

Does War Make States? War, Foreign Credit, and Domestic Economic Resilience

APPENDIX

1 War List and Episode Coding

Dataset. The war list in Table A1 is drawn from the Confronting the Costs of War Project (CCWP) War Finance dataset. CCWP codes interstate war-finance records for wars listed in the Correlates of War (COW) project, covering wars from 1823 to 2003 and restricting the sample to wars lasting more than 180 days in which participants are coded as principal belligerents. The unit of analysis is a *war-participant* (country-war) episode aggregated over the entire conflict rather than country-year, reflecting data limitations for annual war-finance series. For each episode, CCWP records the COW identifiers (`statenum`, `stateabb`) and war dates (`yrbeg1`, `yrend1`).

Table 1: Table A1: War List and Episode Coding

War	statenum	stateabb	yrbeg1	yrend1
Franco-Spanish	220	FRN	1823	1823
Franco-Spanish	230	SPN	1823	1823
Russo-Turkish	640	TUR	1828	1829
Russo-Turkish	365	USR	1828	1829
Mexican-American	2	USA	1846	1848
Mexican-American	70	MEX	1846	1848
First Schleswig-Holstein	390	DEN	1848	1848
First Schleswig-Holstein	255	GMY	1848	1848
La Plata	160	ARG	1851	1852
La Plata	140	BRA	1851	1852
Crimean	365	USR	1853	1856
Crimean	640	TUR	1853	1856
Crimean	200	UKG	1854	1856
Crimean	220	FRN	1854	1856
Franco-Mexican	220	FRN	1862	1867
Franco-Mexican	70	MEX	1862	1867
Lopez	150	PAR	1864	1870
Lopez	140	BRA	1864	1870
Lopez	160	ARG	1865	1870
Spanish-Chilean	155	CHL	1865	1866

Continued on next page

War	statenum	stateabb	yrbeg1	yrend1
Spanish-Chilean	230	SPN	1865	1866
Franco-Prussian	220	FRN	1870	1871
Franco-Prussian	255	GMY	1870	1871
Russo-Turkish	365	USR	1877	1878
Russo-Turkish	640	TUR	1877	1878
Pacific	155	CHL	1879	1883
Pacific	135	PER	1879	1883
Sino-French	710	CHN	1884	1885
Sino-French	220	FRN	1884	1885
First Sino-Japanese	740	JPN	1894	1895
First Sino-Japanese	710	CHN	1894	1895
Russo-Japanese	365	USR	1904	1905
Russo-Japanese	740	JPN	1904	1905
Second Spanish-Moroccan	600	MOR	1909	1910
Second Spanish-Moroccan	230	SPN	1909	1910
Italo-Turkish	325	ITA	1911	1912
Italo-Turkish	640	TUR	1911	1912
Balkan I	350	GRC	1912	1913
Balkan I	640	TUR	1912	1913
World War I	255	GMY	1914	1918
World War I	365	USR	1914	1917
World War I	220	FRN	1914	1918
World War I	200	UKG	1914	1918
World War I	300	AUH	1914	1918
World War I	2	USA	1917	1918
Estonian War of Liberation	365	RUS	1918	1920
Latvian War of Liberation	365	RUS	1918	1920
Estonian War of Liberation	366	EST	1918	1920
Latvian War of Liberation	367	LAT	1918	1920
Greco-Turkish	350	GRC	1919	1922
Russo-Polish	365	USR	1919	1920
Russo-Polish	290	POL	1919	1920
Greco-Turkish	640	TUR	1919	1922
Franco-Turkish	640	TUR	1919	1921
Franco-Turkish	220	FRN	1919	1921
Second Sino-Japanese	710	CHN	1931	1933
Second Sino-Japanese	740	JPN	1931	1933
Chaco	150	PAR	1932	1935
Chaco	145	BOL	1932	1935
Italo-Ethiopian	325	ITA	1935	1936
Italo-Ethiopian	530	ETH	1935	1936
Third Sino-Japanese	710	CHN	1937	1941
Third Sino-Japanese	740	JPN	1937	1941
World War II	200	UKG	1939	1945
World War II	255	GMY	1939	1945
World War II	325	ITA	1940	1943

Continued on next page

War	statenum	stateabb	yrbeg1	yrend1
World War II	2	USA	1941	1945
World War II	740	JPN	1941	1945
World War II	365	USR	1941	1945
Korean	2	USA	1950	1953
Korean	732	ROK	1950	1953
Korean	710	CHN	1950	1953
Korean	731	PRK	1950	1953
Off-shore Islands War	710	CHN	1954	1955
Off-shore Islands War	713	TAW	1954	1955
Vietnamese	2	USA	1965	1973
Vietnamese	816	DRV	1965	1975
Vietnamese	817	RVN	1965	1975
Israeli-Egyptian (War of Attrition)	666	ISR	1969	1970
Israeli-Egyptian (War of Attrition)	651	EGY	1969	1970
Vietnamese-Cambodian Border War	816	DRV	1977	1979
Vietnamese-Cambodian Border War	811	CAM	1977	1979
Ethiopian-Somalian	530	ETH	1977	1978
Ethiopian-Somalian	520	SOM	1977	1978
Iran-Iraq	630	IRN	1980	1988
Iran-Iraq	645	IRQ	1980	1988
War over the Aouzou Strip	483	CHA	1986	1987
War over the Aouzou Strip	620	LIB	1986	1987
Gulf War	645	IRQ	1990	1991
Gulf War	690	KUW	1990	1991
Badme Border War	531	ERI	1998	2000
Badme Border War	530	ETH	1998	2000
Invasion of Afghanistan	2	USA	2001	2001
Invasion of Iraq	2	USA	2003	2003

Notes: Each row is a war-participant episode with the participant identified by `statenum` and `stateabb`. `yrbeg1` and `yrend1` record the start and end year for that participant's involvement. Define any inclusion thresholds (e.g., battle-death cutoff) and the source dataset(s) used for coding here.

2 Variable Definitions and Construction

Outcome Variable. The outcome variable is the Composite Index of National Capability (`cinc`), taken from the Correlates of War National Material Capabilities (NMC) dataset. CINC is a state-year measure of relative material power, constructed as the unweighted average of a state's share of system totals in six components: total population, urban population, military personnel, military expenditures, primary energy consumption, and iron and steel production. By construction, `cinc` lies in [0, 1] and captures a state's material capacity relative to all other states in the international system. :contentReference[oaicite:0]index=0

Treatment Variable. The main treatment indicator, `at_war`, equals one if country i is engaged in

an interstate war in year t , and zero otherwise. War participation is coded following Wimmer and Min (2009), based on Correlates of War interstate war definitions, and mapped to the country–year level using the war–participant episodes described in Appendix A1.

Crisis Control. The variable `flag_gcd` is a binary indicator equal to one if country i experiences any major financial or economic crisis in year t , and zero otherwise. This variable is coded using the Global Crisis Database (GCD) and captures systemic banking, currency, sovereign debt, or inflation crises that may independently affect state capacity and material power.

Additional Controls. All remaining controls are drawn from the NMC dataset. Total population (`tpop`) measures the size of the population in thousands. Military expenditures (`milex`) record total annual military spending, converted to a common currency following COW procedures. Military personnel (`milper`) measure the size of active armed forces in thousands.

Placebo and Sensitivity Analyses. To assess identifying assumptions, the appendix reports placebo tests and sensitivity analyses based on alternative timing and smoothness restrictions. These analyses evaluate whether estimated effects are driven by pre-treatment trends or violations of parallel evolution assumptions.

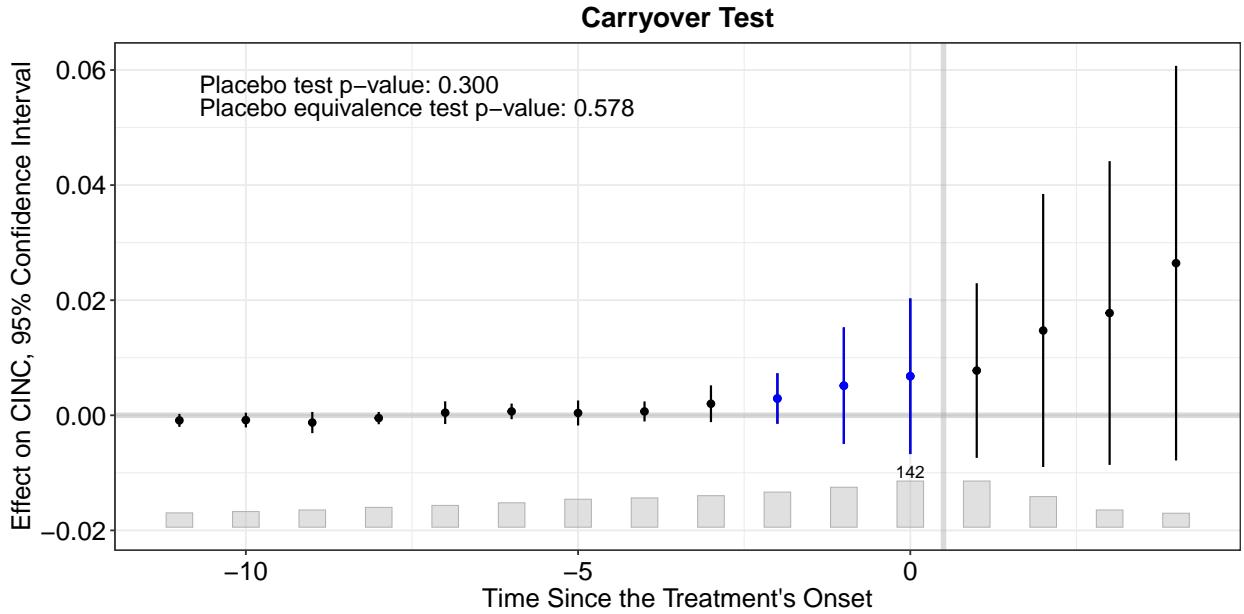


Figure 1: Placebo Test Results

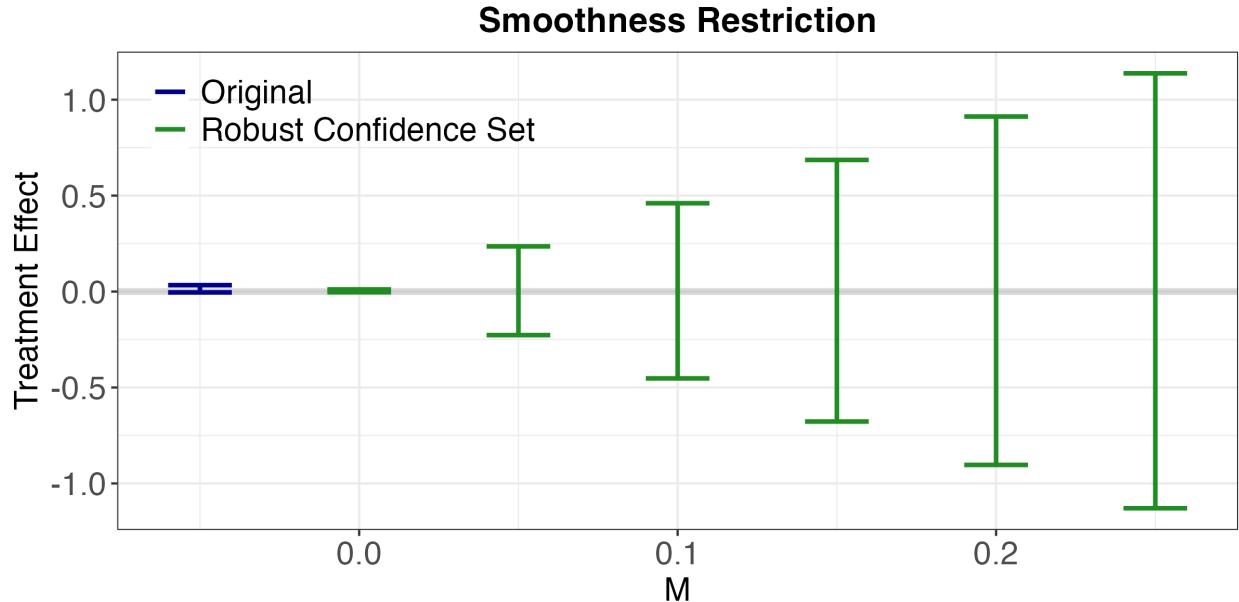


Figure 2: Sensitivity Analysis under Alternative Smoothness Restrictions

3 Two-Way Fixed Effects Estimates of War and National Capability

This section reports two-way fixed effects (TWFE) estimates of the relationship between war participation and national material capability. All specifications use country and year fixed effects and cluster standard errors at the country level. Column (1) presents the baseline specification with war participation as the main regressor. Columns (2)–(4) sequentially control for financial crises, domestic crises, and domestic sovereign default. Columns (5) and (6) replace the baseline war indicator with interstate and homeland war indicators, respectively. Across specifications, the coefficient on war participation is positive and statistically significant(except for the war fought at homeland), indicating that engagement in war is associated with subsequent increases in relative material capability.

Table 2: Two-Way Fixed Effects Estimates

Dependent Variable:	cinc					
Model:	(1)	(2)	(3)	(4)	(5)	(6)
<i>Variables</i>						
At war	0.008** (0.004)	0.008** (0.004)	0.008** (0.004)	0.008** (0.004)		
Total population	4.61×10^{-7} (1.06×10^{-6})	4.62×10^{-7} (1.08×10^{-6})	4.61×10^{-7} (1.07×10^{-6})	4.61×10^{-7} (1.07×10^{-6})	4.62×10^{-7} (1.06×10^{-6})	4.4×10^{-7} (1.05×10^{-6})
Military expenditures	-1.32×10^{-7} (1.16×10^{-6})	-1.32×10^{-7} (1.18×10^{-6})	-1.33×10^{-7} (1.18×10^{-6})	-1.32×10^{-7} (1.17×10^{-6})	-1.05×10^{-7} (1.18×10^{-6})	-1.13×10^{-7} (1.16×10^{-6})
Military personnel	2.14×10^{-5} (4.71×10^{-5})	2.05×10^{-5} (4.62×10^{-5})	2.33×10^{-5} (4.75×10^{-5})			
Financial crisis (GCD)		0.002* (0.001)				
Any crisis (domestic)			0.0005 (0.001)			
Domestic default				0.0006 (0.003)		
Interstate war indicator					0.010* (0.004)	
Homeland war indicator						0.006 (0.003)
<i>Fixed-effects</i>						
iso3	Yes	Yes	Yes	Yes	Yes	Yes
year	Yes	Yes	Yes	Yes	Yes	Yes
<i>Fit statistics</i>						
Observations	3,090	3,090	3,090	3,090	3,090	3,090
R ²	0.90256	0.90258	0.90257	0.90256	0.90254	0.90122

Clustered (iso3) standard errors in parentheses

Significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

4 Data Availability

The figure plots the panel structure of the analysis sample over time. Each grid cell represents a country–year observation for which CINC is observed in the National Material Capabilities data. The horizontal axis denotes calendar year, and the vertical axis indexes countries. Cell color indicates the country’s treatment status in that year: peace, any war, or external war. Blank rows or gaps reflect country–years without available CINC data. The figure shows broad temporal coverage with substantial within-country variation in war exposure, providing the panel structure exploited by the fixed-effects specifications.

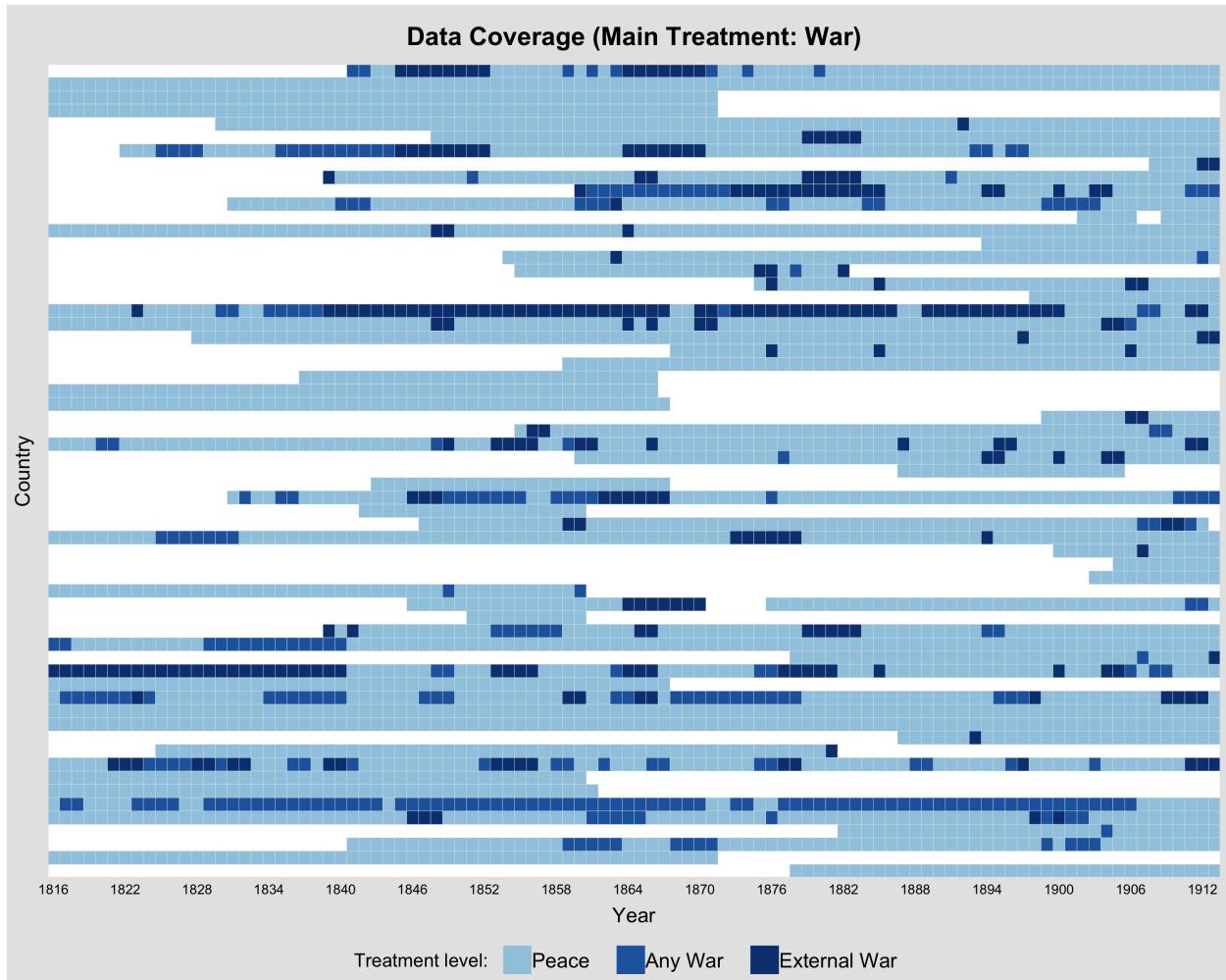


Figure 3: Data Coverage of State Capacity and Conflicts

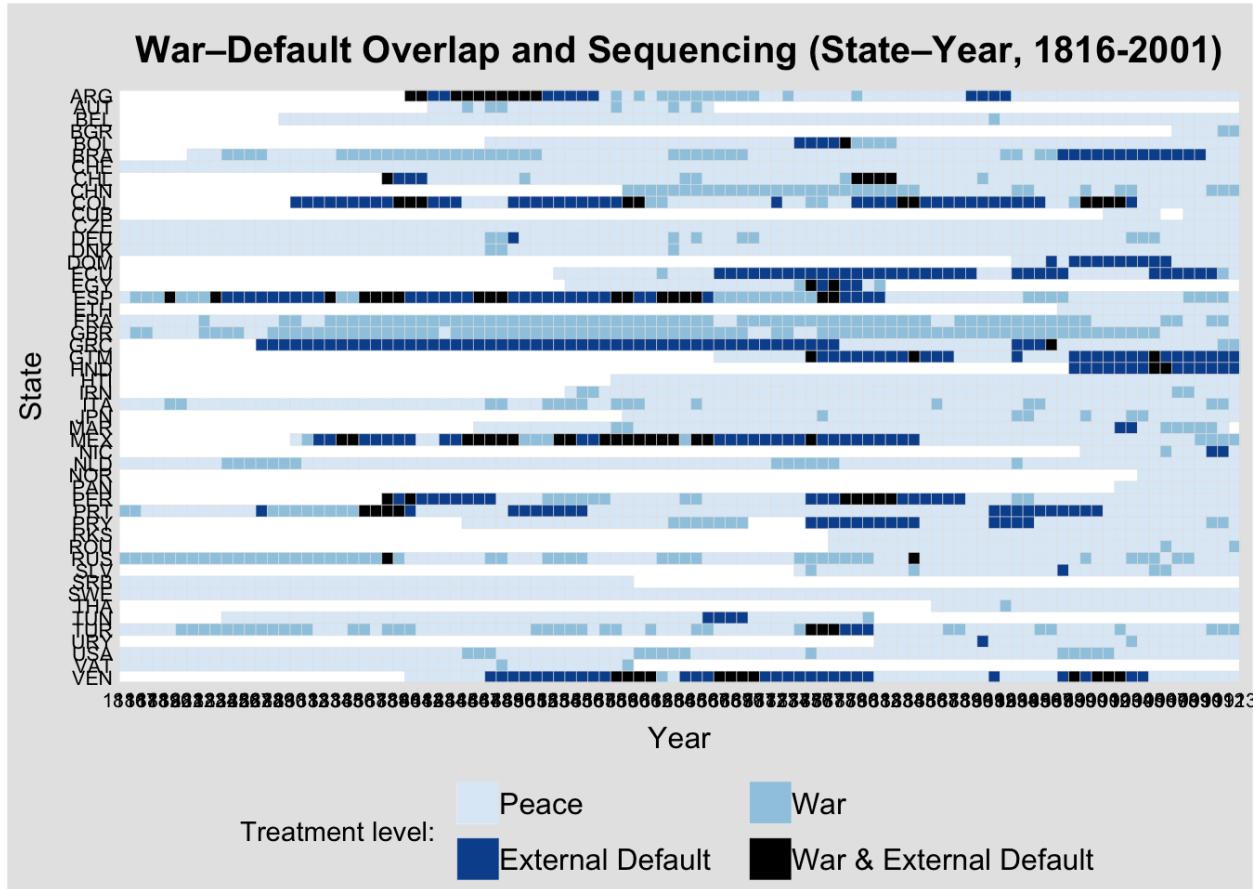


Figure 4: Data Coverage of State Capacity and Defaults

5 Data Availability and Replication Details

The clustering variables are constructed to capture long-run conflict exposure and baseline structural characteristics of states in the nineteenth century. War-related measures are coded as cumulative years of exposure by conflict type. When available, country-level indicators are taken from Queralt (2019). For conflict dimensions not directly available in Queralt (2019), war participation is coded using Wimmer and Min (2009) and similarly aggregated at state level.

Table 3: Variables Used for Clustering Countries in the Nineteenth Century

Category	Variable	Description
<i>War exposure</i>	<code>yr_homeland</code>	Cumulative years of participation in homeland (defensive) wars.
	<code>yr_inter</code>	Cumulative years of participation in interstate (external) wars.
	<code>yr_intra</code>	Cumulative years of participation in intrastate (civil & secessionist) wars.
<i>State capacity and development</i>	<code>first_census</code>	Indicator for whether the state conducted a national population census.
	<code>census_1820</code>	Indicator for having conducted a census by 1820.
	<code>census_1914</code>	Indicator for having conducted a census by 1914.
	<code>ln_rail_km_1850</code>	Log railway kilometers around mid-century, capturing early infrastructure development.
	<code>pop_dens_1820</code>	Population density circa 1820.
	<code>statehist05v3</code>	State antiquity index measuring the depth of historical state presence.
<i>Geography</i>	<code>land_area_scaled</code>	Scaled measure of total land area.
	<code>near_coast</code>	Indicator for proximity to the coastline.
	<code>rugged</code>	Terrain ruggedness index.
	<code>desert</code>	Indicator for predominantly desert terrain.
	<code>tropical</code>	Indicator for tropical climate.
<i>Colonial status</i>	<code>colony_any</code>	Indicator for any colonial relationship.
	<code>colony_iberia</code>	Indicator for former Iberian (Spanish or Portuguese) colony.
	<code>colony_other</code>	Indicator for former non-Iberian, non-British colony.
	<code>colony_uk</code>	Indicator for former British colony.
	<code>greatpower</code>	Indicator for great power status.
<i>Alliance ties</i>	<code>share_alliance_france</code>	Share of alliance years with France.
	<code>share_alliance_ger</code>	Share of alliance years with Germany.
	<code>share_alliance_uk</code>	Share of alliance years with the United Kingdom.
	<code>share_alliance_usa</code>	Share of alliance years with the United States.