Supplementary Materials for

**TESTING THE SURGE:
WHY DID VIOLENCE DECLINE IN IRAQ IN 2007?**

Stephen Biddle, Jeffrey A. Friedman, and Jacob N. Shapiro

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These materials supplement the analysis in "Testing the Surge: Why Did Violence Decline in Iraq in 2007?" The document follows the organization of the paper, providing additional empirical evidence and explanation of relevant data. Section I provides additional information on the paper's "Evidence and Approach" section. Section II provides additional information for the section of the paper addressing the argument that violence declined in Iraq as a result of sectarian cleansing. Section III provides robustness checks for the analysis of trends in the "Comparing Surge and Synergy" section of the paper.

   Replication data are available at http://www.princeton.edu/~jns/publications.html. These include a .dta file containing information on SIGACTs across Iraq as a whole from 2004-08 organized by district-month, a .dta file containing information on monthly SIGACTs within each of the 38 areas of operation discussed in the paper, and Stata code for replicating results in the paper and this supplement. For further information, please contact Jeffrey A. Friedman (Jeffrey_Friedman@hksphd.harvard.edu).

Index of Supplementary Figures and Tables

I. Supplement for "Evidence and Approach" section

The paper draws on two main sources of evidence. The first is a database of Significant Activities (SIGACTs) recorded by Multinational Forces-Iraq (MNF-I) between 2004-08. Those data are described in the paper. The first published article to use them was Eli Berman, Jacob N. Shapiro, and Joseph Felter, "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq," *Journal of Political Economy*, Vol. 119, No. 4 (August, 2011), pp. 766-811. For more information on the SIGACTs data, contact Shapiro at jns@princeton.edu. For other projects drawing on SIGACTs, see http://www.princeton.edu/~jns/.

The second principal source of data in the paper is seventy structured interviews with Coalition officers who participated in the campaign from 2006-08. These interviews span a wide range of Iraq's key terrain, though they do not provide complete coverage of Iraq during this period.

As a way of indicating interview coverage, **Supplementary Figure 1** indexes interviews to Iraq's "Key Districts," the 25 districts in Iraq with the most SIGACTs in 2006. Those 25 districts accounted for more than 90 percent of the SIGACTs in Iraq in 2006, and the reduction in this violence is the phenomenon that the paper seeks to explain. Interviews also covered several of Iraq's less violent areas; see Table 1 in the paper, which contains information on the peak number of monthly SIGACTs in each of the areas of operation (AO) the paper analyzes. Entries in Supplementary Figure 1 give the interview numbers for interviews pertinent to the given district and time period.

Each interview began by asking interviewees to draw the boundaries of their unit's AO on a map. Those AO boundaries were then geo-coded in a GIS using geo-rectified versions of each map as well as comments made in the interviews and follow-up calls with interviewees. Since individual SIGACTs are geocoded, we can aggregate incidents within these AO boundaries to identify AO-specific time trends in violence, which are the primary dependent variable used in the "Comparing Surge and Synergy" section of the paper. **Supplementary Figure 2** presents a map of the 38 AOs studied in that section of the paper – these are the AOs for which there is also information about the date at which the first Sons of Iraq (SOI) unit stood up. Note that there is variation in the location of these AOs, the size of these AOs (with urban areas typically divided into smaller units of battlespace), and the dates at which SOIs stood up within them.

The interviews focused on explanatory variables, such as when SOI units stood up, how Coalition forces were positioned and employed, and whether interviewees observed demographic shifts within their battlespace. Because the combination of geocoded AO boundaries and the administratively-collected SIGACTs data provide systematic information on violence trends, we could avoid relying on retrospective assessments of when and why violence trends changed, a practice that would inevitably conflate dependent and independent variables. We asked interviewees to provide only factual information that they observed first-hand.

Supplementary Figure 3 presents the basic interview questionnaire that structured these interviews. This question list was approved by Institutional Review Boards at Harvard University (Cambridge, Mass.), and the U.S. Army Command and General Staff College (Ft. Leavenworth, Kans.). Copies of the interviews have been made available to researchers through the Military History Institute (Carlisle Barracks, Penn.). For more information on the interviews, contact Friedman at Jeffrey_Friedman@hksphd.harvard.edu.

SUPPLEMENTARY FIGURE 1. Interview Coverage of Key Districts

District	Late 06	Early 07	Late 07
Abu Al-Khaseeb			
Abu Ghraib	17	17	7
Al Resafa		13	13
Al Sadr			
Al Daur	25, 53, 54	25, 53, 54	25, 53, 54
Al-Hamdaniya	5		
Al-Hawiga			9
Al-Mahawil		4, 15,34	4, 15, 16,34
Al-Muqdadiya			18, 63
Balad		24,68	24,68
Baladrooz			20
Basrah	47		
Fallujah	8	8	
Haditha	31,45, 64	31,45, 64	
Heet		39	39
Karkh	10, 23,37	1, 23,37	1, 23,37
Khadamiya	1, 2, 10, 23, 35	1, 23, 35	1, 7, 23,35
Khanaqin			
Kirkuk			9, 30,62
Madain		15, 51, 65	15, 51, 65
Mahmoudiya	6, 14,36, 69	6, 26, 69	6, 11,16,18, 21,26,38,43,69
Mosul	5, 59	29	29
Ramadi	1,28,33,40	27,28,39,40, 52	27,28,39,52, 64
Tarmia		24,68	24,68
Tikrit	25, 53, 54	25, 53, 54	25, 53, 54

SUPPLEMENTARY FIGURE 2. Locations of Relevant Areas of Operation
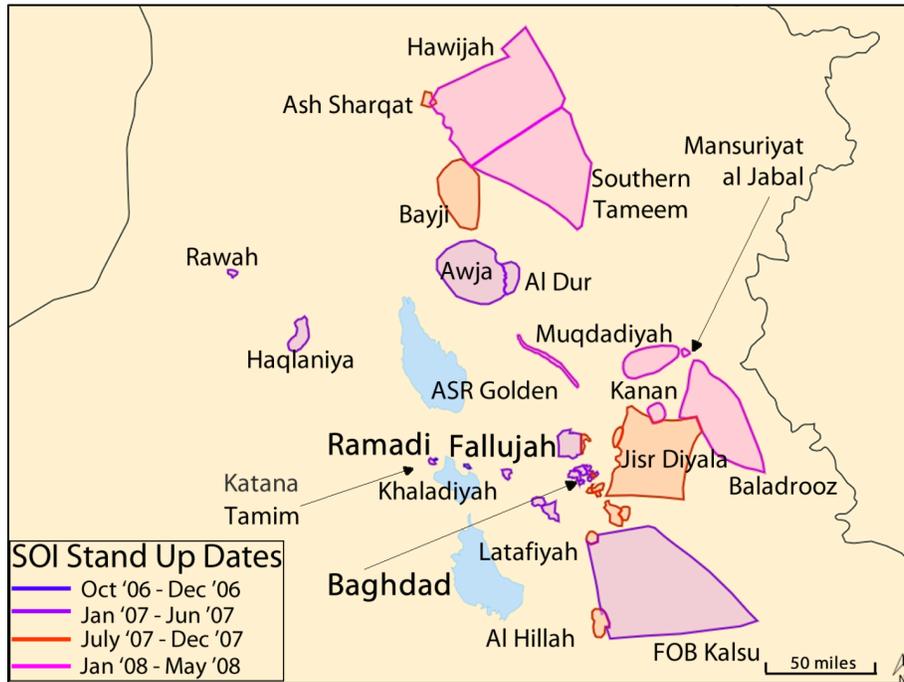
Focus on Baghdad:
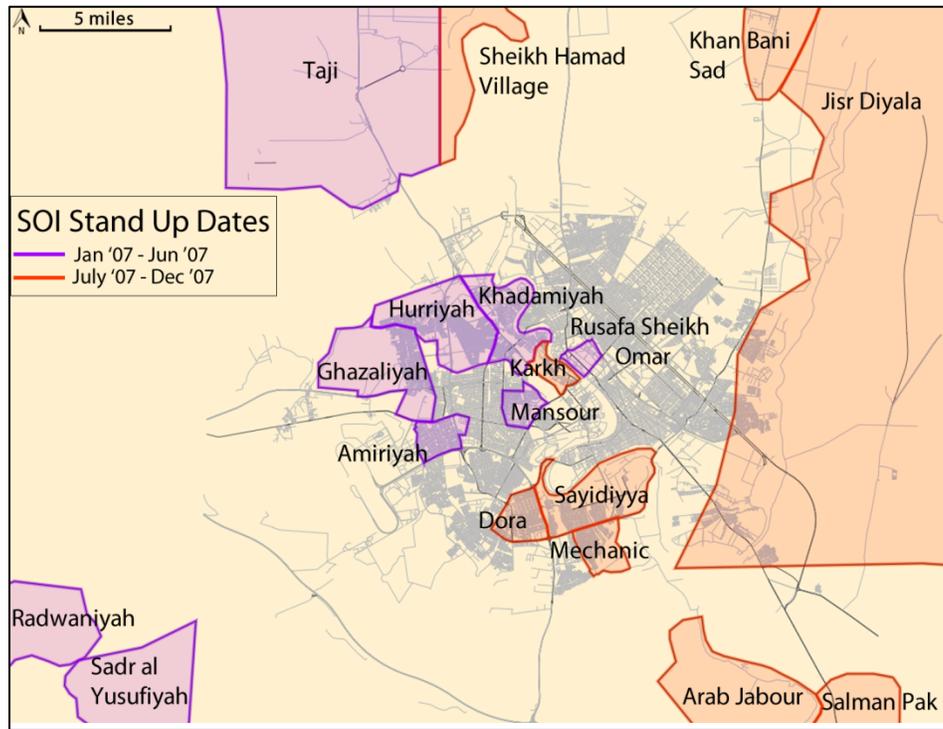
SUPPLEMENTARY FIGURE 3. Structured Interview Questionnaire

a. What was your unit?

b. When did you arrive in Iraq and when did you leave?

c. What was your AO? Can you draw your AO on a map?

d. Did your AO change during your tour? [If so, describe subsequent AOs and also draw on map]

e. Roughly what was your average present-for-duty strength? Did it change over time? If so, how and when?

a. Roughly what was the sectarian makeup of your AO at the beginning of your tour?

b. If your AO was mixed-sect, how were the sects distributed? Were they intermingled by apartment building, by city block, by neighborhood, or by town or region?

c. Did sectarian demography in your AO change by the end of your tour? If so, what did it become?

d. Were there ISF active in your AO? If so, which ones (IA, IP, INP), and roughly what was their present-for-duty strength? Did this change over time, and if so, how?

e. Were there SOI/CLC/other community watch forces active in your AO?

f. If so, roughly how many security providers did they field/how many members did they have? When did they stand up?

g. Do you have a sense of what members of these groups were doing before they signed up?

h. Did they interact with you? Did they provide intell (e.g. IED locations, safe house/bomb factory locations, AQI identities)? Did they go out on ops with you? Did the behavior of these groups change over time?

i. If there were JAM active in your AO, did their combat intensity change over time; if so how and when?

j. Did you observe any significant Iraqi-on-Iraqi sectarian violence? If so, where did this occur? Was it spread throughout the AO, or concentrated in certain locations? Did these locations change over time, and if so, how? Did it wax or wane during your tour? And if it changed significantly in intensity, about when did this occur?

k. How were your forces disposed? Did you deploy COPs, or just FOBs? How many? How were they garrisoned (by single platoons, companies, or battalions)? Were there major changes in the distribution of your forces?

l. Did you patrol on foot or mounted? How large was the typical patrol? Did your SOP for conducting patrols change at any point?

m. Did you conduct offensive sweeps? If so, in what size and how frequently?

n. Did your unit provide any economic assistance or reconstruction activity? If so, in roughly what quantity and of what kind?

o. Did your unit conduct KLEs? If so, how many? And with whom?

p. Who were the primary threat forces in your AO? Did this change during your tour?

q. Roughly how many insurgents were you facing? Did this change during your tour?

r. If the numbers declined, did your unit assess this to have resulted from combat attrition, from withdrawal of survivors from the AO, or from stand-down of combatants who remained in the AO after demobilization?

s. Did the rate of tips from the population change over time during your tour? If so, how?

t. Did the rate at which tips proved actionable change over time, and if so how? How about the rate at which tips proved accurate, or survived vetting?

u. Roughly what fraction of your operations resulted from tips from the population? Did this change over time during your tour, and if so, how?

v. Did the ISF interact with SOI/CLC/community watch groups or operate within their AOs? Was there any apparent conflict or violence between them? Did the behavior of the ISF change over time (e.g., did they become better able to conduct independent patrols)?

II. Supplement for "Sectarian Cleansing" section

This section supports the claim in the paper that:

> "Throughout 2005 and 2006 much of the violence in Iraq occurred in Anbar Province, which is almost entirely Sunni and where no un-mixing could thus occur. In fact, for most of 2006, SIGACTs data show more insurgent attacks in Sunni districts than in mixed ones, and violence began to decline in Sunni areas a full eight months before it did in mixed areas. The timing of the reductions in violence also suggests that nonsectarian violence (such as attacks on U.S. forces) was not epiphenomenal to sectarian bloodshed. The IBC data show that sectarian violence actually lags behind both insurgent attacks on coalition forces and civilian casualties resulting from combat: total SIGACTs began to decline in May 2007, three months before sectarian violence turned."

Supplementary Figure 4 demonstrates these trends from 2006 through 2008. Panel A shows the trends in SIGACTs in Anbar and Baghdad governorates, illustrating that violence began to decline in Anbar fully 8 months before it did so in Baghdad.

Panel B shows the trends in SIGACTs in mixed and Sunni districts, highlighting two facts.[1] First, for 7 months of 2006 there was more total violence in Sunni districts than in mixed ones – and this is despite the fact that the aggregate population of districts we classify as Sunni is 2.3M people and that of mixed districts is almost 9M people. Roughly speaking, Sunni districts were 3.5 times as violent on a per-capita basis in 2006. Second, the decline in violence in Sunni districts begins 8 months before the decline in mixed districts.

Panel C shows that the early trend-break in Sunni districts was driven by events in Anbar. In Sunni areas outside of Anbar, violence is increasing until it peaks in mid-2007.

Panel D shows the trends in civilian casualties (from the IBC data) classified as stemming from sectarian violence and those which occurred during combat, whether they were caused by Coalition or insurgent forces.[2] Civilian casualties from sectarian violence begin to decline in August 2007 while total SIGACTs in mixed areas began to decline in May of that year. Civilian casualties incident to combat show no clear trend during the critical period.

These plots also show that violence in Anbar governorate crested before the Surge, as others have previously noted and as we describe in the paper.[3] As we argue, those trends are exceptions that prove the rule. The trends in Anbar changed first in those districts where local commanders were applying a Surge-like tactical approach and where prominent local leaders had decided to

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[1] Districts are coded as Sunni if more than 66% of the population in the district was Sunni and mixed if no ethnic group comprised more than 66% of the population. Ethnic shares were calculated by combining maps from the Gulf 2000 project with gridded population data from LandScan (2008) which provides population estimates for roughly every 1km^2 square worldwide (grid cells are 30 arc-seconds per side). Similarly-constructed data drawing on different base maps are used in Luke N. Condra and Jacob N. Shapiro, "Who Takes the Blame? The Strategic Effects of Collateral Damage. *American Journal of Political Science*, Vol. 56, No. 1 (January 2012), pp. 167-187, with corrections made to the classifications of Ramadi and Falluja.

[2] See Condra and Shapiro, "Who Takes the Blame?" for coding details and reliability checks.

[3] See the references in the paper's note 3, which surveys the literature on what we call the "Awakening thesis."

switch sides by mid-2006.[4] The section of the paper on "Combining Surge and Synergy" provides more details and citations relevant to this argument.

Assessing Sectarian Demographics in Iraq

An important challenge for any claim about the role of sectarian cleansing in Iraq is to establish just what Iraq's sectarian demographics were during the 2006-7 campaign. This is not trivial. Iraq has had no official census since 1957; even that census did not distinguish Sunni from Shia districts, and there have been massive population movements since then. In the absence of such an authoritative official source, all overall assessments of nationwide trends in sectarian violence – both ours and cleansing school adherents' – are therefore estimates and approximations. The purpose of this section is to present the method behind our estimates, and to evaluate the sensitivity of our findings to reasonable variations in that method. (This discussion only pertains to the paper's aggregate analyses of broad trends over large areas; note that the section on ethnic cleansing in the paper also contains an in-depth discussion of dynamics in Baghdad that is based on first-hand, local observations by Coalition officers).

Our approach to measuring Iraq's nationwide sectarian demographics follows the procedure in Condra and Shapiro (2012) and Shapiro and Weidmann (2012).[5] The basic source for Iraqi sectarian geography here is the Gulf 2000 project's series of maps showing the sectarian mix for different regions of Iraq, including maps of all of Iraq,[6] central Iraq,[7] and the 2003 map of the ethnic composition of Baghdad.[8] These maps provide a spatial rendering of contiguous areas coded as Sunni Arab; Shiite Arab; mixed Sunni-Shiite Arab; Kurdish; Assyrian, Chaldian, Armenian, and other Christian; Turcoman; and other. These maps are the most detailed treatments we are aware of on this score, but as categorical codings they are necessarily somewhat aggregate, and the exact population proportions needed to qualify for "mixed" status are undefined; in the absence of a specific figure, it is assumed that Gulf 2000's "mixed" areas average 50 percent Sunni, 50 percent Shia populations overall. For each map, GIS tools were used to trace the boundaries of each contiguous area digitally. These contiguous areas were then overlaid with Iraqi district boundaries, and population figures by sect for each district were computed using Oak Ridge National Laboratory's LandScan dataset, which provides population estimates at the 1km level for the entire globe, producing estimates for the population in each district that is "Sunni," "Shiite," and "mixed." The varying proportions of Sunni, Shiite, and "mixed" within each district require a

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[4] On Ramadi, see Neil Smith and Sean McFarland, "Anbar Awakens: The Tipping Point," *Military Review,* March-April 2008, pp. 41-52; Anthony E. Deane, "Providing Security Force Assistance in an Economy of Force Battle," *Military Review* (January/February 2010), pp. 80-90; and the discussion in the "Comparing Surge and Synergy" section of the paper.

[5] Condra and Shapiro, "Who Takes the Blame?"; Shapiro and Nils B. Weidmann, "Is the Phone Mightier than the Sword? Cell Phones and Insurgent Violence in Iraq," Working Paper, Princeton University, 2012. A very similar procedure is used with respect to African countries by Lars-Erik Cederman, Weidmann, and Kristian Skrede Gleditsch (2011), "Horizontal Inequalities and Ethnonationalist Civil War: A Global Comparison," *American Political Science Review*, Vol. 105, No. 3 (August, 2011), pp. 478-495, and by Condra, "Ethnic Group Rebellion in Civil War," Ph.D. dissertation, Stanford University, 2010.

[6] Gulf/2000 Project Map Collection, "Iraq, Ethnic Groups." See http://gulf2000.columbia.edu/maps.shtml for the Gulf/2000 Project's work.

[7] Gulf/2000 Project Map Collection, "Central Iraq, Ethnic Groups."

[8] Gulf/2000 Project Map Collection, "Baghdad, Iraq, Ethnic Composition in 2003."

coding rule to characterize the district as a whole; following Shapiro and Weidmann (2012), we code districts with populations that are more than 66 percent Sunni as "Sunni," districts with populations that are more than 66 percent Shiite as "Shiite," and others as "mixed." ("Sunni-Shia mixed" districts are thus those with Sunni populations of between 34 and 66 percent of total residents.)[9]

These codings thus require an assumption external to the Gulf 2000 source on the exact makeup of Gulf 2000's categorically described districts and the cutoff on assumed Sunni-Shiite imbalance required to qualify for "mixed" as opposed to "Sunni" or "Shiite" status. **Supplementary Figure 5** evaluates the sensitivity of our findings to variations in the assumed cutoff.

The results suggest that our findings are robust to a wide range of such variations. A 50 percent cutoff is the lowest threshold possible. We also consider thresholds of up to 75 percent for either sect; to call a district whose population has a preponderance of much more than three-quarters for one sect over the other "mixed" is to stretch the term's definition well beyond normal intuition. Note that these thresholds are symmetric: "70 percent," for example, means that a district with 71 percent Sunni population is coded "Sunni," a district with 71 percent Shiite population is coded "Shiite," a district with 65 percent Sunni and 35 percent Shiites is coded "mixed," and a district with 35 percent Sunni and 65 percent Shiite is also coded "mixed," and so on. For all the variations considered, the results are consistent with the findings in the paper: violence crests sooner for "Sunni" districts than in "mixed" ones.

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[9] An alternative is to use voting results from Iraqi elections. By identifying which parties had a clearly sectarian identity and then assessing their vote share, one can get a rough estimate of the sectarian make-up of an area. Unfortunately, vote shares in the December 2005 elections in Iraq (the relevant election for our analysis) were never tabulated below the provincial level, and so are less useful in the context of this analysis (though in "Can Hearts and Minds Be Bought?" Berman, Shapiro, and Felter use those data in an analysis of the impact of aid spending on the conflict in Iraq). Note that the procedure above yields very similar results if the CIA's 2003 map of ethnic demographics in Iraq is substituted for the Gulf 2000 map, as long as the former's mistake regarding the ethnic mix in Falluja and Ramadi is corrected. The CIA map can be found at http://www.lib.utexas.edu/maps/middle_east_and_asia/iraq_ethno_2003.jpg (accessed July 1, 2012).

SUPPLEMENTARY FIGURE 4. Trends in Violence in Different Regions
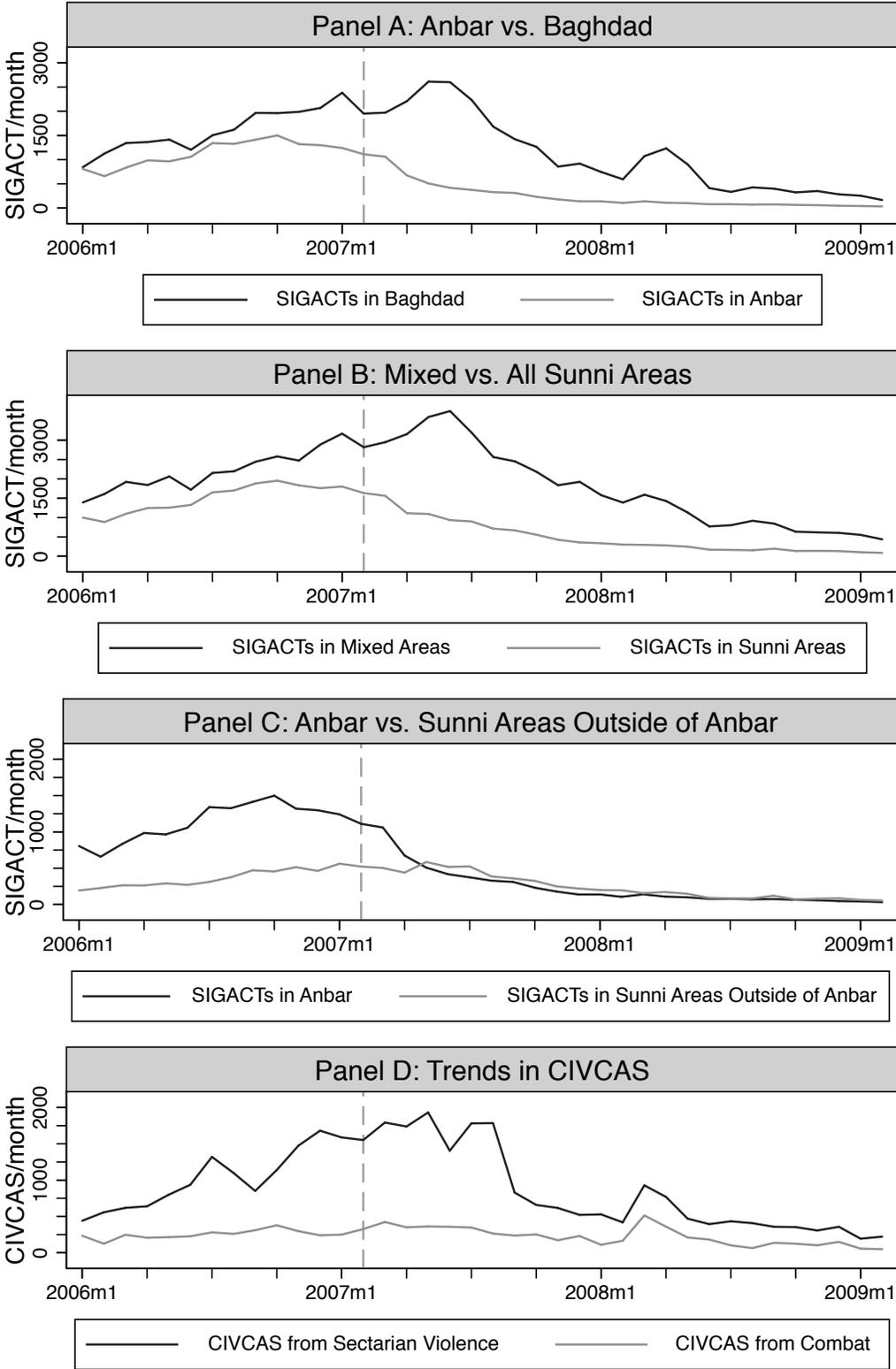
SUPPLEMENTARY FIGURE 5. Trends in Violence Varying Threshold for Sect

Mixed vs. Sunni Areas Varying Threshold
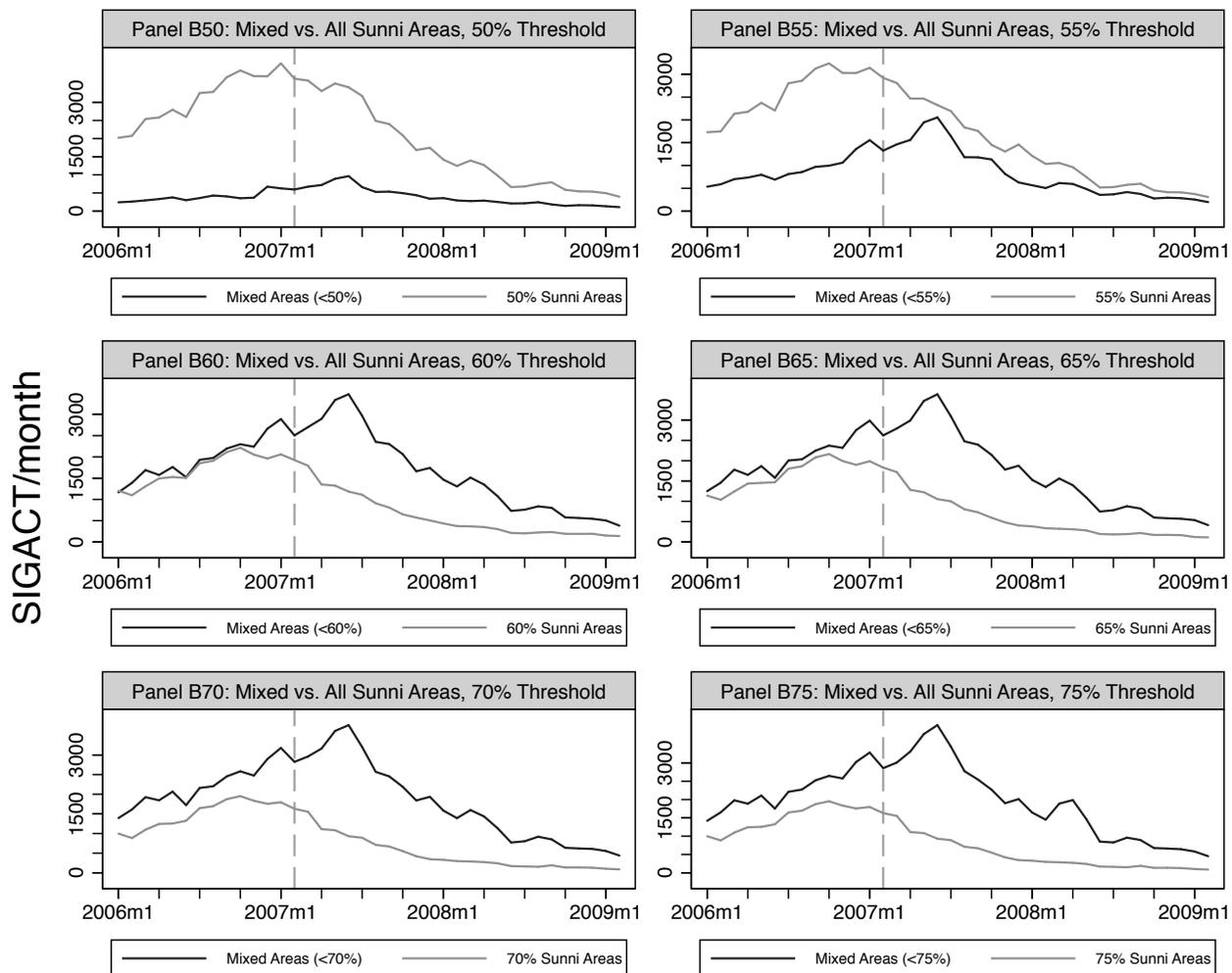
III. Supplement for "Comparing Surge and Synergy" section

The empirical discussion in this section of the paper revolves around an analysis of violence trends in the 38 areas of operation (AOs) for which there is information on when Sons of Iraq (SOI) units first stood up. These violence trends were estimated using data on monthly SIGACTs within each of the interviewees' AOs. Table 1 in the paper provides information on each of the 38 relevant AOs. Table 2 then aggregates those AOs into different groups, demonstrating that violence fell faster after SOI standup in areas that mattered most. **Supplementary Table 1** provides information on each AO that determined these various groupings.

The paper demonstrates that SOI standup generally coincided with an acceleration of the rate at which violence declined across the 38 relevant AOs. The empirical results presented in the paper measure these violence trends using piecewise linear regression over three-month intervals before and after SOI standup. Thus each linear regression comprises four data points: the month in which SOI standup occurred, and the three months beforehand or afterward. **Supplementary Figure 4** provides a graphical example of these piecewise slope estimates for two AOs, Amiriyah and Jisr Diyala.

The choice to examine violence trends across three-month intervals does not determine the results of the analysis; as footnote 52 explains, "when the slope of violence is computed for any interval from one to twelve months after SOI standup, it falls faster on average across all 38 AOs than it does for any interval from one to twelve months prior to SOI standup." **Supplementary Table 2** presents the data behind this claim. In addition, footnote 52 states that "We also examined the robustness of these results by dropping all SIGACTs that were positively identified as not occurring from combat. All of these patterns remained substantively the same: for example, violence fell by 6.2 percentage points per month on average in the three months following standup, versus 2.5 in the three months prior." **Supplementary Table 3** demonstrates these results, and how more generally, re-operationalizing the dependent variable to exclude non-combat SIGACTs does not meaningfully change the paper's empirical findings.

Footnote 56 explains that "[O]ur analysis [is not] confounded by violence trends that were already declining at an accelerating rate prior to SOI standup. Violence trends across these 38 AOs are actually weakly convex: if we regress monthly violence on time elapsed since violence peaked in each AO, then a second-order term for duration has a positive coefficient that is statistically significant at the p=0.001 level no matter what time period the regression covers." **Supplementary Table 4** presents these regressions. This table shows the results of 11 regressions that examine violence trends in the period after violence peaks in each of the 38 relevant AOs. The dependent variable is SIGACTs as a percentage of the maximum observed monthly values in each AO. The independent variables are first- and second-order terms for the number of months elapsed since violence peaked in each AO. Normalizing violence levels and time scales in this way allows us to examine how violence generally trended after violence peaked in each AO. The 11 regressions in Supplementary Table 4 capture time trends across intervals ranging from two to twelve months after violence peaked. For all of these intervals, violence trends are negative and convex. All coefficients presented in this table are statistically significant at the P=.001 level.[10]

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[10] Establishing the general convexity of violence trends is important, because if violence tended to decline in a concave manner, then we would *expect* to see this decline accelerate regardless of what happened after violence peaked. Concave violence trends would make it difficult to examine cases where SOIs stood up after violence peaked and to make a judgment about whether the SOIs then played a meaningful role in causing violence to decline further or faster.

SUPPLEMENTARY FIGURE 6. Piecewise Slope Estimate Examples
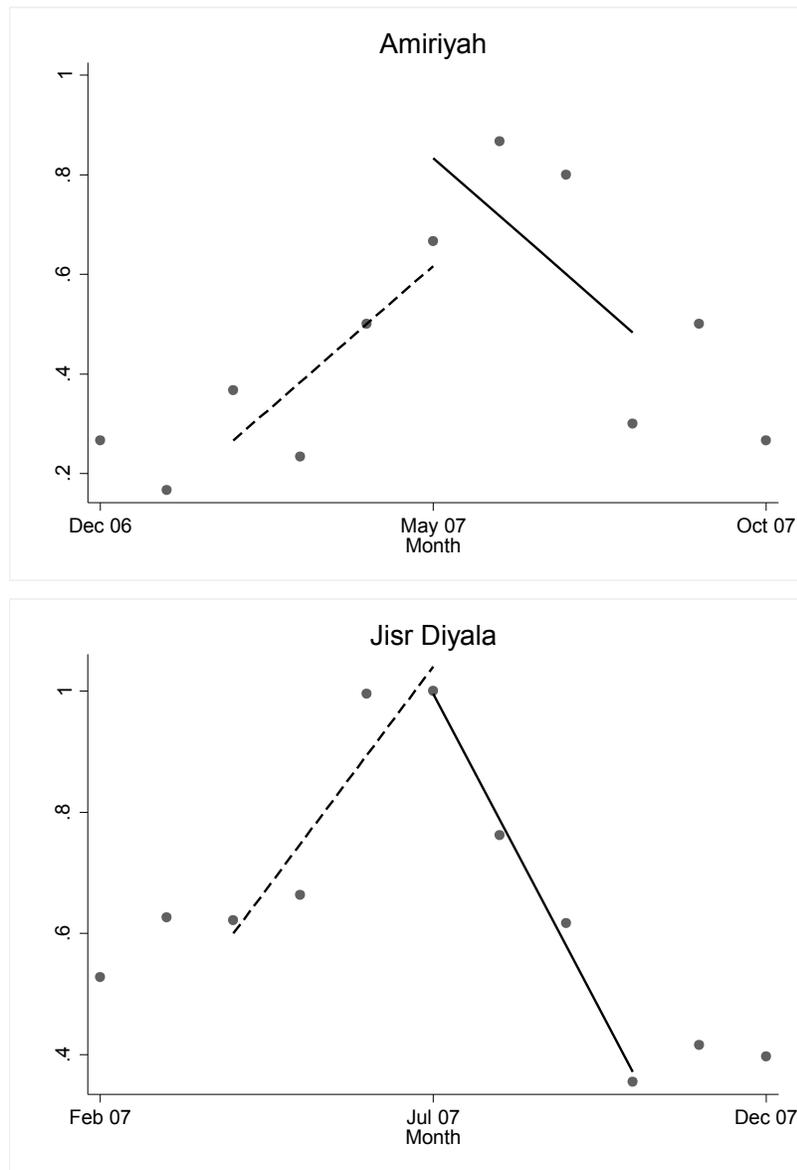
Obviously, violence trends will become convex at some stage, as this variable is bounded at zero – what Supplementary Table 4 shows, however, is that violence is not concave within *any* temporal window. This helps to establish, as we write in note 56, that the empirical results "are not simply artifacts of nonlinear violence trends."

SUPPLEMENTARY TABLE 1. Additional Information on Relevant AOs.

Area of Operation	ID Number	Pop.*	Pop. Density	SIGACTs in standup month	%Peak†	Pre-Surge violence
Al Dur	10	9354	3.3e-4	20	.67	3
Al Hillah	4	595669	1.1e-3	11	.61	7.25
Amiriyah	12	93855	1.6e-3	76	.89	69
Arab Jabour	13	6970	4.1e-3	21	.25	8.25
Ash Sharqat	8	10973	5.8e-4	0	.00	0.5
ASR Golden	44	6718	2.0e-4	22	.15	101.75
Awja	35	64136	1.3e-4	64	.78	52.75
Baladrooz	33	44032	6.1e-5	11	.26	29.75
Bayji	9	104571	1.3e-2	78	.52	107.25
Dora	14	99211	6.9e-5	126	.48	182.5
Fallujah	39	224705	2.0e-3	60	.41	131.25
FOB Kalsu Area	37	418988	1.2e-2	183	1.0	123.5
Ghazaliyah	40	105117	1.1e-4	61	.39	132.75
Haqlaniya	1	54383	1.5e-2	64	.40	126.75
Hawijah	31	176158	6.8e-5	28	.24	54.25
Hurriyah	23	258958	7.9e-5	64	.39	144.75
Jisr Diyala	34	340209	1.3e-2	214	1.0	150.5
Kanan	42	8477	9.1e-3	5	.24	6.75
Karkh	45	86964	4.8e-4	9	.09	58
Katana	26	25374	2.1e-2	119	1.0	99
Khadamiya Urban	16	217023	1.2e-2	55	.77	49
Khalidiyah	3	9380	3.7e-2	29	.62	28.5
Khan Bani Sa'ad	5	28417	2.7e-4	20	.47	27.25
Latifiyah	17	4843	4.9e-5	3	.08	17.25
Mansour	18	87806	2.7e-5	26	.79	16
Mansuriyat al Jabal	41	8852	2.4e-5	0	.00	10.5
Mechanic	15	18496	3.8e-3	9	.08	57.75
Muqdadiyah	36	53590	1.5e-4	17	.27	27
Radwaniyha	43	3015	5.1e-5	4	.18	2.25
Rawah	2	19326	9.0e-3	5	.25	11.5
Rusafa Sheikh Omar	29	129194	3.2e-3	28	.52	32.75
Sadr al Yusufiyah	20	4791	5.6e-4	20	.24	45.25
Salman Pak	21	3397	8.4e-5	30	.61	22
Sayidiyya	22	114732	8.0e-5	52	.69	50
Sheikh Hamad Village	24	14016	7.0e-5	7	.24	8.25
Southern Tameem	32	74732	1.8e-2	18	.18	58.75
Taji	30	59404	7.1e-6	51	.31	104.5
Tamim	27	44863	4.5e-3	76	1.0	52.5

*: population and area estimates are from LandScan data. Population density calculated as persons per square meter.

†: "%Peak" indicates the ratio of SIGACTs in the month where SOIs stood up in each AO to the peak number of SIGACTs in that AO in any other month in the data set.

SUPPLEMENTARY TABLE 2, Violence Trends Pre- and Post- SOI Standup, Measured Across Different Intervals of Time

Interval Length	Avg. Slope Prior to Standup	Avg. Slope After Standup
1 month	-1.9	-5.9
2 months	-1.2	-5.6
3 months	-2.5	-5.8
4 months	-2.5	-4.7
5 months	-2.1	-4.2
6 months	-2.3	-4.3
7 months	-1.8	-4.0
8 months	-1.6	-3.9
9 months	-1.0	-3.8
10 months	-0.4	-3.3
11 months	-0.1	-3.0
12 months	+0.3	-2.8

SUPPLEMENTARY TABLE 3, Violence Trends Pre- and Post- SOI Standup, Measured Across Different Intervals of Time, Excluding SIGACTs Positively Identified as Being Non-Combat

Interval Length	Avg. Slope Prior to Standup	Avg. Slope After Standup
1 month	-0.6	-6.1
2 months	-1.1	-6.1
3 months	-2.5	-6.2
4 months	-2.3	-4.8
5 months	-1.3	-4.0
6 months	-1.5	-3.9
7 months	-1.0	-3.6
8 months	-0.6	-3.6
9 months	-0.7	-3.5
10 months	+0.4	-3.0
11 months	+0.5	-2.7
12 months	+0.8	-2.5

SUPPLEMENTARY TABLE 4. First- and Second-Order Violence Trends

Interval Length	Months elapsed	Months elapsed^2	Constant	N	R^2
2 months	-0.49 (.10)	0.14 (.05)	0.97 (.04)	114	0.40
3 months	-0.35 (.06)	0.06 (.02)	0.96 (.04)	152	0.40
4 months	-0.31 (.04)	0.05 (.01)	0.95 (.04)	190	0.40
5 months	-0.25 (.03)	0.03 (.01)	0.93 (.04)	228	0.42
6 months	-0.23 (.02)	2.2e-2 (4.2e-3)	0.92 (.03)	266	0.41
7 months	-0.20 (.02)	1.7e-2 (3.0e-3)	0.90 (.03)	304	0.40
8 months	-0.18 (.01)	1.4e-2 (2.2e-3)	0.89 (.03)	342	0.38
9 months	-0.17 (.01)	1.3e-2 (1.7e-3)	0.88 (.03)	380	0.37
10 months	-0.15 (.01)	1.0e-2 (1.4e-3)	0.86 (.03)	418	0.37
11 months	-0.13 (.01)	7.7e-3 (1.1e-3)	0.84 (.03)	456	0.37
12 months	-0.12 (.01)	5.9e-3 (8.9e-4)	0.82 (.03)	494	0.38