militant organization based in the Balochistan region of Pakistan. The group wages an armed insurgency against the Pakistani state to achieve independence for the Baloch people. Its grievances are rooted in the economic exploitation of regional resources and political marginalization, and its ideology explicitly rejects religious framing in favor of secular Baloch nationalism.

16. **Balochistan Liberation Front (BLF)** — A Baloch ethno-nationalist militant group founded in 1964, operating primarily in Pakistan's Balochistan province. With historical roots in Marxist ideology and left-wing nationalism, the organization's armed struggle against the Pakistani state is strictly secular. It seeks an independent Balochistan based on ethnic identity rather than religious affiliation.

17. **Baloch Republican Army (BRA)** — A secular, ethno-nationalist insurgent group in Pakistan's Balochistan province, largely serving as the militant wing of the Baloch Republican Party. Like other Baloch separatist organizations, its armed struggle is driven by demands for ethnic sovereignty, political rights, and control over natural resources, entirely separate from the religious militant networks operating in the same region.

18. **Baloch Raaji Aajoi Sangar (BRAS)** — An operational umbrella organization formed in 2018 to unify the efforts of several secular Baloch ethno-nationalist insurgent groups, including the BLA, BLF, and BRA. The coalition coordinates armed attacks against Pakistani security forces and Chinese infrastructure projects. Its foundational mandate is strictly secular and separatist, consolidating the armed struggle for an independent Baloch state.

19. **Muttahida Qaumi Movement (MQM)** — A secular political party in Pakistan representing the Muhajir community (Urdu-speaking migrants from India). Its armed factions engaged in extensive urban conflict in Karachi to secure political and economic power for Muhajirs, operating strictly along ethnic and secular lines

20. **Purbo Banglar Communist Party (PBCP)** — A clandestine Marxist-Leninist and Maoist insurgent group operating in Bangladesh. The group's armed struggle is driven by revolutionary communist ideology, seeking to overthrow the state through agrarian revolution and class warfare, firmly placing it in the secular-ideological category.

21. **Purbo Banglar Communist Party - Janajuddha (PBCP-J)** — A hardline splinter faction of the PBCP in Bangladesh. It maintains the same secular, Maoist revolutionary ideology as its parent organization, conducting assassinations and extortion to fund its localized class-based armed struggle.

22. **Parbatya Chattagram Jana Samhati Samiti (PCJSS)** — A secular political organization representing the indigenous Jumma people of the Chittagong Hill Tracts in Bangladesh. Its armed wing, the Shanti Bahini, waged a decades-long ethno-nationalist insurgency to secure autonomy, land rights, and cultural preservation against Bengali settlement and state marginalization.

23. **Sudan People's Liberation Movement/Army (SPLM/A)** — The primary secular insurgent movement that fought the Sudanese government during the Second Sudanese Civil War. Founded by John Garang, the group initially pursued a Marxist-oriented vision for a unified, secular, and democratic "New Sudan," vigorously opposing the Khartoum government's imposition of Islamic law (sharia) on the diverse and largely non-Muslim southern population.

24. **Sudan People's Liberation Movement-North (SPLM/A-North)** — The northern branch of the SPLM/A that continued fighting the Sudanese state after the secession of South Sudan in 2011. Operating primarily in the Nuba Mountains and Blue Nile states, it fights against regional marginalization and advocates for a secular, democratic, and decentralized Sudan.

25. **Sudan Liberation Movement/Army (SLM/A)** — A secular, ethno-nationalist rebel group founded in 2002 to fight for the rights of the marginalized non-Arab communities in the

Darfur region of Sudan. It explicitly rejects the Islamist and Arab-nationalist policies of the central government, demanding political representation and economic development.

26. **Sudan Liberation Movement/Army - Minni Minnawi (SLM/A - MM)** — A major splinter faction of the SLM/A, drawing its support predominantly from the Zaghawa ethnic group. While it has occasionally signed peace agreements with the government, its ideological foundation remains rooted in secular Darfuri ethno-nationalism and regional autonomy.

27. **Justice and Equality Movement (JEM)** — A powerful Darfuri rebel group. While its early leadership had historical ties to the Islamist politician Hassan al-Turabi, the organization's armed struggle is overwhelmingly centered on regional equality, Darfuri ethno-nationalist rights, and the overthrow of the Bashir regime. It allied with strictly secular rebel groups, placing its operational focus squarely on regional political objectives rather than a religious mandate.

28. **Sudan Revolutionary Front (SRF)** — A broad alliance formed in 2011 comprising major Sudanese rebel groups, including the SPLM-N, JEM, and various SLM factions. The coalition's unified mandate is entirely secular and political, aiming to overthrow the Islamist regime in Khartoum and establish a democratic, federal state that respects the rights of Sudan's marginalized peripheries.

29. **Darfur Joint Resistance Forces** — An umbrella coalition of Darfuri rebel factions formed to coordinate military operations against Sudanese government forces and allied militias. Its objectives are firmly rooted in the defense of Darfuri communities and secular regional autonomy.

30. **National Democratic Alliance (NDA)** — An umbrella coalition of Sudanese opposition groups formed in 1989 to oppose Omar al-Bashir's Islamist military regime. It brought together the secular SPLM/A with northern political parties, unified by a secular, democratic, and anti-regime political platform.

31. **South Sudan Democratic Movement/Army (SSDM/A)** — A militant group formed in South Sudan shortly before its independence. Driven by ethnic grievances (particularly among the Murle and Shilluk) and opposition to the dominance of the SPLM government, its insurgency was entirely secular and based on localized political and ethnic power struggles.

32. **South Sudan Liberation Movement/Army (SSLM/A)** — A predominantly Nuer rebel militia in South Sudan. Formed in opposition to the Dinka-dominated SPLM/A state apparatus, its armed campaign was driven by secular ethno-nationalist grievances, seeking greater political power and resource distribution for its constituency.

33. **Free Aceh Movement (GAM)** — An ethno-nationalist separatist organization that waged an insurgency against the Indonesian government from 1976 to 2005. Despite Aceh's strong Islamic identity and the eventual implementation of regional sharia law, GAM's foundational ideology under founder Hasan di Tiro was explicitly secular, anti-colonial, and ethno-nationalist. The group's stated objective was independence from perceived Javanese neo-colonialism and the restoration of the historic Acehnese state, consciously rejecting the religious-state objectives of earlier rebellions like Darul Islam.

34. **Free Papua Movement (OPM)** — An umbrella term for the decentralized ethno-nationalist separatist movement in West Papua, Indonesia. Founded in 1965, the movement's armed

factions wage a low-level guerrilla war against the Indonesian state. Their armed struggle is strictly secular and driven by demands for indigenous self-determination, independence, and the cessation of economic exploitation and demographic marginalization by the Indonesian government.

35. **National Transitional Council (NTC)** — The de facto political body and armed coalition formed by anti-Gaddafi forces during the 2011 Libyan Civil War. While functioning as a broad umbrella encompassing various local and Islamist militias, the central leadership of the NTC officially pursued the overthrow of the Gaddafi regime to establish a pluralistic, democratic, and secular civil state, prioritizing national political transition over ideological mandates.

36. **Forces of the House of Representatives (LNA)** — The military coalition, predominantly known as the Libyan National Army (LNA) led by Khalifa Haftar, aligned with the Tobruk-based parliament during the Second Libyan Civil War. The faction's stated objective was to defeat rival Islamist and UN-backed coalitions in Tripoli to unify Libya under a centralized military-backed government. Haftar explicitly framed his military campaigns, such as Operation Dignity, as a secular-nationalist war to eradicate Islamist militias and political Islam from Libya.

37. **Movement of Democratic Forces of Casamance (MFDC)** — A separatist movement operating in the Casamance region of Senegal since 1982. The group's armed insurgency is driven by the ethno-nationalist grievances of the predominantly Diola population, citing economic neglect and cultural marginalization by the northern Wolof-dominated government in Dakar. Its demands for independence are secular and rooted entirely in regional and ethnic identity.

38. **Polisario Front** — A Sahrawi nationalist liberation movement fighting for the independence of Western Sahara from Moroccan control. Originating with strong Marxist-Leninist and anti-colonial influences, the organization is strictly secular. Its armed struggle and diplomatic efforts are dedicated entirely to securing territorial sovereignty and self-determination through the establishment of the Sahrawi Arab Democratic Republic (SADR).

39. **Lord's Resistance Army (LRA)** — A radical syncretic militant group operating across Uganda, South Sudan, the Central African Republic, and the DRC. Founded by Joseph Kony in 1987, the group's foundational objective was the violent overthrow of the Ugandan government to establish a state governed by the biblical Ten Commandments and Acholi mysticism. While lacking a cohesive political manifesto and driven by a rigid, prophetic religious-ideological mandate rather than secular political grievances, the group operates entirely outside the Islamic ideological frameworks that characterize other religiously motivated insurgencies in this dataset.

40. **Junbish-i Milli-yi Islami** — Afghan political and paramilitary organization founded by Abdul Rashid Dostum in 1992. Despite the word "Islami" in its name, it is a staunchly secular, predominantly ethnic Uzbek militia. It fought for secular governance and Uzbek factional power during the Afghan civil wars, allying at different times with both Soviet-backed and Western forces against Islamist factions.

41. **Afghanistan Freedom Front (AFF)** — An anti-Taliban militant group formed in 2022 following the Taliban takeover. Composed largely of former Afghan National Defense and Security Forces (ANDSF) personnel, the group's objectives are secular and nationalist. It aims to overthrow the Taliban's theocratic regime and restore a democratic, constitutional republic.

42. **Republic of Artsakh** — The unrecognized breakaway state (formerly the Nagorno-Karabakh Republic) that fought for independence and integration with Armenia against Azerbaijan. Its armed forces functioned as a conventional military fighting a strictly ethno-nationalist and territorial war, entirely devoid of religious-ideological goals, despite the broader religious differences between the warring populations.

43. **Somali National Movement (SNM)** — A Somali insurgent group founded in 1981, drawing its support almost exclusively from the Isaaq clan. The group waged a secular, ethno-nationalist guerrilla war against the Siad Barre regime, ultimately declaring the independent (though internationally unrecognized) state of Somaliland in 1991.

44. **United Somali Congress / Somali Salvation Alliance (USC/SSA)** — A major military faction in the Somali Civil War, originally founded in 1989 and rooted primarily in the Hawiye clan. Its armed struggle to overthrow Siad Barre and its subsequent factional warfare in Mogadishu were driven strictly by clan-based political and territorial competition.

45. **Somali Reconciliation and Restoration Council (SRRC)** — A coalition of secular, clan-based Somali warlords formed in 2001 (with significant backing from Ethiopia) to oppose the Transitional National Government and emerging Islamist groups. Its objectives were entirely political and factional, seeking power-sharing and territorial control within a decentralized Somali state.

46. **Forces of Khudoberdiyev** — A rebel military faction led by mutinous Tajik warlord Colonel Mahmud Khudoberdiyev. He led secular military uprisings in 1997 and 1998 against the Tajik government, driven by regional factionalism and strict opposition to the integration of Islamist forces (from the United Tajik Opposition) into the national army following the civil war peace accords.

47. **Mouvement Populaire de l'Azawad (MPA)** — A Tuareg rebel organization founded in 1990 in Mali. While its founder, Iyad Ag Ghaly, much later embraced jihadism, the MPA itself operated during the 1990s Tuareg rebellion as a strictly secular, ethno-nationalist movement seeking autonomy and political representation for the marginalized Tuareg people.

48. **Anjouan People's Movement (MPA / Republic of Anjouan)** — A separatist movement that declared the independence of the island of Anjouan from the Comoros in 1997. The armed struggle was driven entirely by localized political and economic grievances against the central government in Moroni, operating without any religious-ideological framework.

49. **Niger Movement for Justice (MNJ)** — A predominantly Tuareg rebel group that waged an insurgency against the government of Niger from 2007 to 2009. The group's objectives were secular and ethno-nationalist, demanding a greater share of the region's uranium wealth, regional development, and political integration for northern nomadic populations.

50. **Coordination of Azawad Movements (CMA)** — A coalition of Tuareg independence and Arab nationalist movements in northern Mali formed in 2014. Serving as the primary secular and ethno-nationalist counterweight to jihadist coalitions like JNIM, the CMA seeks political autonomy and self-determination for the Azawad region, consistently rejecting the imposition of transnational sharia governance.

51. **National Council of Timorese Resistance (CNRT)** — An umbrella organization formed in 1998 representing the East Timorese struggle for independence from Indonesia. Integrating the armed wing FALINTIL with diplomatic and political fronts, the movement was strictly secular, nationalistic, and focused on achieving sovereign statehood and self-determination for East Timor.

52. **Front for the Restoration of Unity and Democracy (FRUD)** — A rebel group in Djibouti that launched an insurgency in 1991. Drawing its support primarily from the Afar ethnic group, the organization fought against the perceived political and economic marginalization by the Issa-dominated central government. Its objectives were strictly secular and focused on ethno-political power-sharing.

53. **Rally of Democratic Forces of Guinea (RFDG)** — A Guinean rebel coalition that launched cross-border attacks from Liberia and Sierra Leone into Guinea in 2000 and 2001. Backed by Liberian President Charles Taylor, the group's armed campaign was a secular, political proxy conflict aimed at destabilizing the government of Lansana Conté, entirely devoid of religious framing.

54. **Syrian Democratic Forces (SDF)** — A multi-ethnic and multi-religious military alliance formed in 2015, dominated by the Kurdish YPG but including Arab, Assyrian, and Turkmen militias. The SDF was the primary ground force fighting the Islamic State in Syria. Its ideology is rooted in secular democratic confederalism, aiming to establish a decentralized, secular, and pluralistic governance model in northeastern Syria.

55. **Patriotic Salvation Movement (MPS)** — A Chadian rebel group formed in 1990 by Idriss Déby. Operating from bases in Sudan, the group launched a successful insurgency to overthrow the dictatorial regime of Hissène Habré. Its foundational objectives and subsequent governance as Chad's ruling party were rooted in secular political control and regional factionalism rather than any religious mandate.

56. **Popular Front for the Liberation of Azawad (FPLA)** — A Tuareg rebel faction active during the 1990s Tuareg rebellion in Mali. Splintering from other groups over strategic differences, the FPLA pursued a strictly secular, ethno-nationalist agenda, fighting for the political and economic rights of the Tuareg population in the northern Azawad region.

57. **Sudan Liberation Forces Alliance (SLFA)** — A rebel coalition operating in the Darfur region of Sudan. Formed by merging several secular Darfuri factions, its armed struggle is driven by ethno-nationalist grievances, seeking regional autonomy, political representation, and an end to the marginalization of Darfur's non-Arab populations by the central government.

58. **Rwandan Secular Militant Factions (RJF)** — An armed faction operating within the context of the Rwandan conflict system. Its armed struggle is driven by secular political objectives, regional grievances, and factional competition for state resources, operating entirely outside of a religious-ideological mandate.

59. **Popular Resistance Committees (PRC)** — A Palestinian militant coalition operating primarily in the Gaza Strip. Formed in 2000 during the Second Intifada, it functions as a cross-ideological umbrella group. While operating alongside Islamist groups, its foundational mandate is rooted in secular Palestinian nationalism and armed resistance against Israel, lacking a specific Islamist state-building agenda.

60. **Popular Front of Tajikistan (PFT)** — A secular, pro-government paramilitary organization active during the Tajikistani Civil War. Composed primarily of Kulyabi and Uzbek

militias, the group fought on behalf of the post-Soviet secular government against the Islamist and regionalist forces of the United Tajik Opposition (UTO), motivated by regional factionalism and the preservation of the secular state apparatus.

61. **United Baloch Army (UBA)** — A secular ethno-nationalist militant group in Pakistan's Balochistan province, formed as a splinter faction from the Balochistan Liberation Army (BLA). The group wages a separatist armed struggle against the Pakistani state, driven entirely by demands for Baloch sovereignty and control over regional resources, distinct from religious militant networks.

62. **Alliance of Tuareg of Niger and Mali for Change (ATNMC)** — A cross-border Tuareg rebel alliance formed to coordinate insurgent activities in both Mali and Niger. The group's objectives were strictly secular and ethno-nationalist, demanding economic development, political integration, and cultural rights for the marginalized nomadic Tuareg populations across the Sahel.

63. **Tigray People's Liberation Front (TPLF)** — An ethno-nationalist paramilitary group and political party in Ethiopia. Rooted in Marxist-Leninist ideology at its founding, the organization pursues secular, ethno-nationalist objectives. Following its ouster from the federal government, its recent armed struggle was driven by demands for Tigrayan regional autonomy and resistance against the central government, entirely outside any religious framework.

64. **OPON Forces** — The Special Purpose Police Unit (OPON) of Azerbaijan. In 1995, this heavily armed state security faction, led by Colonel Rovshan Javadov, engaged in a mutinous armed rebellion against the government of Heydar Aliyev. The conflict was a strictly secular, factional power struggle for control of the Azerbaijani state.

65. **Military Faction (Red Berets)** — An elite airborne commando unit of the Malian army. Following the 2012 military coup by the rival "Green Berets," this faction (loyal to ousted President Amadou Toumani Touré) launched an armed counter-coup attempt in Bamako. The fighting was a secular, internal military factional dispute over state control.

66. **Military Faction (Forces of Shah Nawaz Tanai)** — A mutinous faction of the Afghan communist military led by Defense Minister General Shah Nawaz Tanai, who launched an attempted coup against President Mohammad Najibullah in 1990. The armed uprising was a secular, factional power struggle within the Soviet-backed regime.

67. **Military Faction (Forces of Suret Huseynov)** — A rogue military faction in Azerbaijan led by warlord and army commander Suret Huseynov, who launched a military rebellion in 1993 that ousted President Abulfaz Elchibey. The uprising was an entirely secular, politically motivated military coup.

68. **Presidential Guard (Comoros)** — A mercenary-led military unit, commanded by Bob Denard, that launched an armed takeover of the Comorian state in 1989. Despite its origins as a state security force, it operated during the conflict as an independent, secular military faction driven by political control rather than ideological motives.

69. **Sudan Allied Revolutionary Forces (SARC)** — A rebel coalition operating in the Darfur region. Like other Darfuri groups in this category, its armed struggle against the Sudanese government is driven by secular, ethno-nationalist demands for regional autonomy and an end to systemic marginalization.

70. **Baloch Ittehad** — An ethnic separatist alliance operating in Pakistan's Balochistan province. Its armed struggle is firmly secular and ethno-nationalist, coordinating efforts to achieve an independent Baloch state and control over regional resources.

71. **Council for the Restoration of Arakan (CRA)** — An ethnic Rakhine insurgent group in Myanmar. Operating in Rakhine State, its militant campaign against the central government is driven by secular ethno-nationalist objectives, seeking self-determination and political rights for the Rakhine people.

72. **Front pour la Défense de la République (FDR)** — An armed rebel faction in Burundi. Operating within the context of the Burundian Civil War, the group's mobilization and armed struggle were driven by secular ethno-political grievances and factional competition for state power.

73. **Front de Libération de l'Aïr et de l'Azawad (FLAA)** — A prominent Tuareg rebel organization active during the early 1990s insurgency in Niger. Its armed struggle was strictly secular and ethno-nationalist, demanding political integration, economic development, and autonomy for the marginalized Tuareg populations of the Aïr region.

74. **Front Patriotique de Résistance du Niger (FPRN)** — A rebel faction active in Niger. The group's insurgency was driven by secular political opposition and regional grievances against the central government, entirely devoid of religious-ideological framing.

75. **FRUD-Combattant (FRUD-C)** — A hardline splinter faction of the Front for the Restoration of Unity and Democracy (FRUD) in Djibouti. After the mainstream FRUD signed a peace agreement with the government, this faction continued a secular, ethno-nationalist armed struggle to secure greater political representation for the Afar people.

76. **Forces of Khalifa al-Ghawil** — The armed factions and militias loyal to Khalifa al-Ghawil's National Salvation Government in Tripoli during the Libyan civil war. The conflict with rival governments (like the UN-backed GNA or Haftar's LNA) was a secular political struggle for institutional legitimacy and territorial control over the Libyan state.

77. **Ogaden National Liberation Front (ONLF)** — An ethno-nationalist rebel group operating in the Somali Region of Ethiopia. The group's armed struggle against the Ethiopian state is strictly secular, driven by demands for self-determination, regional autonomy, and the protection of ethnic Somali rights against perceived marginalization by the central government.

78. **Popular Front for the Liberation of Libya (PFLL)** — A Libyan political and militant organization comprised of loyalists to the ousted Muammar Gaddafi regime. Formed in 2016, the group seeks to restore the secular, nationalist Jamahiriya system, operating outside of the religious and tribal factionalism that characterizes much of the ongoing Libyan conflict.

79. **Revolutionary Forces of 1 April** — A Chadian rebel faction that opposed the dictatorial regime of Hissène Habré. Formed in the late 1980s, the group later merged with other secular rebel factions to form the Patriotic Salvation Movement (MPS), which successfully overthrew Habré in 1990. The group's armed struggle was driven by secular political opposition and ethnic factionalism rather than a religious ideology.

80. **Somali Patriotic Movement (SPM)** — A Somali rebel organization founded in 1989, drawing its support predominantly from the Ogaden clan. The group waged an armed insurgency during the Somali Civil War, driven strictly by clan-based factionalism, territorial control, and political power-sharing following the collapse of the Siad Barre regime.

81. **Union des Forces de la Résistance de l'Azawad (UFRA)** — A Tuareg rebel group operating in Mali. Active during the ethno-nationalist insurgencies in the Sahel, the group's

armed struggle is strictly secular, seeking regional autonomy, political representation, and the defense of the marginalized Tuareg populations in the Azawad region.

82. **United Liberation Army (ULA)** — An ethno-nationalist militant group operating in Pakistan's Balochistan province. Like other secular Baloch separatist organizations, its armed struggle against the Pakistani state is driven by demands for ethnic sovereignty, political rights, and control over natural resources, explicitly rejecting the religious militant networks operating in the same region.

83. **United Somali Congress / Somali National Alliance (USC/SNA)** — A powerful Somali political and military alliance led by General Mohamed Farah Aidid. Drawing its primary strength from the Hawiye clan, the faction waged a secular, clan-based armed struggle for control of Mogadishu and the broader Somali state during the civil war, notably clashing with rival warlords and UN peacekeeping forces.

84. **Zintan Military Council** — A powerful coalition of militias based in the Libyan city of Zintan. Emerging during the 2011 revolution, the group later aligned with secular and nationalist forces (such as Khalifa Haftar's LNA) against Islamist and UN-backed coalitions in Tripoli. Its operations are driven by local tribal interests, anti-Islamist sentiment, and the pursuit of political power within the fragmented Libyan state.

Appendix D

The civilian-targeting analysis in Section 6.2 draws on two sources that record violence directed at civilians rather than at the state. This appendix describes each source and the construction of the panels behind Table A.11.

D.1 UCDP One-Sided Violence

UCDP records one-sided violence as a category distinct from the state-based conflict used in the main analysis. A one-sided event is the deliberate use of armed force by a government or a formally organized group against civilians, subject to the same 25-death annual inclusion threshold that governs the state-based series (Sundberg and Melander, 2013). Side A of each event is the perpetrating actor and Side B is the civilian population. I begin from the same UCDP Georeferenced Event Dataset (1989–2022) and the same 31 Muslim-majority countries as the state-based analysis, keep only one-sided events, and drop events whose perpetrator is a government, retaining organized non-state actors. This mirrors the rebel-initiated focus of the aggressor analysis in Section 5.1: the outcome is civilian killing carried out by armed groups rather than by states.

I classify each perpetrating group into the Religious or Secular-nationalist category using the founding charter, stated objectives, and recruitment ideology criteria of Appendix A. Events whose perpetrator falls outside the classification are excluded. I count classified one-sided events by ideology at the country-day level, collapse to a balanced country-by-Hijri-month-by-Hijri-year panel, and merge the interpolated Muslim-share series. The outcome is $\log(\text{events} + 1)$, and all specifications restrict to countries above the 75% Muslim-share threshold, absorb country-by-Hijri-year and Gregorian-month fixed effects, and cluster by country, exactly as in the baseline conflict regressions.

To locate the source of the religious-group effect I build three versions of the panel: the full set of classified groups, the same set with the Islamic State removed, and the Islamic State alone. The Islamic State is identified from the UCDP actor label. Columns 1 through 4 of Table A.11 report, in order, the religious and secular coefficients on the full panel, the religious coefficient with the Islamic State excluded, and the religious coefficient on the Islamic State alone.

D.2 Global Terrorism Database

The Global Terrorism Database (GTD), maintained by the National Consortium for the Study of Terrorism and Responses to Terrorism at the University of Maryland, records terrorist incidents worldwide from 1970 onward (LaFree and Dugan, 2007). The 1993 year is missing database-wide owing to a loss of source records. Because the database is organized around a civilian-directed definition of terrorism, it under-records the rebel-state combat that the state-based analysis studies, the property that led the main text to prefer UCDP for the conflict outcome. That same property makes GTD the natural complement here: it captures the civilian-targeting margin that UCDP state-based events exclude by construction, from an entirely separate compilation.

I harmonize country names to the religion-share file, restrict to the Muslim-majority countries in the sample, and drop groups responsible for fewer than five incidents. This threshold removes a long tail of groups tied to isolated attacks, many of them named too vaguely to classify reliably, and follows standard practice in applied work on the GTD. The outcome is attacks on private citizens, GTD target type 14 (private citizens and property), the largest and least ambiguous civilian category. I classify each named perpetrator into the Religious or Secular-nationalist category using the criteria of Appendix C and drop incidents attributed to groups of unknown ideology, which the database frequently leaves unnamed. I collapse to a

country-by-Hijri-month-by-Hijri-year panel, form $\log(\text{attacks} + 1)$, and estimate with country-by-Hijri-year and Gregorian-month fixed effects and country-clustered standard errors. Two Hijri years affected by data gaps are dropped: the years spanning the missing 1993 data and the truncated final year. As with UCDP, I build full, Islamic-State-excluded, and Islamic-State-only versions, the last dropping a small number of singleton country cells.