

Data Notes

for

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The Cease-Fires Data Set Time Varying Covariates Version November 2002

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GENERAL COMMENTS:

Universe of Cases:

Cease-fires in interstate wars ending between 1946 and 1994. There are 48 cases in the data set, each representing a dyadic cease-fire between principal belligerents in a Correlates of War (COW) interstate war.¹

“Principal belligerents” are the main participants in a war, defined as states whose troop contribution was at least 1/10th the number contributed by the largest troop provider. (Source: Clodfelter 1992). For example, the Korean War includes the US and South Korea vs. China and North Korea, for a total of 4 dyads (rather than 28 dyads if every minor participant was included).²

¹ For COW coding criterion see Singer and Small 1994 and Singer 1980. Note: Vietnam-Cambodia (warnumb=187) is excluded because there was no cease-fire. The interstate war “ends” when Vietnamese forces replace Pol Pot with a new puppet government (which signs an agreement with Vietnam). However, because the Khmer Rouge continue to fight Vietnamese forces and the new Cambodian government, this war simply becomes a civil war.

² In a few cases, a state meets this formal rule, but not necessarily our common understanding of the main players in the war: Jordan’s peripheral participation in the Yom Kippur War (id=31, warnumb=181); Cuba’s role in the Ethiopian Somalian war (id=35, warnumb=189); Libya’s role in the Ugandan-Tanzanian war (id=38, warnumb=190). These cases are marked by drop=1 for robustness checks (see below).

Wars which start and stop more than once are split into separate cases for each cease-fire (warnumb numbers with .2, e.g. 148.2, indicate such cases). COW marks dates participants left and reentered the war (yearlef, yearent2, yearlef2, etc.). Where research turned up cease-fires that went into effect but subsequently failed within single COW wars these cases were also split so that each cease-fire is considered a separate war.

Each case consists of multiple observations over time. Each observation runs from the cease-fire or the end of the previous time period, until the end of the calendar year, a substantial change in agreement terms (e.g. the signing of a follow-up agreement), or another war between the same belligerents, whichever comes first.

For each case, observations run continuously from the cease-fire until another war or January 1 1998, at which point the data are censored.³ Data adapted from dyad-year data generated in EUGene. (Bennett and Stam 2000. Software available at www.eugenesoftware.org)

There are a total of 876 observations in the data.

Notes:

id=9 (Palestine 2) Lebanon & Israel fight again 11 April 1992, (See Maoz 2001).

id=21 (North vs South Vietnam) is censored the day after the cease-fire in 1975 because South Vietnam ceased to exist.

id=28 (India-Pakistan after Bangladesh war) war resumes (Kargil 1999) after these data are censored.

id =39 (First Sino-Vietnamese) date of cease-fire failure somewhat unclear. COW3 lists the Second Sino-Vietnamese war as starting on January 5 1987, but MID lists it as starting in October 1986 (the exact day is missing). An earlier version of COW (COW2) listed the war as starting in September 1985. Bercovitch and Jackson 1997, p.216 note clashes until March 1987, "with particularly heavy fighting in October 1986 and January 1987." I use October 15, 1986 as the day the next war begins.

Data were stset in STATA using the following command:

```
stset date1, id(id) failure(newwar) time0(date0) origin(time date0)
```

Analysis time is in days.

³ Note that there is a break in id=8 (Israel-Syria) because Syria "ceases to exist" between for 1959 and 1960 while united with Egypt as the UAR.

id	War	Between		Cease-Fire	War Resumes
1	Palestine 1	Israel	Iraq	18 Jul 1948	15 Oct 1948
2	Palestine 1	Israel	Egypt	18 Jul 1948	15 Oct 1948
3	Palestine 1	Israel	Syria	18 Jul 1948	15 Oct 1948
4	Palestine 1	Israel	Lebanon	18 Jul 1948	15 Oct 1948
5	Palestine 1	Israel	Jordan	18 Jul 1948	15 Oct 1948
6	Palestine 2	Israel	Iraq	31 Oct 1948	06 Oct 1973
7	Palestine 2	Israel	Egypt	07 Jan 1949	29 Oct 1956
8	Palestine 2	Israel	Syria	31 Oct 1948	05 Jun 1967
9	Palestine 2	Israel	Lebanon	31 Oct 1948	11 Apr 1982
10	Palestine 2	Israel	Jordan	31 Oct 1948	05 Jun 1967
11	Korean	USA	China	27 Jul 1953	
12	Korean	USA	No. Korea	27 Jul 1953	
13	Korean	So. Korea	China	27 Jul 1953	
14	Korean	So. Korea	No. Korea	27 Jul 1953	
15	Russo - Hungarian	USSR	Hungary	14 Nov 1956	
16	Sinai	UK	Egypt	06 Nov 1956	
17	Sinai	France	Egypt	06 Nov 1956	
18	Sinai	Israel	Egypt	06 Nov 1956	05 Jun 1967
19	Sino - Indian	China	India	22 Nov 1962	
20	Vietnamese	No. Vietnam	USA	27 Jan 1973	
21	Vietnamese	No. Vietnam	So. Vietnam	30 Apr 1975	[censored immediately]
22	Second Kashmir	Pakistan	India	23 Sep 1965	03 Dec 1971
23	Six Day	Israel	Egypt	10 Jun 1967	06 Mar 1969
24	Six Day	Israel	Syria	10 Jun 1967	06 Oct 1973
25	Six Day	Israel	Jordan	10 Jun 1967	10 Oct 1973
26	Israeli - Egyptian	Israel	Egypt	07 Aug 1970	06 Oct 1973
27	Football	El Salvador	Honduras	18 Jul 1969	
28	Bangladesh	India	Pakistan	17 Dec 1971	[1999, after censoring]
29	Yom Kippur	Israel	Egypt	24 Oct 1973	
30	Yom Kippur	Israel	Syria	24 Oct 1973	05 Jun 1982
31	Yom Kippur	Israel	Jordan	24 Oct 1973	
32	Turco - Cypriot 1	Turkey	Cyprus	29 Jul 1974	14 Aug 1974
33	Turco - Cypriot 2	Turkey	Cyprus	16 Aug 1974	
35	Ethiopian - Somalian	Cuba	Somalia	14 Mar 1978	
36	Ethiopian - Somalian	Ethiopia	Somalia	14 Mar 1978	
37	Ugandan - Tanzanian	Tanzania	Uganda	12 Apr 1979	
38	Ugandan - Tanzanian	Tanzania	Libya	12 Apr 1979	
39	Sino - Vietnamese	China	Vietnam	10 Mar 1979	05 Jan 1987
40	Iran - Iraq	Iran	Iraq	20 Aug 1988	
41	Falklands	UK	Argentina	20 Jun 1982	
42	Lebanon	Israel	Syria	05 Sep 1982	
43	Sino - Vietnamese	China	Vietnam	06 Feb 1987	
44	Gulf War	USA	Iraq	11 Apr 1991	
45	Gulf War	Saudi Arabia	Iraq	11 Apr 1991	
46	Gulf War	Kuwait	Iraq	11 Apr 1991	
47	Azeri - Armenian 1	Armenia	Azerbaijan	21 Mar 1992	11 Apr 1992
48	Azeri - Armenian 2	Armenia	Azerbaijan	12 May 1994	
51	First Kashmir	India	Pakistan	01 Jan 1949	05 Aug 1965

VARIABLES FOR DATA MANIPULATION:

id id number
warnumb COW war number
war war name

ccode1 country code for belligerent “1” – country codes same as in COW
ccode2 country code for belligerent “2”

date0 start date of observation
date1 end date of observation

newwar
= 1 if the period ends with a new COW war for the dyad (i.e. failure).
Peace fails in 21 cases.

cfyear
= 1 in first observation for each case

cluster	war cluster	N
1	Arab-Israeli (including all dyads in Sinai war)	21
2	India-Pakistan	3
3	Korea	4
4	Russo-Hungary	1
5	Sino-Indian	1
6	Vietnam	2
7	Football war	1
8	Turco-Cypriot	2
9	Ethiopia-Somalia	2
10	Uganda-Tanzania	2
11	Sino-Vietnam	2
12	Iran-Iraq	1
13	Falklands war	1
14	Gulf war	3
15	Azeri-Armenian	2

israel Arab-Israeli war (for robustness checks)
= 1 if war includes Israel as a combatant

drop cases to drop for robustness checks

0	regular case
1	questionable whether principal belligerent (meets objective 1/10 troop criteria but not necessarily common sense to include it)
2	marks all but one of the observations in multilateral cases (remaining case selected at random)

SITUATIONAL VARIABLES:

tie military outcome
0 victory for ccode1
1 tie

Source: Stam 1996 and for cases not included Stam's data, COW's "outcome" variable.
Note: where Stam and COW disagree (10 cases), I used Stam, as military outcomes are the focus of his study.

For wars split by a failed cease-fire (see above):
id=1-5 (Palestine 1) coded 0, a victory for Israel as it was clear that Israel was dominating militarily even before the stoppage (see Goldstein 1992).
id=32 (Turco-Cypriot 1), coded 1, a tie as there was a standoff after initial Turkish invasion, Greece won't partition, Turkey won't withdraw, then Turks partition by force in id=33 (See Brogan 1990, p.348).

foreign victor-imposed regime change
= 1 if victor imposes regime change on loser

Source: Werner 1999's variable "FOREIGN"
Note: only holds for 3 cases: Russo-Hungarian, Ugandan-Tanzanian, No. vs. So. Vietnam

lndeaths cost of war: natural log of battle deaths
= $\ln(\text{deatha} + \text{deathb})$

Source: COW3 data on battle deaths

disputes prior militarized interstate disputes
= number of MID disputes in dyad before war

Source: EUGene generated dataset, using 1996 MID data.⁴

⁴ In EUGene, asked for directed dispute dyad data, 1 case per dispute-year, target vs. initiator dropped if no new dispute, include all joiners, using both directions of the dyad, counting cases prior to war's start year. Ongoing disputes counted as 1 per year they last.

dyadage years disputes possible
= number of years both states in the interstate system (since 1816) at time the war started.

Source: COW codebook

Note: a few states drop out and rejoin the system (e.g. France drops out for 1943; Syria drops out in 1959-60; Egypt drops out 1883-1936) – these years are not included in dyadage, as there could be no disputes in those years.

cfhist history of conflict
= (disputes/dyadage)

Coded 1 for wars at independence (e.g. First Arab-Israeli War and First Kashmir War)

stake_e existence at stake in the conflict
=1 if war threatened existence of either side

Source: Brecher and Wilkenfeld 1992 International Crisis Behavior (ICB2) dataset. Coded 1 if “gravity of value threatened” (GRAVCR) = 5 “threat to existence (survival of population, existence of country, annexation, occupation)” for either ccode1 or ccode2.

Note: most of the COW wars are included in ICB as a single crisis. For those wars that corresponded to several crises, I used the highest GRAVCR for the dyad for the war).

Filled in for: id=44-46 (Gulf war), coded 1 only for Kuwait-Iraq; id=31 (Jordan-Israel) 0, same as other dyads in Yom Kippur; id=35 (Cuba-Somalia) 0, same as Ethiopia-Somalia in warnumb 189.

rev_terr territorial issue at stake
= 1 if rev_type = 1 (territory)

Source: MID 1996 revision type. Jones, Bremer, and Singer 1996.

Note: the one case coded by MID as “other” (the Football war) is coded as territorial because the issues were a combination of disputed boundaries and land pressures/immigration (See Anderson 1981; Martz 1978).

contig contiguous
= 1 if ccode1 and ccode2 contiguous by land, or separated by less than 150 miles of water

multi multilateral war
= 1 if this dyad was part of a multilateral war

cap_1 COW capabilities index for ccode1
cap_2 COW capabilities index for ccode2

Source: COW capabilities index (generated in EUGene): average of a state's share of the interstate system's total population, urban population, iron and steel production, energy consumption, military manpower and military expenditures.

lagcap_1 cap_1 from previous year
lagcap_2 cap_2 from previous year

d_relcap change in relative capabilities
= $\text{abs}(((\text{cap}_1 - \text{lagcap}_1) / \text{lagcap}_1) - ((\text{cap}_2 - \text{lagcap}_2) / \text{lagcap}_2))$
following Werner 1999, p. 923, fn.7

Note: d_relcap is missing after 1994 because COW capability data ends then. Also note that d_relcap outliers (all 7 cases in which d_relcap > 1) are all in 1993, possibly reflecting changes with the end of the cold war.⁵

lagrelcp lagged change in relative capabilities
= d_relcap from previous year

Note: missing for cases in which war resumes in less than 1 year – beware missing variable bias!

gp_bel great power as belligerent
0 no great power belligerent
1 great power (GB, France, China) belligerent in the war (not just the dyad)
2 superpower (US or Soviet Union) belligerent in the war (not just the dyad)

Expected Utility Measures

Generated in EUGene (using tau-B), following Bueno de Mesquita and Lalman 1992

equilib equilibrium outcome in “international interaction game”
0 status quo (in both A vs. B and B vs. A, status quo is predicted)
1 demand (negotiation or acquiescence predicted in either A vs. B or B vs. A, but capitulation or force predicted in neither)
2 force (capitulation expected in either, but not war) [no cases in this category]
3 war (war predicted in either A vs. B or B vs. A)

⁵ Values are higher than average in 1991 and 1992, and dramatically so in 1993.

eusq status quo predicted in equilibrium
= 1 if equilib = 0

eudemand demand predicted in equilibrium
= 1 if equilib = 1

euwar war predicted in equilibrium
= 1 if equilib = 3

Democracy Measures

Generated in EUGene, using Polity III's "dem" variable (-10 to 10 score democ-autoc). Jagers and Gurr 1996.

onedem at least one democracy in dyad
= 1 if either ccode1 or ccode2 has a democracy score of 6 or higher

twodem joint democracy
= 1 if both ccode1 and ccode2 have democracy scores of 6 or higher

Note: to reduce the number of observations with missing data, I interpolated onedem and twodem for some years in which polity data was missing (e.g. Egypt was coded a non-democracy in 1952, because its scores in 1951 and 1953 were 1 and -7 respectively). If the year before or after the missing data the dem score was close to the threshold, I left it missing (e.g. Syria in 1958, as it rated a 7 in 1957), I also did not fill in data for Israel in 1948 (it rates a 10 in 1949) or India in 1949 (it rates 9 in 1950). Interpolated data for: Egypt 1952; Hungary 1956; Honduras 1981; Somalia 1991-1994; Ethiopia 1991-1993; Uganda 1979-1980, 1985. None of these were considered democracies.

politych polity change
= $\text{abs}(\text{dem1} - \text{lagdem1}) + \text{abs}(\text{dem2} - \text{lagdem2})$
where dem is the current democracy score, lagdem is the score for the previous year

newdem
= 0 if neither side newly a democracy
= 1 if one side newly a democracy, i.e. if $\text{dem} < 6$ in previous year, now ≥ 6

Note: once a state becomes a new democracy, newdem=1 for each subsequent period until that state's democracy's score falls below 6 (this provides a very lenient test of the hypothesis that states crossing the threshold to democracy are more war prone).

AGREEMENT VARIABLES:

formal formalism of cease-fire
0 no declared cease-fire
1 unilaterally declared cease-fire, tacitly accepted by the other side
2 tacit or informal acceptance of cease-fire proposal (e.g. UN resolution or mediator's plan)
3 formal acceptance of cease-fire proposal
4 formal bilateral or multilateral agreement

formal_d formalism dummy
= 1 if formal > 2

withdraw withdrawal of forces
0 = none
1 = partial (some areas or part way)
2 = to status quo ante
3 = beyond status quo ante

Includes unilateral withdrawals, but not withdrawals out of narrow demilitarized zones only.

with_dum withdrawal dummy
= 1 if withdraw > 0

with_sqa withdrawal to status ante or more
= 1 if withdraw > 1

dmz demilitarized areas
0 none
1 partial, demilitarized areas (not along full border or front, or < 2 km
2 demilitarized zone at least 2 km

dmz_dum dmz dummy
= 1 if dmz > 0

ac arms control
0 none
1 arms embargo or standfast (no increase or movement forward of weapons or troops
2 areas limited to defensive forces only or other limits on arms near the cease-fire line
3 prohibition on specific weapons or weapons programs

ac_dum arms control dummy
= 1 if ac>0

pk peacekeeping
0 none
1 monitoring (unarmed military observers)
2 peacekeeping forces (armed)

Note: pk does not include enforcement missions (such as the UN force in Korea), but does include non-UN missions (such as the Neutral Nations Monitoring Group deployed after the Korean armistice)

pk_num number of peacekeepers
= number of monitors and/or peacekeeping forces.

Note: if more than one force present, coded number of more important/active group only.

pk_pre pre-existing peacekeeping mission only
0 new for this war (or no peacekeeping)
1 present from earlier conflict

Note: coded 0 if there was any new mission, even if there was also a pre-existing one

ext_inv external involvement
0 none
1 mediation – third party involvement as mediator of the cease-fire, exercising restraint, acting as patron for one side, etc. Does not include UN mediation of the cease-fire; it must be a sovereign state taking a particular interest in the process.
2 guarantee – third party provides explicit or well-understood guarantee of peace

internal internal control
0 none
1 responsibility for irregular forces, actions from territory, etc. stated but no concrete measures
2 concrete measures to ensure control

paragrph specificity of agreement
= number of paragraphs in agreement text⁶

detail specificity group
0 = 0 paragraphs
1 = 1-20 paragraphs
2 = 21-80 paragraphs
3 = over 80 paragraphs

info confidence-building measures
0 none
1 information exchanged on mines, troop rotations, and/or maneuvers
2 hot-line established
3 on site verification or aerial surveillance system established

Note: id=41 (Falklands) follow-up agreement included both hot-line and info on maneuvers;
id=22 had both mine clearing info and a hot-line

info_dum confidence-building dummy
= 1 if info>0

disp_res dispute resolution
0 none
1 ongoing third party mediation (not including peacekeepers providing dispute
resolution)
2 joint commission of belligerents to resolve issues as they arise

cf_pa cease-fire or peace agreement
0 no agreement (war fizzles or is ended unilaterally)
1 cease-fire or armistice
2 renunciation of use of force, restoration of diplomatic relations, or full fledged
peace treaty

⁶ Counting rules: count paragraphs of agreement text or UN resolution, not including preamble nor details of boundary markers. Count all numbered or lettered or full paragraphs (e.g. 1...2...a...b... = 4, but 1...2a...b... = 3). Don't count correspondence unless agreement terms were only spelled out in correspondence. If there was a series of agreements in quick succession, use most detailed.

settle settlement of political issues
0 no settlement
1 settlement imposed by force or unilateral action (de facto)
2 settlement by agreement (de jure), even if this is part of decisive victory

index index of agreement strength, normalized
= formal_d + with_sqa + dmz_dum + ac_dum + (pk/2) + (ext_inv/2) + (detail/3) +
(internal/2) + info_dum + (disp_res/2)

Note: missing values for mechanisms counted as zero

strength subjective coding of agreement strength
0 none – no mechanisms
1 very weak – a few, weak mechanisms, e.g. withdrawal to status quo ante, or a partial DMZ
2 weak – slightly more or more extensive measures, e.g. a peacekeeping mission or a mechanism for dispute resolution
3 moderate – more substantial mechanisms, e.g. formal and specific agreement involving peacekeepers, and/or a wider DMZ or concrete measures to disarm rogue groups
4 strong – formal, very detailed agreements, that implement large peacekeeping missions, arms control provisions, and CBMs etc.

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