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## Terror after the Caliphate: The Effect of ISIS Loss of Control over Population Centers on Patterns of Global Terrorism

James A. Piazza and Michael J. Soules

### ABSTRACT

Experts opine that the Islamic State of Iraq and Syria (ISIS) responded to its loss of control over major population centers in Iraq and Syria that constituted its self-described “caliphate” by internationalizing its patterns of terrorist violence, committing higher-profile attacks abroad, and exploiting sectarian conflicts in other countries. In this study, we test this conventional wisdom. We theorize that the loss of population centers prompted ISIS to conduct more attacks abroad, to shift its attack venues abroad, and to cause higher casualties abroad. Using original time series data on ISIS control over major cities, we find empirical support for our theoretical assumptions.

At its height in late 2014, the Islamic State of Iraq and Syria (ISIS)<sup>1</sup> controlled an estimated 41,000 square miles of territory in Iraq and Syria and had a monthly revenue of \$81 million derived from looted oil, smuggling, and taxation of the between 6 and 8 million people that lived in its self-styled “caliphate.”<sup>2</sup> Its rapid success—it conquered over 92 cities, towns, military bases, oil fields, oil pumping stations, dams, waterways, and roadways from November 2013 to December 2014<sup>3</sup>—surprised US officials and belied ISIS’s relatively modest origins as an underground descendent of the jihadi organization Tawhid wa Jihad.<sup>4</sup> ISIS had become the largest, richest, and most powerful Islamist terrorist insurgency in contemporary history,

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<sup>1</sup>ISIS is commonly referred to using several monikers. We use ISIS because it is most commonly used by Western media, policymakers, and commentators.

<sup>2</sup>Wilson Center, “ISIS after the Caliphate,” January 8, 2018, <https://www.wilsoncenter.org/article/isis-after-the-caliphate-0>. All dollar amounts in this article are in USD.

<sup>3</sup>According to data from Conflict Monitor, IHS Markit summarized in Sarah Almkhatar et al., “The Islamic State: From Insurgency to Rogue State and Back,” *New York Times*, October 22, 2017.

<sup>4</sup>Tawhid wa Jihad, translated as “monotheism and struggle,” was a foreign jihadi terrorist movement that moved to Iraq in 2003 on the heels of the US invasion. Its leader, Abu Musab al-Zarqawi, pledged allegiance to al Qaeda and renamed the group al Qaeda in Iraq. After al-Zarqawi was killed by US troops in 2006, his movement merged with several Sunni Iraqi insurgent groups and recruited former Ba’ath party officials, who then formed ISIS. For an in-depth treatment, see Fawaz A. Gerges, *ISIS: A History* (Princeton, NJ: Princeton University Press, 2017).

eclipsing al Qaeda. On 29 June 2014 ISIS declared itself to be the reinstated global Muslim caliphate, installing its leader, Abu Bakr al-Baghdadi, as the *Amir al Mu'munin*, or leader of the Muslim faithful. It acquired the allegiance of various extremist jihadi movements in other countries, such as Abu Sayyaf in the Philippines and Boko Haram in Nigeria, while founding affiliated franchise Islamic State movements throughout the Muslim world. It broadcast its achievements and ambitious plans for expansion in its sleek online publication, *Dabiq*. Foreign volunteers flocked to Iraq and Syria to populate the caliphate and to fill ISIS's ranks.<sup>5</sup>

However, by late 2015, under pressure from Syrian and Iraqi government military forces and Russian and US airstrikes, ISIS had begun to lose territory, almost as rapidly as it had acquired it. In July 2017 it ceded control over Mosul, the most populous and economically important city in its caliphate, to Iraqi government forces and militias. By summer 2017 it had lost around 88 percent of the territorial assets it controlled at its height. In October of that year, it lost Raqqa, its self-proclaimed capital in Syria, and by the beginning of November, government forces recaptured the last major population centers in Iraq and Syria.<sup>6</sup>

The rapid decline of ISIS's control over population centers prompted policymakers, analysts, media commentators, and scholars to question what the movement would do next. Would it wither away, eventually disappearing as a global terrorist threat? Or, rather, would ISIS's loss of its population centers prompt it to change tactics as it adjusted to its new reduced status in a bid to remain relevant within the global community of jihadi movements? These questions motivate our study and have implications for our understanding of future terrorist and insurgent organizations that control, and then lose, territory.

We examine the argument that the ISIS core movement based in Syria and Iraq responded to its territorial and population center losses, specifically its loss of what we regard as its key asset—its caliphate—by globalizing its terrorist activity. In our study, we empirically assess prognostications commonly advanced by policymakers, policy experts, and media commentators who argued that to compensate for the loss of its caliphate, the ISIS core increasingly launched terrorist attacks abroad (outside of Iraq and Syria), shifted to more extreme and deadly tactics abroad, increasingly relied on affiliates to carry out attacks, more frequently targeted civilians, and sought to exploit sectarian conflicts abroad. We find support for all these predictions. We conclude that as ISIS lost its caliphate, it internationalized its profile.

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<sup>5</sup>See Gerges, *ISIS*.

<sup>6</sup>For a comprehensive account, see Gerges, *ISIS*.

Although policymakers, media commentators, and other experts expected the ISIS core's loss of control over population areas would shape its tactics moving forward, the academic literature yields few concrete insights into how ISIS was predicted to respond to the loss of its caliphate. Paul Staniland underscores this point, noting that scholars have not conducted substantial research on how insurgent groups cope with declines in power or tactically adapt to more challenging strategic environments.<sup>7</sup> To address this sizeable gap in the literature, we use the case of ISIS to highlight the importance of studying the intersection between the growing internationalization of civil war<sup>8</sup> and how battlefield and territorial losses affect nonstate armed groups' use of violence.<sup>9</sup>

With this study, we make four contributions to the scholarly literature. First, using the case of the ISIS core we illustrate how insurgent groups can turn to transnational violence in response to territorial decline, and consequent material resource and reputational losses. Prior quantitative studies have only examined the effect of territory on violence at the domestic or local level and have not considered transnational behaviors.<sup>10</sup> Additionally, although policy analysts have used anecdotal evidence to argue that groups such as ISIS internationalize their violence in response to territorial loss, we provide the first systematic analysis of this phenomenon.

Second, again using the example of ISIS, we examine the effect of territorial and population-center loss on insurgents' target selection when employing terrorism. More specifically, we examine how these losses affect the propensity of groups to resort to more extreme, higher-casualty, and civilian attacks, and to commit attacks aimed at stroking sectarian tensions. We do this to examine how territorial loss can affect the quality, not just the quantity, of insurgent violence.

Third, our findings on the ISIS case have potential implications for other Islamist insurgencies across the world. This is particularly relevant given Barbara F. Walter's observation that jihadist groups such as ISIS increasingly adopt the goal of establishing a worldwide Sunni caliphate because it enables them to mobilize much larger groups of supporters than they could in a single country.<sup>11</sup> In turn, this strategy could be used to help offset a

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<sup>7</sup>Paul Staniland, "Whither ISIS? Insights from Insurgent Responses to Decline," *Washington Quarterly* 40, no. 3 (Fall 2017): 29–43.

<sup>8</sup>For example, Barbara F. Walter, "The New New Civil Wars," *Annual Review of Political Science* 20 (2017): 469–86.

<sup>9</sup>For example, Lisa Hultman, "Battle Losses and Rebel Violence: Raising the Costs for Fighting," *Terrorism and Political Violence* 19, no. 2 (2007): 205–22; Reed M. Wood, "Rebel Capability and Strategic Violence against Civilians," *Journal of Peace Research* 47, no. 5 (September 2010): 601–14; Reed M. Wood, "From Loss to Looting? Battlefield Costs and Rebel Incentives for Violence," *International Organization* 68, no. 4 (Fall 2014): 979–99.

<sup>10</sup>Hultman, "Battle Losses and Rebel Violence;" Wood, "Rebel Capability and Strategic Violence against Civilians;" Wood, "From Loss to Looting?"; Michael Weintraub, "Do All Good Things Go Together? Development Assistance and Insurgent Violence in Civil War," *Journal of Politics* 78, no. 4 (October 2016): 989–1002.

<sup>11</sup>Walter, "The New New Civil Wars."

loss of resources and damage to group reputation. Indeed, we find evidence that ISIS affiliates became more active as the core lost territory and control over population centers.

Fourth and finally, our findings have important implications for the counterterrorism literature. This body of scholarly work finds somewhat mixed support for a variety of counterterrorism policies. For instance, Orlandrew E. Danzell and Steve Zidek find increased counterterrorism spending reduces the frequency and severity of domestic terrorist attacks,<sup>12</sup> whereas Konstantinos Drakos and Panagiotis Th. Konstantinou find that although terrorist attacks lead to substantial increases in spending on public safety, these changes do little to reduce incidents of terrorism.<sup>13</sup> Some evidence suggests indiscriminate government violence reduces insurgent violence,<sup>14</sup> but government force is more effective at dampening insurgency when it increases the costs of expanding insurgency into new areas, rather than focusing on areas in which insurgents already operate.<sup>15</sup> To our knowledge, scholars have not examined how government efforts to dislodge armed groups from territory and populations these groups control might prompt internationalization of violence and more extreme violence globally.

Given the power ISIS once had, and the destruction and death it has wrought, it is vital to understand what counterterrorism policies effectively combat such a threat and the consequences of implementing such policies. This is particularly relevant given Audrey Kurth Cronin's assessment that standard US counterterrorism policies were unlikely to be effective against ISIS because it functioned more like a state than a traditional terrorist group.<sup>16</sup> ISIS's territorial control and state-like functions, coupled with its substantial international presence, poses unique problems for policymakers. Our analysis reveals that ISIS was able to adapt after counterterrorism policies reduced its territorial holdings, and it continued to pose a threat to the international community. As militant movements increasingly go transnational,<sup>17</sup> policymakers must understand the potential consequences that the international community could face from the weakening of international militant groups.

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<sup>12</sup>Orlandrew E. Danzell and Steve Zidek, "Does Counterterrorism Spending Reduce the Incidence and Lethality of Terrorism? A Quantitative Analysis of 34 Countries," *Defense & Security Analysis* 29, no. 3 (2013): 218–33.

<sup>13</sup>Konstantinos Drakos and Panagiotis Th. Konstantinou, "Terrorism Shocks and Public Spending: Panel VAR Evidence from Europe" (Economics of Security Working Paper Series 48, DIW Berlin, Berlin, May 2011), 1–27.

<sup>14</sup>Jason Lyall, "Does Indiscriminate Violence Incite Insurgent Attacks? Evidence from Chechnya," *Journal of Conflict Resolution* 53, no. 3 (June 2009): 331–62.

<sup>15</sup>Monica Duffy Toft, and Yuri M. Zhukov, "Denial and Punishment in the North Caucasus: Evaluating the Effectiveness of Coercive Counter-Insurgency," *Journal of Peace Research* 49, no. 6 (November 2012): 785–800.

<sup>16</sup>Audrey Kurth Cronin, "ISIS Is Not a Terrorist Group: Why Counterterrorism Won't Stop the Latest Jihadist Threat," *Foreign Affairs* 94, no. 2 (March/April 2015): 87.

<sup>17</sup>Walter, "The New New Civil Wars."

In the next section, we discuss ISIS's tactical reactions to the loss of its caliphate. We organize these reactions into three broad themes. First, in response to its loss of control over population centers and territory in Iraq and Syria, ISIS more generally ramped up terrorist attacks abroad. Second, as it lost territory it focused terrorist attacks abroad in venues that offered distinct strategic advantages and in which ISIS had unique capacities. Third, as ISIS lost its caliphate, it committed more damaging terrorist violence abroad. We construct a set of hypotheses around these themes and test them using original data on ISIS's change of control over major population areas.<sup>18</sup> We conclude by discussing the scholarly and policy implications of our findings.

### ISIS and the loss of the caliphate

Prior to discussing the three themes linking ISIS core's loss of control over population centers in Iraq and Syria to its tactical reactions, it is crucial to consider the importance of controlling cities to the financial vitality and to the identity of ISIS. We argue that the reputational and financial costs of immense territorial loss drove ISIS to alter its behavior in several ways. To begin, however, we describe the extent of the costs ISIS has faced from losing its caliphate.

On a concrete level, control over territory and its residents was central to ISIS's financial model. At its height of power, the ISIS operating budget relied heavily on exploitation of oil wealth derived from fields and pumping stations under its direct control in Iraq and Syria. ISIS also extracted revenues from smuggling and other illegal activities occurring within its territory or across trafficking routes it patrolled.<sup>19</sup> This latter source of revenue is noteworthy because smuggling goods provide militant organizations financial resources to increase their longevity.<sup>20</sup>

However, the lion's share of ISIS's purse was dependent on taxation of the people in the territory ISIS controlled.<sup>21</sup> Sarah Almukhtar estimates, at its peak in 2014, ISIS taxes brought in around \$600 million annually, compared with oil, which netted around \$100 million.<sup>22</sup> These territory-based revenues were critical for ISIS because in addition to recruiting, paying, and equipping fighters, ISIS used the earnings to finance an extensive array

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<sup>18</sup>Other research has produced fruitful results by conducting micro-level studies of ISIS. For example, Mara Redlich Revkin, in "What Explains Taxation by Resource-Rich Rebels? Evidence from the Islamic State in Syria," *Journal of Politics* 82, no. 2 (April 2020): 757–64, for instance, developed a novel dataset on ISIS's revenue-extracting policies in Syria to test her new theory of rebel taxation.

<sup>19</sup>Erika Solomon, Guy Chazan, and Sam Jones, "ISIS Inc: How Oil Fuels the Jihadi Terrorists," *Financial Times*, 14 October 2015.

<sup>20</sup>Justin M. Conrad et al., "Rebel Natural Resource Exploitation and Conflict Duration," *Journal of Conflict Resolution* 63, no. 3 (March 2019): 591–616.

<sup>21</sup>Rukmini Callimachi, "The ISIS Files," *New York Times*, 4 April 2018.

<sup>22</sup>Sarah Almukhtar, "ISIS Finances Are Strong," *New York Times*, 19 May 2015.

of state-like institutions<sup>23</sup> in the territories it controlled.<sup>24</sup> ISIS also strategically implemented patterns of taxation based on offensive and defensive military needs.<sup>25</sup>

At the same time, control over territory and populations was a crucial element of ISIS's appeal and distinct identity vis-à-vis other jihadi movements. Unlike other organizations that referred to the reconstruction of a Muslim caliphate,<sup>26</sup> such as its rival al Qaeda, ISIS actually proclaimed a populated caliphate on physical territory in Iraq and Syria and built within it Islamic governing institutions. The caliphate was a key selling point for ISIS: it captured the imaginations of alienated Sunni Muslims in Iraq and Syria, and in the wider Muslim world, providing them with an idealized but concrete achievement in which they could participate.<sup>27</sup>

ISIS deftly used the caliphate to recruit supporters and fighters both locally and abroad, and in its crucial early stages of development the caliphate enabled ISIS to outcompete rival jihadi organizations, particularly al Qaeda-affiliated groups in Syria.<sup>28</sup> Amarnath Amarasingam and J. M. Berger argue ISIS used the caliphate to help foster a strong sense of group identity, or “entitativity,” among its members, particularly because it enabled ISIS to showcase institutional manifestations of the caliphate on the ground, thereby boosting recruitment and loyalty.<sup>29</sup> James P. Farwell notes that ISIS used social media in a more sophisticated manner than other extremist groups to create a narrative that the caliphate was an unstoppable force, further buttressing its reputation and appeal.<sup>30</sup>

Loss of control over population centers in Iraq and Syria critically deprived ISIS of revenues while challenging its unique brand identity and reputation globally. Loss of revenue from oil production, smuggling, and taxation severely eroded the ISIS core's capacity to project conventional

<sup>23</sup>Callimachi, “The ISIS Files,” documents in detail the political and social institutions in the areas ISIS controlled in Iraq and Syria. These include law and courts, public records bureaucracies, licensing and regulatory authorities, policing, housing, and welfare.

<sup>24</sup>Almukhtar, “ISIS Finances Are Strong”; Colin P. Clarke et al., *Financial Futures of the Islamic State of Iraq and the Levant: Findings from a RAND Corporation Workshop* (Santa Monica, CA: RAND Corp., 2017); Aymenn al-Tamimi, “The Evolution in Islamic State Administration: The Documentary Evidence,” *Perspectives on Terrorism* 9, no. 4 (August 2015): 117–29.

<sup>25</sup>Revkina, “What Explains Taxation by Resource-Rich Rebels?”

<sup>26</sup>ISIS used the term “caliphate” to mean a resurrection of an authentic pan-Sunni Islamic religious-political state governed by Islamic law and headed by a holy deputy, a khalifa or emir, who wields political and religious authority in the tradition of the first four “rightly guided” caliphs of Muslim religious tradition: the <Rashidun> caliphs.

<sup>27</sup>Daniel L. Byman, “What Happens When ISIS Goes Underground?” *Markaz* (blog), Brookings Institution, 18 January 2018; Gerges, *ISIS*.

<sup>28</sup>Anton Chan, “The Call of ISIS: The Medium and the Message Attracting Southeast Asians,” *Counter Terrorist Trends and Analyses* 7, no. 4 (May 2015): 4–9; Cole Bunzel, *From Paper State to Caliphate: The Ideology of the Islamic State* (Washington, DC: Brookings Institution, 2015); Fawaz A. Gerges, “ISIS and the Third Wave of Jihadism,” *Current History* 113, no. 767 (December 2014): 339–43.

<sup>29</sup>Amarnath Amarasingam and J. M. Berger, “With the Destruction of the Caliphate, the Islamic State Has Lost Far More than Territory,” *Washington Post*, October 31, 2017.

<sup>30</sup>James P. Farwell, “The Media Strategy of ISIS,” *Survival* 56, no. 6 (2014): 49–55.

military force, theoretically precipitating a need for the group to change its tactics. Andrew Watkins notes that ISIS's loss of access to resources, such as oil, major transit routes, and taxable populations eroded the movement's ability to finance itself and subsequently undermined its ability to recruit more members.<sup>31</sup> He highlights the reputational damage caused by the group's wavering finances by noting that a leaked document in 2015 revealed that as ISIS was losing territory, it was planning to implement a 50 percent pay cut for its fighters.

Loss of the caliphate also produced what some experts depict as a reputational or credibility crisis for the group.<sup>32</sup> Observers have argued that the loss of the caliphate undermined ISIS's distinctive identity and, by extension, its appeal to supporters. Watkins explains that ISIS constructed a prophetic narrative involving the caliphate, maintaining in its official propaganda that "a final battle between infidels and Muslims will take place in the Syrian towns of al-'Amaq or Dabiq, prior to the Day of Judgement."<sup>33</sup> When Dabiq was lost to government forces, ISIS's credibility was severely challenged. A report from the United Nations (UN) further highlights the damage the loss of the caliphate wrought to ISIS's reputation, noting that when ISIS acted more like a state it had a broader appeal for individuals who wanted to participate in the establishment of a caliphate. Vladimir Voronkov, the under-secretary-general of the UN Office of Counter-Terrorism, noted that with the collapse of ISIS state structures, the organization was only able to appeal to individuals already motivated to fight or participate in a terrorist campaign a priori.<sup>34</sup>

Concerns over the reputational costs of territorial decline are evident in ISIS's propaganda. As ISIS's territorial expansion came to a halt, and then subsequently declined, its publications *Dabiq* and *Rumiyah* began to emphasize the growth and activity of the caliphate outside of Syria and Iraq.<sup>35</sup> E. J. Morin<sup>36</sup> argues that as ISIS lost territory, its propaganda increasingly emphasized brutality to discourage further counterterrorism

<sup>31</sup>Andrew Watkins, "Losing Territory and Lashing Out: The Islamic State and International Terror," *CTC Sentinel* 9, no. 3 (March 2016): 14–18.

<sup>32</sup>Thomas R. McCabe, "The Islamic State after the Caliphate: Can IS Go Underground?" *Perspectives on Terrorism* 11, no. 4 (August 2017): 95–101.

<sup>33</sup>Watkins, "Losing Territory and Lashing Out," 16.

<sup>34</sup>United Nations (UN), "Islamic State/Da'esh Using Social Media, Extortion to Retain Might after Military Setbacks, Territory Loss, Top Counter-Terrorism Official Tells Security Council," 8 February 2018. Meetings coverage and statement available at: <https://www.un.org/press/en/2018/sc13202.doc.htm>.

<sup>35</sup>Nur Aziemah Azman, "'Islamic State'(IS) Propaganda: Dabiq and Future Directions of 'Islamic State,'" *Counter Terrorist Trends and Analyses* 8, no. 10 (October 2016): 3–8.

<sup>36</sup>E. J. Morin, "Less Territory, More Terror: The Evolution of Brutality in Islamic State Propaganda" (unpublished manuscript, 21 April 2019).

measures, draw in recruits and media attention, and distract from its decline.<sup>37</sup> Wojciech Kaczkowski et al. find that when ISIS's territorial holdings declined, its overall image-based propaganda output increased, and the content of the messaging shifted toward images of state building.<sup>38</sup> They argue that this is an effort to assure the group's supporters that it can still function as a state. ISIS also altered its propaganda to de-emphasize the importance of the territory it once controlled, including Dabiq, and many supporters of the group bought into such reinterpretations of the caliphate to affirm their support.<sup>39</sup>

Thus, we begin with an expectation that ISIS's loss of the territory and population centers that constituted its self-declared caliphate produced a blow to its reputation and that this prompted the movement to alter its tactical behavior. Namely, we expect that loss of the caliphate prompted ISIS to ramp up terrorism abroad.

### More attacks abroad

This brings us to our first theme, and our first set of hypotheses. A few potential mechanisms link ISIS's decline in reputation and material resources, due to territorial loss, to its increase in terrorist attacks abroad. First, terrorism is frequently regarded as a tactic conventionally weak actors adopt.<sup>40</sup> Militants who utilize terrorism are theorized to do so because they lack the capacity to project conventional military force. This shares a similar logic with Lisa Hultman's argument that armed groups, at the domestic level, turn to violence against civilians in response to battlefield losses as an alternative method to impose political and military costs on governments.<sup>41</sup>

Whereas the terrorism as a "weapon of the weak" framework has traditionally been used to explain differences in use of terrorism as a tactic across actors,<sup>42</sup> we posit that it can also be used to explain the tactical

<sup>37</sup>Such a strategy might be counterproductive for ISIS, however, as Joan Barceló and Elena Labzina, "Do Islamic State's Deadly Attacks Disengage, Deter, or Mobilize Supporters?" *British Journal of Political Science* 50, no. 4 (October 2020): 1539–59, finds, support for ISIS declined following its attacks, indicated by subsequent losses in followers of Twitter accounts related to the group.

<sup>38</sup>Wojciech Kaczkowski et al., "Intersections of the Real and the Virtual Caliphates: The Islamic State's Territory and Media Campaign," *Journal of Global Security Studies* (2020), <https://doi.org/10.1093/jogss/ogaa020>.

<sup>39</sup>Léa Eveline Jeanne Stéphanie Massé, "Losing Mood(s): Examining Jihadi Supporters' Responses to ISIS' Territorial Decline," *Terrorism and Political Violence* (2020): 1–21, <https://doi.org/10.1080/09546553.2020.1733989>.

<sup>40</sup>Martha Crenshaw, "The Causes of Terrorism," *Comparative Politics* 13, no. 4 (July 1981): 379–99; Robert A. Pape, "The Strategic Logic of Suicide Terrorism," *American Political Science Review* 97, no. 3 (August 2003): 343–61.

<sup>41</sup>Hultman, "Battle Losses and Rebel Violence."

<sup>42</sup>The "weapon of the weak" argument has some notable critics. A cross-sectional study of insurgencies did not find rebel movements that were weaker, relative to the state they were fighting, to be more likely to use terrorism as a tactic. See Virginia Page Fortna, "Is Terrorism Really a Weapon of the Weak? Testing the Conventional Wisdom" (working paper, Columbia University, 2015), <https://polisci.columbia.edu/sites/default/files/content/pdfs/Publications/Fortna/Working%20Papers/Is%20T%20a%20Weapon%20of%20the%20Weak%20>

behaviors of actors that see their conventional capacity reduced over time. ISIS's loss of control over population centers has rendered it a much weaker armed actor over time. As it has grown weaker, it can be expected to adopt and more heavily rely upon tactical behaviors, such as terrorism, that suit its reduced capacity.

Though weapon of the weak arguments can help explain why ISIS turned to transnational terrorism in the face of resource losses, signaling-based arguments in the terrorism literature can aid in explaining how the internationalization of violence can offset reputational losses. Just as terrorism can be used as a costly signal to domestic constituencies that the group can impose costs on its targets, and that it is committed to the cause,<sup>43</sup> groups such as ISIS can signal their willingness to stick with transnational goals, such as establishing a caliphate, and their ability to impose costs on those who oppose their goals. Put another way, an international armed group such as ISIS can signal through transnational violence that the organization is still highly resolved and highly capable despite losses in its domestic base of operation, as ISIS has done in Iraq and Syria.

Furthermore, scholars have depicted terrorism as a tactic suited to signaling and messaging objectives.<sup>44</sup> Militants use terrorism to try to capture attention and influence a wider audience for strategic purposes. We argue that this too supports the expectation that ISIS increasingly resorted to terrorist attacks globally as it lost its main attractive asset: the caliphate. To capture and maintain the attention of target audiences worldwide, it ramped up terrorist attacks outside Iraq and Syria. When coupled with other features of the ISIS conflict—the desire to remain relevant vis-à-vis other Islamist militant movements, the alliances it made with Islamist insurgencies abroad, and the phenomenon of ISIS militants relocating from Iraq and Syria to other countries—we expect ISIS's growing weakness as it lost its caliphate to prompt it to increase its use of terrorism internationally.

Thus, increased transnational terrorism has helped ISIS offset resource and reputational costs through taking pressure off the core, imposing costs on its international enemies, and signaling its resolve in the face of significant territorial losses. It is very difficult to directly test the impact of reputational damage on ISIS's tactical choices. We resort to testing the relationship between ISIS's loss of the caliphate indirectly, expecting it to

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202015%205.pdf. Our study adopts a micro-focus on one insurgency, ISIS, and examines the effects of its gradual weakening over time. It is likely that the structure of our study explains our divergent findings.

<sup>43</sup>Andrew H. Kydd and Barbara F. Walter, "The Strategies of Terrorism," *International Security* 31, no. 1 (Summer 2006): 49–80.

<sup>44</sup>Bruce Hoffman and Gordon H. McCormick, "Terrorism, Signaling, and Suicide Attack," *Studies in Conflict & Terrorism* 27, no. 4 (2004): 243–81; Kydd and Walter, "The Strategies of Terrorism."

prompt an increase in ISIS terrorist attacks abroad. This leads us to our first hypothesis, which posits:

*Hypothesis 1 (H1).* As the ISIS core lost control over population centers in Syria and Iraq, it increased its terrorist attacks outside Syria and Iraq.

Moreover, ISIS supporters and affiliated jihadi movements outside Iraq and Syria are another critical component of the relationship between the loss of territory and the ISIS violence's internationalization. According to testimony before a Senate Select Committee on Intelligence by Director of National Intelligence Dan Coates, ISIS's territorial losses in population centers prompted the group to coordinate more closely with its affiliates—both franchises the ISIS core movement established in other countries and pre-existing Islamist militant groups that have pledged allegiance to ISIS—to increase terrorism abroad.<sup>45</sup> Olof Skoog, Sweden's representative to the UN, notes that while ISIS lost control of both its territory and affiliates, the organization still remained entrenched in several conflicts, including in Libya and Afghanistan.<sup>46</sup> Jonah Shepp further argues that ISIS's affiliates have been able to take advantage of instability across the Islamic world, opening up the possibility for a caliphate to be established elsewhere.<sup>47</sup>

Such behavior is not without precedent. Daniel Byman argues that ISIS followed a franchising strategy similar to that which al Qaeda used when it suffered territorial losses in Afghanistan and Pakistan in the early to mid-2000s.<sup>48</sup> This organizational structure was a critical determinant of ISIS behavior in response to the loss of territory. Watkins depicts this as a “bottom-up dynamic” in which foreign fighters and ISIS's affiliates increasingly turn to transnational terrorism in response to the core group's loss of the caliphate.<sup>49</sup> Colin P. Clarke explains that as the core of ISIS weakened, affiliate organizations were able to act more independently, opening the door for them to become even more lethal.<sup>50</sup> Thus, as the ISIS movement lost control over population centers in Iraq and Syria, it saw its affiliates abroad engage in violence transnationally. This actually helps ISIS maintain its brand identity and garner media coverage, enabling it to stay relevant after the loss of the caliphate. Another possible mechanism is that ISIS affiliates, many of which aligned with the group because of the fame and recognition the ISIS brand name conveys,<sup>51</sup> also experienced reputational

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<sup>45</sup>Yohan Jeremy Bob, “ISIS Is Not Yet Vanquished, Not by a Long Shot, Top Intel Experts Say,” *Jerusalem Post*, November 16, 2017.

<sup>46</sup>UN, “Islamic State/Da'esh Using Social Media, Extortion.”

<sup>47</sup>Jonah Shepp, “ISIS's Caliphate Is Collapsing, but Don't Celebrate Just Yet,” *New York Magazine*, June 30, 2017.

<sup>48</sup>Daniel Byman, “ISIS Goes Global: Fight the Islamic State by Targeting Its Affiliates,” *Foreign Affairs* 95, no. 2 (March/April 2016): 76–85.

<sup>49</sup>Watkins, “Losing Territory and Lashing Out.”

<sup>50</sup>Colin P. Clarke, “ISIS: Weakened but Still Potent,” *Rand Blog*, May 18, 2017.

<sup>51</sup>Farhan Zahid, “Understanding the Islamic State: Ideology, Affiliates and the Da'esh Model,” *Conflict and Peace Studies* 6, no. 2 (Autumn 2014): 105–27.

damage because of losses by the core. This, in turn, prompted affiliates to also step up their use of violence to distract from setbacks.

We consider ISIS's reliance on affiliates, both franchises and armed movements that have pledged allegiance to ISIS, outside of Iraq and Syria, to be another indication of internationalization. As the core of ISIS weakened, and the caliphate was lost, affiliates abroad heightened their terrorist activity. This leads to our second hypothesis:

*Hypothesis 2 (H2).* As the ISIS core lost control over population centers in Syria and Iraq, its affiliates increased their terrorist attacks in countries abroad.

### Shifting venues abroad

In addition to conducting more terrorist attacks abroad—both via the ISIS core movement and through ISIS affiliates—we argue that the loss of the caliphate affected the venues in which ISIS committed terrorist attacks outside Iraq and Syria. To explain this, we first examine the impact of territorial loss, due to Iraq and Syria's militarized counterinsurgency and counterterrorism efforts, which were buttressed by the United States, Russia, Iran, France, Turkey, and coalition member states, on ISIS's tactical adaptations.

The weapon of the weak argument is typically applied to domestic terrorism. However, because ISIS is an international movement, and because multiple international actors oppose it, the group has an incentive to increasingly adopt transnational terrorism as it weakens. Specifically, David Kilcullen describes this as part of a “centrifugal strategy,” whereby ISIS seeks to relieve military pressure imposed by Iraqi and Syrian forces, and their Allies, on ISIS-held population centers by creating security risks abroad for its opponents.<sup>52</sup> In the same way that armed groups can use terrorism to put pressure on both civilians and governments domestically,<sup>53</sup> we expect that high-intensity attacks abroad can put pressure on both foreign governments and citizens, thereby providing strategic advantages for groups. This is particularly relevant for conflicts, such as the Syrian civil war, in which a significant amount of foreign military intervention increased the security capacities of the Iraqi and Syrian states.

We, therefore, expect that as ISIS lost territory, in part because of external counterinsurgency support and activities by other countries fighting ISIS in Iraq and Syria, it lashed out against those countries through terrorist attacks abroad. This leads to our third hypothesis:

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<sup>52</sup>David Kilcullen, “ISIS Caliphate Collapse Will Mean More Terror in Europe,” *Australian*, May 26, 2017.

<sup>53</sup>Jessica A. Stanton, “Terrorism in the Context of Civil War,” *Journal of Politics* 75, no. 4 (October 2013): 1009–22.

*Hypothesis 3 (H3).* As the ISIS core lost control over population centers in Syria and Iraq, it increased its terrorist attacks against countries that militarily intervened against ISIS in Iraq and Syria.

Another expected ISIS tactical change as it lost its caliphate involves venues characterized by religious strife. A host of experts have predicted that ISIS would commit itself to stoking sectarian conflict outside Iraq and Syria in response to its losing control of population centers at home. ISIS is characterized by an extremist Salafi Muslim ideology in which both non-Muslims and members of Muslim heterodox sects, such as Shi'is, are regarded as not only illegitimate but threats to Islam's purity.<sup>54</sup> ISIS came to power by exploiting religious-sectarian strife in Iraq and Syria, courting politically aggrieved Sunni Muslims chafing under Shi'i and Alawi rule.<sup>55</sup> With the loss of its caliphate, and recapture of Sunni caliphate territory by the Shi'i- and Alawi-dominated governments of Iraq and Syria, respectively, ISIS was expected to reinvigorate its efforts to exploit sectarian tensions both in Iraq and Syria and abroad.<sup>56</sup>

For this prediction, the past is prologue. Byman argues that the example of the decline of al Qaeda is instructive on this point. When the al Qaeda core suffered a loss of territory and reduction in prominence after the United States toppled the Taliban regime in Afghanistan and trapped the movement's leadership in Pakistan, it stepped up its attacks against Shi'is and other sectarian minority groups in other countries. Byman identifies preliminary evidence that ISIS engaged in sectarian terrorist attacks outside of Iraq and Syria as it experienced setbacks. In 2015, members of ISIS affiliates attacked Shi'i mosques in Kuwait and targeted Christians in Egypt and Libya.<sup>57</sup>

These incidents, according to Byman, serve a comprehensive and intricate strategic purpose. They capture the attention of radicalized Sunnis, potentially winning supporters and recruits. They also produce dilemmas for Muslim governments that contain religious minorities, particularly in countries such as Saudi Arabia, Bahrain, Kuwait, Nigeria, Indonesia, Turkey, and Egypt, which contain large Shi'i, Alevi, and Christian communities. If authorities fail to prevent or adequately address ISIS attacks against religious groups, this alienates religious minorities and foments unrest and instability. If counterterrorism officials crack down too harshly, this can alienate the Sunni population, rendering them more susceptible to ISIS's allures.<sup>58</sup> This leads to the fourth hypothesis tested in the analysis:

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<sup>54</sup>Bunzel, *From Paper State to Caliphate*; Gerges, "ISIS and the Third Wave of Jihadism."

<sup>55</sup>Gerges, "ISIS and the Third Wave of Jihadism."

<sup>56</sup>Robin B. E. van Schaik, "Will ISIS Be Able to Persist in Its Current Form? A Case Study on the Socioeconomics of Terrorism" (master's thesis, Utrecht University, 2016), <https://dspace.library.uu.nl/handle/1874/339138>.

<sup>57</sup>Byman, "What Happens When ISIS Goes Underground?" Byman, "ISIS Goes Global."

<sup>58</sup>Byman, "ISIS Goes Global."

*Hypothesis 4 (H4).* As the ISIS core lost control over population centers in Syria and Iraq, it increased terrorist attacks abroad in countries experiencing sectarian religious conflict.

In the middle 2010s, an estimated 30,000–40,000 Islamist militants from over 100 countries traveled to Iraq and Syria to join, and fight for, ISIS’s caliphate.<sup>59</sup> These foreign fighters were strongly motivated by ISIS ideology and the desire to join the caliphate, live in it, and defend it from enemies. The ideological motivation of ISIS foreign volunteers is in line with identified motivators for foreign fighters in other conflicts.<sup>60</sup> As ISIS lost control over territory and suffered losses due to counterinsurgency efforts of the Iraqi and Syrian governments and third-party intervening forces, foreign militants fighting within ISIS’s ranks began to leave the conflict zone and, in most cases, return to their home countries. This stoked a widespread concern among experts that returning ISIS foreign fighters would engage in terrorism in their home countries after their return.<sup>61</sup> According to these studies, militants from foreign countries who joined ISIS gained significant military experience on the battlefield and were further radicalized due to operating within the caliphate during the conflict. Their experience fighting with ISIS allowed them to build up contacts and form networks that would prove useful for continuing campaigns of political violence once they returned.

We argue that because of these factors the phenomenon of returning foreign fighters is another link between ISIS’s loss of the caliphate, the internationalization of its terrorist violence, and the targeting of the home states to which ISIS foreign fighters returned. We expect ISIS’s loss of territory prompted flows of ISIS foreign fighters back to their home countries, and that this, in turn, produced higher levels of terrorist attacks carried out in the name of ISIS within those countries. This leads to our fifth hypothesis:

*Hypothesis 5 (H5).* As the ISIS core lost control over population centers in Syria and Iraq, it increased terrorist attacks abroad in countries to which foreign fighters returned.

<sup>59</sup>Efraim Benmelech and Esteban F. Klor, “What Explains the Flow of Foreign Fighters to ISIS?” *Terrorism and Political Violence* 32, no. 7 (2020): 1458–81.

<sup>60</sup>Ross Frenett and Tanya Silverman, “Foreign Fighters: Motivations for Travel to Foreign Conflicts,” in *Foreign Fighters under International Law and Beyond*, ed. Andrea de Guttry, Francesca Capone, and Christophe Paulussen (The Hague: TMC Asser, 2016), 63–76.

<sup>61</sup>Daniel Byman, “The Jihadist Returnee Threat: Just How Dangerous?” *Political Science Quarterly* 131, no. 1 (Spring 2016): 69–99; R. Kim Cragin, “The Challenge of Foreign Fighter Returnees,” *Journal of Contemporary Criminal Justice* 33, no. 3 (August 2017): 292–312; Bruce Hoffman, “Return of the Jihadi,” *National Interest* 141 (January/February 2016): 9–17; David Malet and Rachel Hayes, “Foreign Fighter Returnees: An Indefinite Threat?” *Terrorism and Political Violence* 32, no. 8 (2018): 1617–35; Anne Speckhard, Ardian Shajkocvi, and Ahmet S. Yayla, “Defected from ISIS or Simply Returned, and for How Long? Challenges for the West in Dealing with Returning Foreign Fighters,” *Homeland Security Affairs* 14 (January 2018): 1–22, <https://www.hsaj.org/articles/14263>. For a counterpoint, see McCabe, “The Islamic State after the Caliphate” and Robin Wright, “After the Islamic State,” *New Yorker*, 5 December 2016, both of which argue that the terrorist threat returning ISIS foreign fighters pose is overblown.

## Deadlier attacks

Scholars and commentators also predicted that as it lost control over territory, ISIS would relinquish its inhibitions and launch higher-casualty attacks, attack civilians and soft targets more frequently, and make more use of suicide terrorist attacks abroad.<sup>62</sup> Such attacks are likely to garner more attention and notoriety for ISIS, helping to keep it in the news and relevant.<sup>63</sup> Aaron M. Hoffman, Crystal Shelton, and Erik Clevén argue that armed groups seeking press attention will often engage in transnational terrorist attacks against powerful states to generate more press coverage.<sup>64</sup> Thus, ISIS has the incentive not only to carry out more severe and shocking attacks to garner more attention but to carry out these intense attacks abroad as well.

Mara Revkin and Jacob Olidort predict that with the loss of territory, ISIS faced the possibility that its fighters and supporters would gravitate toward its rivals, namely al Qaeda.<sup>65</sup> Indeed, Byman posits that the main source of rivalry between ISIS and al Qaeda is the competition for affiliates and networks of supporters.<sup>66</sup> Competition for the mantle of leadership of the global jihadist movement is expected to lead to increased violence.<sup>67</sup> These expectations are also in line with outbidding theories terrorism scholars developed that predict the use of more atrocious, high-casualty terrorist attacks,<sup>68</sup> and the adoption of suicide terrorism,<sup>69</sup> by armed nonstate actors that find themselves in competition with other dissidents for public support or attention.<sup>70</sup> Justin Conrad and Kevin Greene find support for the outbidding thesis when they focus on the severity of attacks, rather than the total number of attacks, which conforms to our argument that ISIS should respond to territorial loss with higher-casualty

<sup>62</sup>Scott Atran, "ISIS: The Durability of Chaos," *New York Review of Books*, 16 July 2016; Aaron Brown, "Desperate Islamic State to Get More Brutal as Their Grip Loosens, Says Expert," *Express*, March 14, 2015; Patrick Christys, "ISIS Likely to Launch Wave of Suicide Attacks after Mosul, Warns Expert," *Express*, October 17, 2016; Petter Nesser, Anne Stenersen, and Emilie Oftedal, "Jihadi Terrorism in Europe: The IS-Effect," *Perspectives on Terrorism* 10, no. 6 (December 2016): 3–24.

<sup>63</sup>Byman, "ISIS Goes Global."

<sup>64</sup>Aaron M. Hoffman, Crystal Shelton, and Erik Clevén, "Press Freedom, Publicity, and the Cross-National Incidence of Transnational Terrorism," *Political Research Quarterly* 66, no. 4 (December 2013): 896–909.

<sup>65</sup>Mara Revkin and Jacob Olidort, "Does ISIS Need Territory to Survive?" *New York Times*, 21 October 2016. Indeed, the authors note that as ISIS has lost territory in Iraq and Syria, the online jihadi community has become divided into pro-ISIS and pro-al Qaeda factions where the topic of whether the caliphate has been a successful project or a disappointment is a key flashpoint of discussion.

<sup>66</sup>Daniel L. Byman, "Comparing Al Qaeda and ISIS: Different Goals, Different Targets," Brookings Institution, 29 April 2015.

<sup>67</sup>Aaron Y. Zelin, "The War between ISIS and al-Qaeda for Supremacy of the Global Jihadist Movement," *Research Notes, Washington Institute for Near East Policy* 20 (June 2014): 1–11.

<sup>68</sup>Kydd and Walter, "The Strategies of Terrorism."

<sup>69</sup>Mia M. Bloom, "Palestinian Suicide Bombing: Public Support, Market Share, and Outbidding," *Political Science Quarterly* 119, no. 1 (Spring 2004): 61–88.

<sup>70</sup>Several scholars fail to find support for the outbidding thesis. See, for example, Robert J. Brym and Bader Araj, "Palestinian Suicide Bombing Revisited: A Critique of the Outbidding Thesis," *Political Science Quarterly* 123, no. 3 (Fall 2008): 485–500; Michael G. Findley and Joseph K. Young, "More Combatant Groups, More Terror? Empirical Tests of an Outbidding Logic," *Terrorism and Political Violence* 24, no. 5 (2012): 706–21.

attacks abroad.<sup>71</sup> Megan Farrell argues that Salafi-jihadist groups engage in outbidding for resources and popular support, based on a shared ideology, at the international level. Indeed, she finds that as these groups face an increasing number of ideologically similar rivals, they increase the quantity and severity of their attacks.<sup>72</sup> In line with Farrell's theory and findings, as ISIS found itself in greater competition with other extremist movements for the mantle of the premier jihadi organization, it was inclined to engage in deadlier and more extreme forms of violence abroad to demonstrate its commitment to the cause.

The shock value of individual attacks, rather than the total number of attacks, helps groups distinguish themselves and garner more attention.<sup>73</sup> Thus, to both distract observers from their losses, and to stand out from other organizations competing to be the leader of the global jihadist movement, ISIS was expected to increase the severity of its attacks abroad.<sup>74</sup> The internationalization element of these severe attacks is particularly relevant because ISIS has international audiences of supporters that it needs to maintain and placate. It also has detractors, rivals, and enemies that it needs to distract, deter, and compete with. This leads us to the final hypothesis:

*Hypothesis 6 (H6).* As the ISIS core lost control over population centers in Syria and Iraq, it engaged in higher-casualty terrorist attacks outside of Syria and Iraq.

## Research design

To test our hypotheses, we conduct a series of empirical analyses on the effects that ISIS's loss of control over major population centers in Iraq and Syria has on ISIS's transnational terrorist attack patterns. Our study focuses on the period of 1 January 2013–31 December 2017. This time frame captures the era in which ISIS gained, sustained, and lost the major population centers that constituted its self-styled caliphate. We constructed a daily time-series database for our analysis that includes 1,827 daily observations. In all our estimations, we cluster the standard errors by month.

## Estimation techniques

Most of our dependent variables are daily terrorist attack count measures characterized by overdispersion and likely temporal dependencies. This

<sup>71</sup>Justin Conrad and Kevin Greene, "Competition, Differentiation, and the Severity of Terrorist Attacks," *Journal of Politics* 77, no. 2 (April 2015): 546–61.

<sup>72</sup>Megan Farrell, "The Logic of Transnational Outbidding: Pledging Allegiance and the Escalation of Violence," *Journal of Peace Research* 57, no. 3 (May 2020): 437–51.

<sup>73</sup>Conrad and Greene, "Competition, Differentiation, and the Severity of Terrorist Attacks."

<sup>74</sup>Farrell, "The Logic of Transnational Outbidding."

makes an ordinary least squares estimation technique inappropriate. We, therefore, use a negative binomial estimation technique for models where a count indicator is the outcome variable (models 1, 3–7). However, in one of our estimations (Model 2), the dependent variable is a ratio of attacks abroad to attacks inside Iraq and Syria. For this model, we use a Tobit estimation technique censored at the lower and higher values of the dependent variable.

### ***Dependent variables***

We developed seven dependent variables to measure ISIS's response to its territorial losses in Iraq and Syria to test the study's six hypotheses. To test H1—that ISIS loss of territory in Iraq and Syria prompted the movement to launch more terrorist attacks abroad—we use two variables. The first is a daily count of terrorist attacks conducted by the ISIS core movement “abroad,” meaning terrorist attacks launched by the ISIS group based in Iraq and Syria but conducted outside those countries. The data source we use for terrorist attacks is the Global Terrorism Database (GTD),<sup>75</sup> an event database of terrorist incidents. We derived these counts from terrorist incidents in GTD that are identified as perpetrated by the “Islamic State of Iraq and the Levant” or the “Islamic State of Iraq,” the monikers used in GTD to identify the core ISIS movement active in Iraq and Syria.<sup>76</sup> The number of attacks per day committed by the ISIS core abroad ranges from 0 to 8. The mean value per observation is 0.12, indicating that on average the ISIS core committed one attack outside of Iraq and Syria every 8–9 days during the period observed. The second dependent variable we use to test our first hypothesis is simply a ratio of daily ISIS core attacks outside Iraq and Syria to attacks launched inside Iraq and Syria. This helps us capture internationalization of ISIS core attack behaviors relative to its local attacks. The variable ranges from 0 to 3 and has a mean value, per day, of 0.05.

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<sup>75</sup>Data and codebook available online at: <https://www.start.umd.edu/gtd/>.

<sup>76</sup>One limitation of the GTD database is that it contains a large number of incidents that are unclaimed, where the perpetrator is uncertain, or where the perpetrator name is simply missing. In theory, this potentially inserts bias into our analysis. In constructing our dependent variables, we are likely undercounting incidents by ISIS in instances where the attack is unclaimed and the perpetrator information is uncertain or missing. This is potentially problematic for our study if, for example, ISIS attacks abroad are more likely to be identified in the GTD than its domestic attacks. We have reason to suspect that this problem is minimal and does not bias our findings. We employ a variety of dependent variables measuring ISIS terrorism abroad. While some of these, such as our dependent variable measuring the ratio of ISIS attacks abroad, are in theory likely to be affected by domestic versus transnational incident missing-ness, the others are not, namely because they are not ratios and do not rely upon identification of domestic attacks. Our analysis shows the independent variable to have the same consistent impact on all our dependent variables, suggesting that domestic versus transnational incident missing-ness does not affect our analysis. Additionally, all our dependent variables capture the temporal effect of territorial losses by ISIS on attacks abroad. There is no reason to suspect that missing-ness dramatically changed over time, thereby inserting biases into our analysis.

To test H2—that ISIS’s loss of its caliphate prompted its affiliates to commit more terrorist attacks abroad—we developed a count measure of terrorist attacks outside Iraq and Syria conducted by terrorist movements that have pledged allegiance to and are affiliated with ISIS. We identified ISIS affiliates using GTD, employing a multistep approach. Using the perpetrator name variable in GTD (“*gname*”), we identified all Islamist terrorist groups in the dataset. To determine if a perpetrator was Islamist, we first consulted several sources on terrorist groups and nonstate insurgencies, including Seth G. Jones and Martin C. Libicki’s 2008 database of terrorist actors,<sup>77</sup> the Terrorist Organization Profiles (TOPs) database,<sup>78</sup> the Big, Allied, and Dangerous database,<sup>79</sup> the Stanford University Mapping Militant Organizations database, and reference works by Martha Crenshaw and John Pimlott<sup>80</sup> and Peter Chalk.<sup>81</sup> Once we had identified Islamist perpetrators in GTD, we investigated each one to determine if and when it was affiliated with ISIS during the observation period, using media sources and a US State Department terrorist designation list.<sup>82</sup> We then identified in GTD all ISIS affiliate attacks outside Iraq and Syria and formatted them into a daily count measure to finalize the variable. [Supplementary Appendix Table 1](#) lists all ISIS affiliates in our analysis. ISIS affiliate terrorist attacks range between 0 and 20 attacks per day. On average, ISIS affiliates conducted 1.5 attacks per day outside Iraq and Syria during our observation period.

To test H3—that ISIS’s loss of the caliphate prompted it to conduct more attacks abroad against countries that undertook or participated in military interventions against ISIS in Iraq and Syria—we developed a daily count variable measuring the number of ISIS attacks against intervening countries. We built this indicator by identifying all countries that participated in military interventions, as a leader or member of a coalition of forces, against ISIS and constructing daily counts of ISIS attacks within those countries. [Supplementary Appendix Table 2](#) lists the countries participating in military interventions against ISIS and the date on which that military intervention began. The count of ISIS attacks against interveners

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<sup>77</sup>Seth G. Jones and Martin C. Libicki, *How Terrorist Groups End: Lessons for Countering al Qa’ida* (Santa Monica, CA: RAND Corp., 2008).

<sup>78</sup>The TOPs database was originally constructed by the Memorial Institute for the Prevention of Terrorism, but has been curated and cleaned by Christopher Linebarger at the University of Massachusetts at Lowell. See <http://clinebarger.weebly.com>.

<sup>79</sup>Victor Asal and R. Karl Rethemeyer, “The Nature of the Beast: Organizational Structures and the Lethality of Terrorist Attacks,” *Journal of Politics* 70, no. 2 (April 2008): 437–49.

<sup>80</sup>Martha Crenshaw and John Pimlott, *International Encyclopedia of Terrorism* (New York: Routledge, 2015).

<sup>81</sup>Peter Chalk, *Encyclopedia of Terrorism*, vol. 1. (New York: ABC-CLIO, 2013).

<sup>82</sup>US Department of State, “State Department Terrorist Designations of ISIS Affiliates and Senior Leaders,” <https://www.state.gov/state-department-terrorist-designations-of-isis-affiliates-and-senior-leaders/>. A full list of these ISIS affiliates is presented in Appendix Table 1, along with the months and years the group became affiliated with ISIS during the observation period and the number of attacks it perpetrated during the period.

ranges from 0 to 8 attacks per day. On average, ISIS conducted 1 terrorist attack against an intervening country every 3 days during our observation period.

To test our H4—that as ISIS lost control over population centers in Iraq and Syria it increasingly focused its international attacks within countries suffering from religious or sectarian strife—we created a variable measuring daily ISIS terrorist attacks in countries outside Iraq and Syria that the Pew Research Center rated as “very high” on their Social Hostilities Index involving religion.<sup>83</sup> All are either Muslim-majority countries with significant non-Muslim minority communities, such as Egypt, or countries with large Muslim populations that have had historical tensions with the non-Muslim majority, such as India. This variable ranges between 0 and 20 attacks per day. During the observation period, ISIS conducted nearly 1 attack per day (0.94) in one of these countries on average.

We test H5—that as it lost territory, ISIS increased its attacks on countries to which its foreign fighters returned—using a measure of daily terrorist attacks by ISIS and its affiliates in countries to which foreign fighters returned. We constructed this variable using data and a report by Richard Barrett that lists all countries ISIS foreign fighters issued from and returned to, along with the dates of their return, through 2017.<sup>84</sup> This variable ranges between 0 and 15 terrorist attacks. On average, the ISIS core or its affiliates launched around 1 (0.9) terrorist attack in a country to which ISIS foreign fighters returned during the period examined.

For the final hypothesis, H6—that as ISIS lost its caliphate it committed more extreme and deadly attacks abroad—we developed a daily count of casualties due to terrorist attacks by the ISIS core outside of Iraq and Syria. To construct this variable, we simply totaled the number of persons killed or wounded in ISIS attacks abroad per day. This variable has a wide range of values: between 0 casualties abroad per day to a high of 748 casualties abroad in one day. On average, ISIS core attacks abroad yielded around 6.8 injuries or deaths per day during the observation period.

### ***Independent variable***

Our main independent variable captures the ISIS core’s cumulative loss of the significant population centers in Iraq and Syria that made up its caliphate. In constructing this variable, we want to express an important caveat.

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<sup>83</sup>Pew Research Center, “Religious Hostilities Reach Six-Year High,” <http://www.pewforum.org/2014/01/14/religious-hostilities-reach-six-year-high/>. Data for the Social Hostilities Index and coding explanation can be found at: <http://www.pewresearch.org/wp-content/uploads/sites/7/2014/01/RestrictionsV-SHI.pdf>.

<sup>84</sup>Richard Barrett, *Beyond the Caliphate: Foreign Fighters and the Threat of Returnees* (New York: Soufan Center, 2017). Specifically, we constructed this variable based on information from “Table: Foreign Fighters Who Have (i) Gone to Syria or Iraq; (ii) Been Stopped in, Deported from, Denied Entry to, or Watch-Listed by Turkey; (iii) Remain Fighting; and (iv) Returned,” 12–13.

Ideally, to measure the impact of the loss of the caliphate on ISIS's strategic and tactical behaviors, we would use a precise daily measure of the number of people living under ISIS control. However, available estimates of the population ISIS controlled are rough, "peak size," snapshot approximations by journalistic sources that vary widely,<sup>85</sup> while more detailed authoritative demographic statistics on ISIS's caliphate have not been collected or made available. Alternatively, a study of the consequences of ISIS's decline in Iraq and Syria might try to measure the amount of geographic territory it controlled.<sup>86</sup> However, the scant data available on ISIS territorial control similarly vary by source and is in snapshot form, making it impossible to measure the loss of territory over time.<sup>87</sup> What we are left with, then, is an independent variable based upon samples of major population centers of the ISIS caliphate as it increased and then waned. This suits our purposes, though it does not capture all the territory, and people, that ISIS controlled. Our objective is to determine the impact of the loss of the caliphate as a sociopolitical entity and symbol for ISIS rather than that of the loss of physical territory itself.

This study's independent variable is a cumulative daily count of a sample of the major population centers ISIS controlled.<sup>88</sup> To construct this variable, we developed an indicator that measures the daily cumulative count of the number of population centers ISIS lost over the observation period. We identified a sample of 15 cities and towns controlled by ISIS between 2013 and 2017 representing either major population areas,<sup>89</sup> strategically important sites,<sup>90</sup> or symbolically important sites for ISIS.<sup>91</sup> We estimate that our sample covers approximately 51.4 percent of the total population that lived under ISIS core rule, and includes all major urban concentrations

<sup>85</sup>For example, it is commonly cited that around ten million people lived in areas in Iraq and Syria that were under the control of ISIS at the height of its power. See "Islamic State and the Crisis in Iraq and Syria in Maps," *BBC News*, March 28, 2018, <https://www.bbc.com/news/world-middle-east-27838034>. Another commonly cited statistic is that almost eight million people lived under ISIS rule during its peak, reported by Paul D. Shinkman, "ISIS by the Numbers in 2017," *US News and World Report*, December 27, 2017, <https://www.usnews.com/news/world/articles/2017-12-27/isis-by-the-numbers-in-2017>. The original sources for these figures are almost never cited in media reports, nor are they ever reported dynamically over time.

<sup>86</sup>For example, Xi Li et al., "Detecting 2014 Northern Iraq Insurgency Using Night-Time Light Imagery," *International Journal of Remote Sensing* 36, no. 13 (2015): 3446–58.

<sup>87</sup>Kathy Gilsinan, "The Many Ways to Map the Islamic 'State,'" *Atlantic*, 27 August 2014, provides a useful discussion of the difficulty in mapping the territory controlled by ISIS that sheds light on the high variation across media and expert reports of the physical dimensions of ISIS's territory.

<sup>88</sup>As a check, we also constructed variables measuring the current total number of cities ISIS controlled and a daily cumulative count of cities ISIS gained or captured. When these variables are included in the estimations, they do not change the core findings our analysis. The daily cumulative count of cities lost is still a positive significant predictor of internationalization of ISIS terrorism. In these models, the current number of cities ISIS controlled is usually a significant positive predictor, whereas the daily cumulative count of cities ISIS gained is usually a significant negative predictor. Results available from authors.

<sup>89</sup>For example, Falluja, Ramadi, Mosul, or Tikrit, all of which are highly populated.

<sup>90</sup>For example, Kobani, an important border town in Syria through which foreign fighters transited, or Yarmouk, a refugee center that was important for ISIS recruitment.

<sup>91</sup>For example, Raqqa, the capital of the caliphate, or Dabiq, a city featured in Muslim eschatology and which ISIS argued was to be the site of a final apocalyptic stand in its fight against the non-Muslim West.

of the population of the caliphate.<sup>92</sup> We then consulted a comprehensive timeline published by the Wilson Center<sup>93</sup> and cross-checked it with a variety of media sources and geocoded information presented in map form by Almkhtar et al.<sup>94</sup> Using these sources, we determined the date ISIS captured each city and when it was liberated from ISIS control by Iraqi or Syrian government or para-government forces, such as Kurdish militia groups. These cities and the dates they were under ISIS core control are presented in [Supplementary Appendix Table 3](#).

The independent variable ranges between zero cumulative cities/population centers lost to twelve lost. [Figure 1](#) graphically illustrates the cumulative loss of major cities in Iraq and Syria during the period observed.

Over the course of time series, the daily cumulative count of cities lost ranges in value from 0 to 12 and has an average value of 3.3 cities lost. At the start of the observation period, 1 January 2013, ISIS did not control any of the population centers included in the analysis. It captured its first city, Falluja, Iraq, on 30 December 2013. By the middle of October 2014, ISIS had captured all the major population centers in our sample that it would hold during our observation period. In November 2015, ISIS started to lose control over cities, and this began a steady increase in the cumulative count of cities and major population areas lost to the movement. From this period on, the daily cumulative total of cities lost by ISIS ranged from 8 to 12 and, on average, stood at 9.7 cities forfeited.<sup>95</sup> By the end of the time series, the ISIS core had relinquished control over all population centers included in the analysis except the Yarmouk refugee camp in Syria. It would eventually lose Yarmouk as well, on 1 May 2018, after the observation period for the study.

## Controls

We include two controls in our estimations. First, we control for ISIS oil revenues using data from Quy-Toan Do et al.<sup>96</sup> To construct these unique data, Do and his coauthors used satellite imaging of nighttime oil and natural gas flares and preconflict data to estimate production rates for oil fields ISIS

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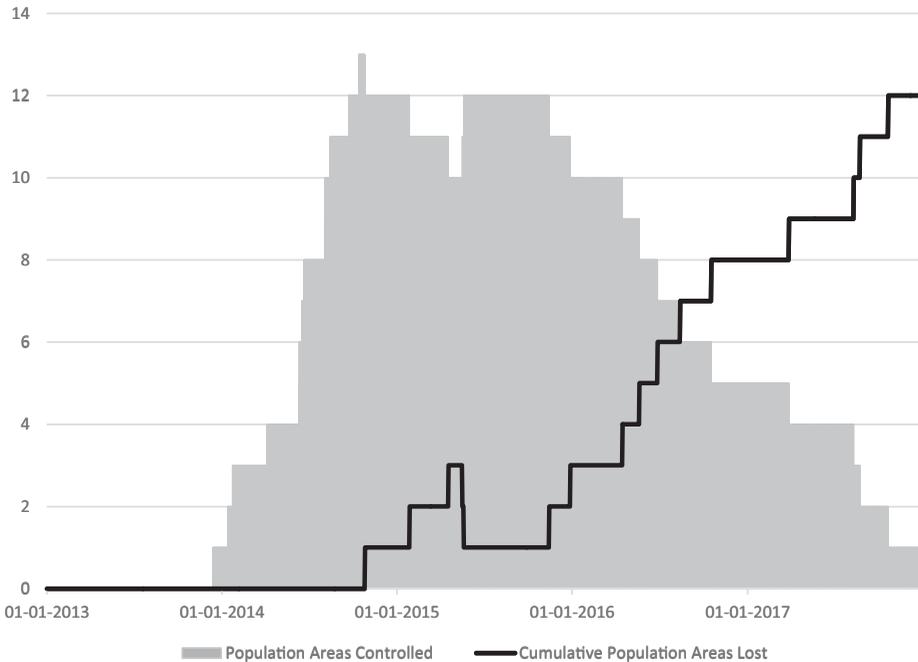
<sup>92</sup>We roughly estimate this by totaling the population of the fifteen sampled population centers and then dividing it by the median peak population size of the caliphate (seven million) estimated by the Wilson Center.

<sup>93</sup>Wilson Center, "Timeline: The Rise, Spread and Fall of the Islamic State," October 28, 2019, <https://www.wilsoncenter.org/article/timeline-the-rise-spread-and-fall-the-islamic-state>.

<sup>94</sup>Almkhtar et al., "The Islamic State."

<sup>95</sup>For the entire sample, including the period prior to November 2015 when ISIS was gaining and holding cities, the average daily cumulative number of cities lost was around 4 and ranged from 0 to 12, as indicated in the descriptive statistics.

<sup>96</sup>Quy-Toan Do et al., "Terrorism, Geopolitics, and Oil Security," *Energy Research & Social Science* 44 (October 2018): 411–18; Quy-Toan Do et al., "How Much Oil Is the Islamic State Group Producing? Evidence from Remote Sensing" (policy research working paper 8231, World Bank Group, Washington, DC, October 2017): 1–52, <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/239611509455488520/how-much-oil-is-the-islamic-state-group-producing-evidence-from-remote-sensing>.



**Figure 1.** Cumulative cities/population centers controlled and lost by ISIS, 2013–2017.

controlled in Iraq and Syria in thousands of barrels per day. We regard this control as crucial. As previously stated, oil revenues from ISIS-controlled wells provided a critical—though probably not the largest—source of wealth for the organization. It is possible that fluctuations in oil revenues affected the capacity of ISIS to launch transnational attacks, to engage in more complex and deadly attacks, to attract and maintain the loyalty of affiliates, and to extend the geographic range of its activities. Moreover, inclusion of the data from Do et al. on ISIS control over oil enables us to differentiate the effects of ISIS revenues or wealth from its control over population centers and, by proxy, the sociopolitical and symbolic aspects of the caliphate. Production on ISIS-controlled wells began 13 January 2014 and ended on 25 August 2016.<sup>97</sup> On average, during the period examined around 18.3 thousand barrels of oil were produced per day. Peak oil production for ISIS occurred on 27 July 2014, at around 87.1 thousand barrels. However, for around 36 percent of the days in the observation period, ISIS produced no oil at all.

To hold constant ISIS fighting capacity and to measure counterinsurgency and counterterrorism efforts against ISIS, we also controlled for the daily cumulative total of ISIS members killed over the course of conducting terrorist

<sup>97</sup>Do et al.'s data end on December 31, 2016. However, we made the assumption that because ISIS oil production ended, according to the data, in August of 2016 and remained at zero production throughout the rest of 2016, and because ISIS lost territory precipitously throughout 2017, oil production remained at zero throughout 2017 as well.

**Table 1.** Main results, effects of ISIS loss of cities/population centers on internationalization of attacks.

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
	Attacks Abroad by ISIS Core <sup>a</sup>	Ratio Attacks Abroad by ISIS Core <sup>b</sup>	Attacks Abroad by ISIS Affiliates <sup>a</sup>	Attacks Abroad against Interveners <sup>a</sup>	Attacks Abroad in Countries with Religious Hostilities <sup>a</sup>	Attacks Abroad against Countries with Returning Foreign Fighters <sup>a</sup>	Casualties Abroad by ISIS Core <sup>a</sup>
Cumulative Count of Cities Lost	0.106* (0.043)	0.089** (0.029)	0.132*** (0.033)	0.123*** (0.033)	0.127*** (0.031)	0.127*** (0.029)	0.150* (0.059)
ISIS Oil Production	0.018* (0.007)	0.016*** (0.005)	0.028*** (0.007)	0.021*** (0.005)	0.026*** (0.006)	0.020*** (0.005)	0.024* (0.010)
Cumulative ISIS Terrorists Killed	0.013 (0.009)	0.002 (0.003)	0.008* (0.004)	0.004 (0.003)	0.004 (0.003)	0.008* (0.004)	0.037** (0.012)
Constant	-2.898*** (0.326)	-2.782*** (0.319)	-0.608* (0.263)	-1.824*** (0.263)	-1.012*** (0.244)	-0.978*** (0.238)	0.669* (0.404)
Obs.	1,827	1,827	1,827	1,827	1,827	1,827	1,827
Wald $\chi^2$	10.55*		26.52***	18.13***	25.46***	23.82***	18.77***
F		5.07**					
Pseudo $r^2$	0.0174	0.0265	0.0451	0.0305	0.0403	0.0373	0.0039
Month	60	60	60	60	60	60	60
Clusters							

Note: Robust standard errors clustered by month reported in parentheses.

<sup>a</sup>Negative binomial estimation.

<sup>b</sup>Tobit estimation, upper and lower levels censored at 0 and 3.

\*\*\* $p \leq 0.000$ .

\*\* $p \leq 0.01$ .

\* $p \leq 0.1$ .

attacks, both within Iraq and Syria and abroad. Of course, this does not capture all of ISIS's personnel losses. However, it provides us with some ability to factor how counterterrorism efforts targeting ISIS might affect its attack behaviors abroad. Over the course of the period examined, ISIS lost a total of 346 fighters during terrorist operations. Descriptive statistics for all variables used in the analysis are presented in [Supplementary Appendix Table 4](#).

## Results

The results of the analysis are summarized in [Table 1](#). The substantive effects of the estimations in the analysis are summarized in [Table 2](#). We find broad support for all our hypotheses.<sup>98</sup>

<sup>98</sup>To further check our findings, we also produced simple bivariate correlations between the cumulative loss of cities by ISIS and its terrorist attack patterns abroad. These are represented in [Appendix Figures 1–7](#). The bivariate tests produce compatible findings with those in our main analysis.

**Table 2.** Marginal effects of ISIS loss of cities/population centers on predicted number of attacks per day.

	[1]	[3]	[4]	[5]	[6]	[7]
	Attacks Abroad by ISIS Core	Attacks Abroad by ISIS Affiliates	Attacks Abroad against Interveners	Attacks Abroad in Countries with Religious Hostilities	Attacks Abroad against Countries with Returning Foreign Fighters	Casualties Abroad by ISIS Core
Cumulative Count of Cities Lost:						
0	+0.076	+0.853	+0.225	+0.541	+0.526	+3.330
6	+0.144	+1.878	+0.472	+1.159	+1.128	+8.174
12	+0.274	+4.137	+0.987	+2.485	+2.417	+20.059
Percent Change (0 to 12 Cities Lost)	+360.5%	+484.9%	+438.6%	+459.3%	+459.5%	+602.3%

Note: Calculated using marginal effects simulations. Values of main independent variable set at minimum, median, and highest value. Models include controls. Substantive effect is for entire model as predictor of daily counts of terrorism.

Across all models in [Table 1](#), the main independent variable—the daily cumulative count of cities and population centers ISIS once controlled as part of its caliphate but then lost to Iraqi or Syrian government and other forces—is a significant and positive predictor of the various measures of ISIS internationalization of its terrorist tactics. Cumulative loss of cities by ISIS is found to drive the ISIS core to conduct more (Model 1), and a higher ratio of (Model 2), terrorist attacks outside Iraq and Syria. This provides support for H1. Cumulative loss of cities is also found to boost ISIS affiliate attacks abroad (Model 3), thereby providing support for H2. As the cumulative count of cities lost by ISIS increased, ISIS committed more terrorist attacks abroad against countries that participated in military interventions against it in Iraq and Syria (Model 4), against countries featuring internal religious hostilities (Model 5), and against countries to which ISIS foreign fighters returned (Model 6). The findings lend support to H3–H5. Finally, cumulative loss of cities in Iraq and Syria prompted ISIS to commit higher-casualty attacks abroad (Model 7), thereby providing support for H6.

[Table 2](#) shows that the relationship between cumulative loss of cities and ISIS's internationalization of its terrorist tactics is also substantive. In [Table 2](#), we summarize the results of marginal effects simulations where the daily cumulative count of cities ISIS lost is held at 0, the period until October 2014 when ISIS lost its first city, Falluja; 6, representing the period around July 2016 when ISIS had lost the median number of cities during the observation period; and 12, the period from around October 2017 to December 2017 when ISIS had lost the largest number of the cities in its caliphate.

While ISIS held onto all its cities (cumulative count of cities lost is 0), it conducted, on average, around 0.076 terrorist attacks abroad per day. This works out to around one attack abroad every 13 days. In contrast, during the period when ISIS had lost half its caliphate (cumulative count of cities lost is 6), it launched an average of 0.144 attacks abroad per day, which translated to 1 attack every 9 days. When ISIS had lost nearly all its cities in its caliphate (cumulative count of cities lost is 12), it conducted an average of 0.274 attacks abroad, or around 1 attack every 4 days.

The same pattern is found across all measures of attack internationalization. On average, ISIS affiliates committed around one attack abroad per day during the period when ISIS was building or holding its cities in Iraq and Syria. Affiliates launched 4 attacks per day on average when ISIS racked up 12 cities lost cumulatively. While its cumulative number of cities lost was zero, the ISIS core conducted around 0.225, 0.541, and 0.526 terrorist attacks abroad per day in countries that had intervened in Iraq and Syria, that were wracked by religious strife, and that were targets of returning foreign fighters. When ISIS's cumulative net losses of cities reached the maximum of 12, the average daily number of attacks abroad in these categories increased to 0.987, 2.485, and 2.417, respectively. The impact of loss of the caliphate on ISIS terrorist casualties is similarly dramatic. While the cumulative loss of cities stood at 0, ISIS attacks yielded around 3.3 casualties abroad per day. When cumulative losses of cities reached their maximum, foreign casualties due to ISIS attacks increased to around 20 casualties per day.

The marginal effects of cumulative loss of cities on the ratio of ISIS attacks abroad (Model 2) are not presented in [Table 2](#). This is because the Tobit coefficient can be directly interpreted without simulations. As Model 2 in [Table 1](#) indicates, increasing the cumulative number of cities lost by ISIS by 1 yields, on average, 0.089 more ISIS attacks per day, or around 1 attack per 11 days. This works out to around 0.53 attacks per day abroad during periods when ISIS had suffered 6 cumulative cities lost and around 1.1 attacks per day when ISIS had lost the maximum number of its cities.

In the models, the controls are also significant. ISIS production of oil is consistently a significant, positive predictor of all dependent variables in [Table 1](#). This suggests that ISIS control over resources permitted or prompted it, perhaps by boosting its capacity, to internationalize its terrorist tactics. The measure of counterterrorism efforts against ISIS—the cumulative count of ISIS fighters killed—is only significant in a few models, namely Model 3 (attacks abroad by affiliates), Model 4 (attacks against countries to which foreign fighters return), and Model 7 (casualties due to attacks abroad). This is potentially interesting. It produces evidence that as ISIS sustained personnel losses in Iraq and Syria, its affiliates and its

foreign fighters returning home became more active while casualties abroad went up, raising the possibility that successful counterterrorism against ISIS prompted new security threats by ISIS-allied militants outside the theater of conflict in Iraq and Syria.

### Temporal effects

The results in [Table 1](#) demonstrate that ISIS's cumulative losses of cities and population centers prompted it to internationalize its terrorist attack behaviors. We have theorized that this is due to a host of factors associated with losing the material, strategic, ideological, and reputational advantages the caliphate afforded to ISIS. However, some clarifications regarding the temporal effects surrounding ISIS's loss of territory and its terrorist attack behavior abroad are needed. There are two reasons for this. First, it is likely that a substantial change in tactics as a result of territorial losses takes time to manifest. To reorient attacks to transnational venues, ISIS would need time to plan, recruit attackers, build capacity, coordinate with affiliates, and mobilize foreign fighters returning home. Second, in our theory section, we briefly mentioned that the effects of cumulative territorial losses on ISIS tactical behaviors might be short term. We certainly cannot predict that the loss of the caliphate would produce a permanent change in ISIS tactics. The strategic environment during and after ISIS's loss of the caliphate is quite fluid, and it is important to try to determine how long it takes for the impact of cumulative loss of cities on ISIS terrorist attack tactics to dissipate.

To better understand the temporal effects of the independent variable on the dependent variables, we conducted additional analyses experimenting with different lagged values of cumulative loss of cities. We constructed measures of the independent variable lagged by 7 days, 1 month, 3 months, 6 months, and a year. The results of these tests are summarized in [Table 3](#).

[Table 3](#) presents the coefficients only for the impact of the lagged independent variable on the seven dependent variables of the study.<sup>99</sup> The results suggest the findings in the main analysis, which demonstrate that ISIS internationalized its terrorist activity in response to the loss of the caliphate, hold for at least 90 days for all dependent variables. The 7-, 30-, and 90-day lagged versions of the independent variable remain positive, significant predictors of all dependent variables measuring internationalization of ISIS terrorist attacks. When the daily cumulative count of cities lost is lagged by 180 days, the effect on ISIS core attacks abroad and on the ratio of attacks abroad is not significant but remains a significant predictor

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<sup>99</sup>Full results available from the authors.

**Table 3.** Summary of impact of time-lagged loss of cities/population centers on ISIS internationalization of attacks.

	Attacks Abroad by ISIS Core <sup>a</sup>	Ratio Attacks Abroad by ISIS Core <sup>b</sup>	Attacks Abroad by ISIS Affiliates <sup>a</sup>	Attacks Abroad against Interveners <sup>a</sup>	Attacks Abroad in Countries with Religious Hostilities <sup>a</sup>	Attacks Abroad against Countries with Returning Foreign Fighters <sup>a</sup>	Casualties Abroad by ISIS Core <sup>a</sup>
Cumulative Count of Cities Lost:							
7-Day Lag (n = 1,820)	0.103* (0.044)	0.087** (0.029)	0.131*** (0.033)	0.122*** (0.033)	0.126*** (0.031)	0.127*** (0.029)	0.147* (0.060)
30-Day Lag (n = 1,797)	0.096* (0.045)	0.081** (0.030)	0.128*** (0.034)	0.120*** (0.034)	0.125*** (0.032)	0.123*** (0.030)	0.143* (0.062)
90-Day Lag (n = 1,737)	0.076† (0.049)	0.071* (0.033)	0.132*** (0.036)	0.112** (0.036)	0.129*** (0.033)	0.120*** (0.032)	0.131* (0.067)
180-Day Lag (n = 1,647)	0.049 (0.056)	0.048 (0.039)	0.086* (0.038)	0.074* (0.037)	0.091** (0.035)	0.083* (0.036)	0.117* (0.073)
365-Day Lag (n = 1,462)	0.060 (0.065)	0.052 (0.047)	-0.028 (0.041)	-0.013 (0.036)	-0.034 (0.039)	0.011 (0.039)	-0.001 (0.102)

Note: Only coefficients for main independent variable, cumulative count of cities lost in Iraq and Syria, reported along with standard errors to preserve space. All models include controls (ISIS oil production, cumulative ISIS terrorists killed) but do not report their coefficients. Robust standard errors clustered by month and reported in parentheses.

<sup>a</sup>Negative binomial estimation.

<sup>b</sup>Tobit estimation, upper and lower levels censored at 0 and 3.

\*\*\* $p \leq 0.000$ .

\*\* $p \leq 0.01$ .

\* $p \leq 0.1$ .

† $p = 0.119$ .

of attacks abroad by affiliates, and attacks against interveners, countries suffering from severe religious strife, and countries to which ISIS foreign fighters returned. It is also a significant predictor of ISIS casualties abroad. However, when the cumulative loss of cities is lagged by a year, it ceases to be a significant predictor of any dependent variables. These findings show that the loss of the caliphate did not only trigger an immediate or short-term change in ISIS terrorist tactics, nor did it produce a permanent shift in ISIS tactical behavior. Rather, it fostered a tactical shift for the intermediate through roughly the 6-month term.

## Endogeneity

We do not have a strong theoretical expectation that the relationship between ISIS loss of cities and the dependent variables measuring internationalization of ISIS attacks is endogenous. Our theoretical story clearly

posits that the direction arrow points from population center losses to internationalization of ISIS activities. We do not find it theoretically compelling to argue that ISIS internationalization of attacks, affiliates, and so forth cause ISIS to lose population areas as well. However, as a check, we ran a two-stage least squares (2SLS) model in which we instrument for cumulative loss of population centers with a measure of Iraqi and Syrian government capacity. We expect that weak capacity on the part of the Iraqi and Syrian governments likely directly covaries with the error term of ISIS's ability to control and hold population centers, but do not expect it to have a direct association with ISIS's internationalization activities. This suggests that the instrument satisfies the exclusion restriction.

To operationalize our instrument, we used the Human Development Index (HDI) as an (albeit indirect) proxy of state capacity. The HDI combines literacy, life expectancy, and gross domestic product per capita into an annual index that ranges between 0 and 100. This indicator has some limitations,<sup>100</sup> but it does provide some information on the potential economic and financial resources the government can draw upon to project power. It also measures government provision of services to its citizens, another indication of government capacity. For our study, we average the Iraqi and Syrian HDI measures. Average combined HDI for the period observed was around 608.1, which is near the median for all states. The Iraqi and Syrian combined HDI declined from 2013 to 2015 but began to rebound for 2016 and 2017 as ISIS receded and government forces recaptured territory from it.

The results of the 2SLS estimations are summarized in [Supplementary Appendix Table 5](#). They show that the instrumented independent variable, cumulative loss of cities, is a significant positive predictor of all dependent variables. Furthermore, Durbin chi-square and Wu-Hausman F tests, summarized in [Supplementary Appendix Table 6](#), demonstrate that the instrument—Iraq and Syria combined HDI—satisfies the exclusion restriction.<sup>101</sup> This provides further assurance that the direction of causation runs from ISIS's loss of the caliphate to its conduct of terrorist activities abroad, rather than the other way around.

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<sup>100</sup>We also opted to use the HDI because other conventional indicators of state capacity, such as tax revenues as a percentage of GDP, are not available for Syria during the years of study. Indeed, HDI is one of the few national indicators collected for Syria over the course of the country's civil war.

<sup>101</sup>The  $p$  values for the Durbin chi-square and W-Hausman F tests are all below .05, suggesting that we may reject the null hypothesis that the relationship between ISIS loss of cities and the dependent variables is endogenous.

## Loss of the caliphate and ISIS internationalization

We find consistent evidence that ISIS's loss of its caliphate prompted it to ramp up terrorist activity abroad, outside Iraq and Syria. The results presented in this paper indicate that insurgencies do not necessarily become less of a threat when they lose control over territory and population centers. Rather, we find the loss of control over populated areas can prompt armed movements to adopt tactical changes that create new security threats on a wider geographic scale. Our findings indicate that as ISIS lost control over population centers, it compensated by increasing its use of terrorist attacks in other countries. As its caliphate evaporated, ISIS affiliates also increasingly launched attacks. Additionally, we find that ISIS more frequently used higher-casualty and more extreme forms of terrorism, such as suicide terrorism, and also more frequently targeted civilians as it sustained population center losses. Finally, we produce evidence that ISIS conducted attacks abroad intended to exploit sectarian and religious divisions in response to its loss of population centers. This latter finding may suggest that insurgencies that have lost territory and stature seek to strategically exploit ethnic, social, or political divisions to compensate for losses.

Our study represents a first-cut investigation of the impact of loss of the caliphate on ISIS tactical behaviors. As such, it suffers from important limitations that can be addressed in future research. A follow-up study should adopt a more comprehensive and perhaps granular measure of ISIS territorial control and control over people during the caliphate period. Future research should also more closely examine the array of causal mechanisms linking territorial loss to the internationalization of violence. For instance, to examine how resource loss affects patterns of attacks, scholars could use data on ISIS's taxing infrastructure from Revkin.<sup>102</sup> To parse out the effects of reputational costs, researchers could employ Daniel Milton's data on ISIS's propaganda output to explore how the quality and quantity of the group's propaganda changes in response to territorial loss.<sup>103</sup>

These results have implications for both the academic and policy communities. For scholars, they demonstrate the importance of change in insurgent group status—strength, capacity, control over territory—for the group's tactical and strategic decisions moving forward. As previously noted, scholarly work on the implications of insurgent control over territory for its patterns of tactical violence have adopted a static view of territorial control, typically comparing insurgent and rebel movements that control territory with those that do not. We believe this obscures important

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<sup>102</sup>Revkin, "What Explains Taxation by Resource-Rich Rebels?"

<sup>103</sup>Daniel Milton, "Fatal Attraction: Explaining Variation in the Attractiveness of Islamic State Propaganda," *Conflict Management and Peace Science* 37, no. 4 (July 2018): 430–50. Milton's data and appendix can be found at: <https://journals.sagepub.com/doi/suppl/10.1177/0738894218759008>.

parts of the relationship between territory and tactics. Our study also illustrates the importance of considering violence by groups beyond the battlefield or domestic sphere. Groups such as ISIS, when facing defeat, compensate by shifting their use of violence to an international forum.

For the policy community, the results of our study empirically illustrate that there is a “cost” to defeating ISIS in Iraq and Syria. From a policy standpoint, policymakers and security officials must not become complacent when their nonstate rivals begin to decline in power. Additionally, we provide the first systematic empirical examination of policy analysts’ expectations regarding how ISIS will respond to the decline of its caliphate. As ISIS’s behavior demonstrates, groups can become even more violent as they conventionally decline, presenting further security challenges to a wider number of states.

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### **Data Availability Statement**

The data and materials that support the findings of this study are available in the Harvard Dataverse at <https://doi.org/10.7910/DVN/6DJFDZ>.