

Democracy, War, and Wealth Evidence from Two Centuries of Inheritance Taxation

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Purpose of the paper

- Inheritance taxes are crucial as a tool to influence the distribution of wealth and as an instrument to fund the government
- However, if inheritance taxes are often very old taxes, the implementation of high rates for the top of the distribution is much more recent
- France: creation in 1789 but introduction of the idea of progressivity in 1901
- Long run analysis to find the determinants of progressivity
- Two channels:
 - Democratization
 - Warfare

Contents

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Democracy

- Farhi and Werning (2008):

There should be more progressive taxation of capital in a democracy where all citizens can vote as opposed to in a system where the suffrage is restricted or where policies are otherwise set by a narrow group.

- Acemoglu and Robinson (2000, 2006):

Extension of voting rights leads to redistributive programs to prevent social unrest and revolution.

Warfare

- **Expediency effect:**

- War as an exogenous expenditure for governments
- Greater uncertainty about the government survival = less consideration for reputation issues.

- **Mobilization effect:**

When the great mass of citizens are mobilized for war, they may demand that the wealthy bear a significant share of the financial burden.

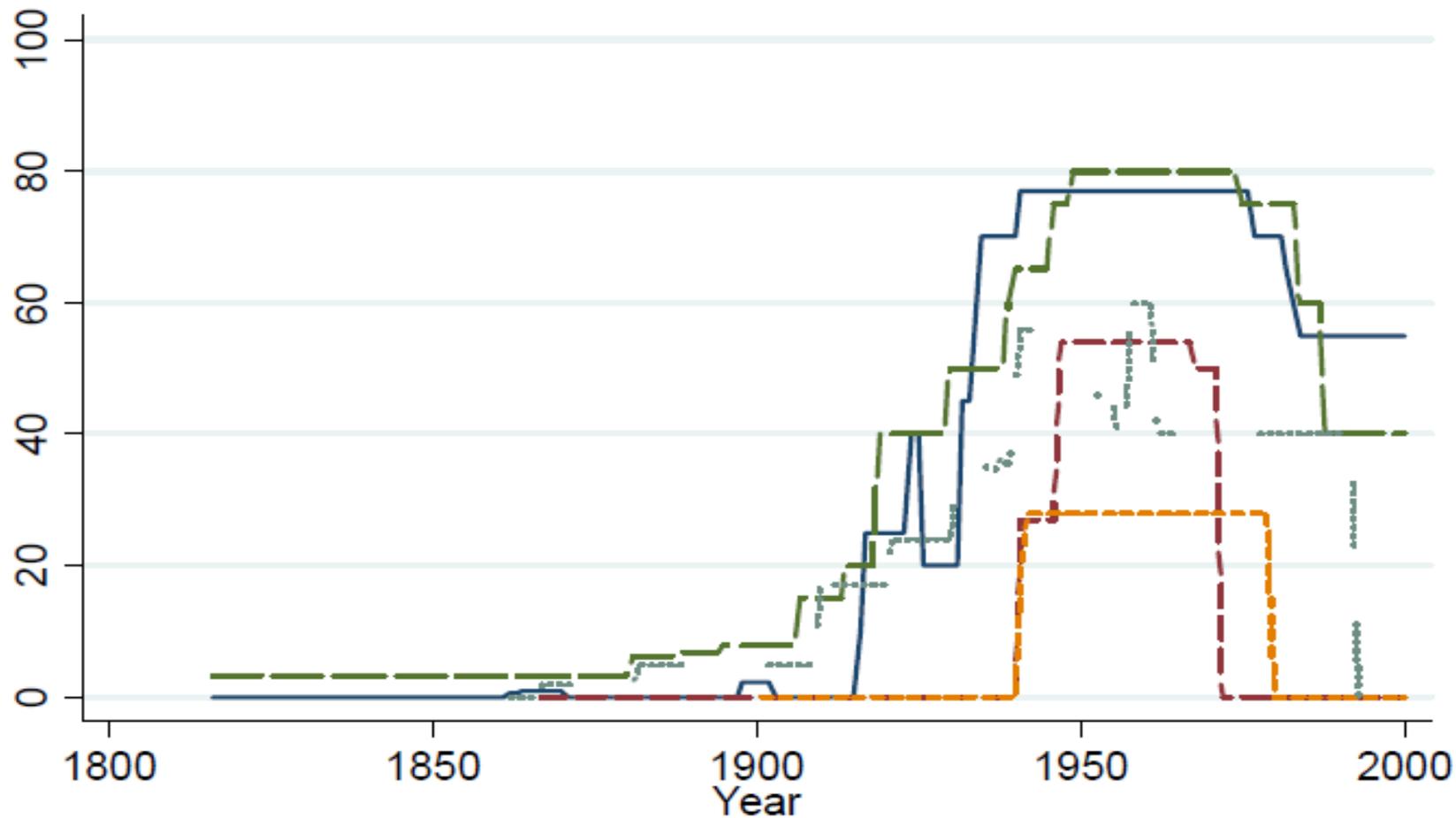
The size of the effect depends on:

- The fraction of countries' citizens engaged in the war effort
- The means of recruitment (mass conscription)

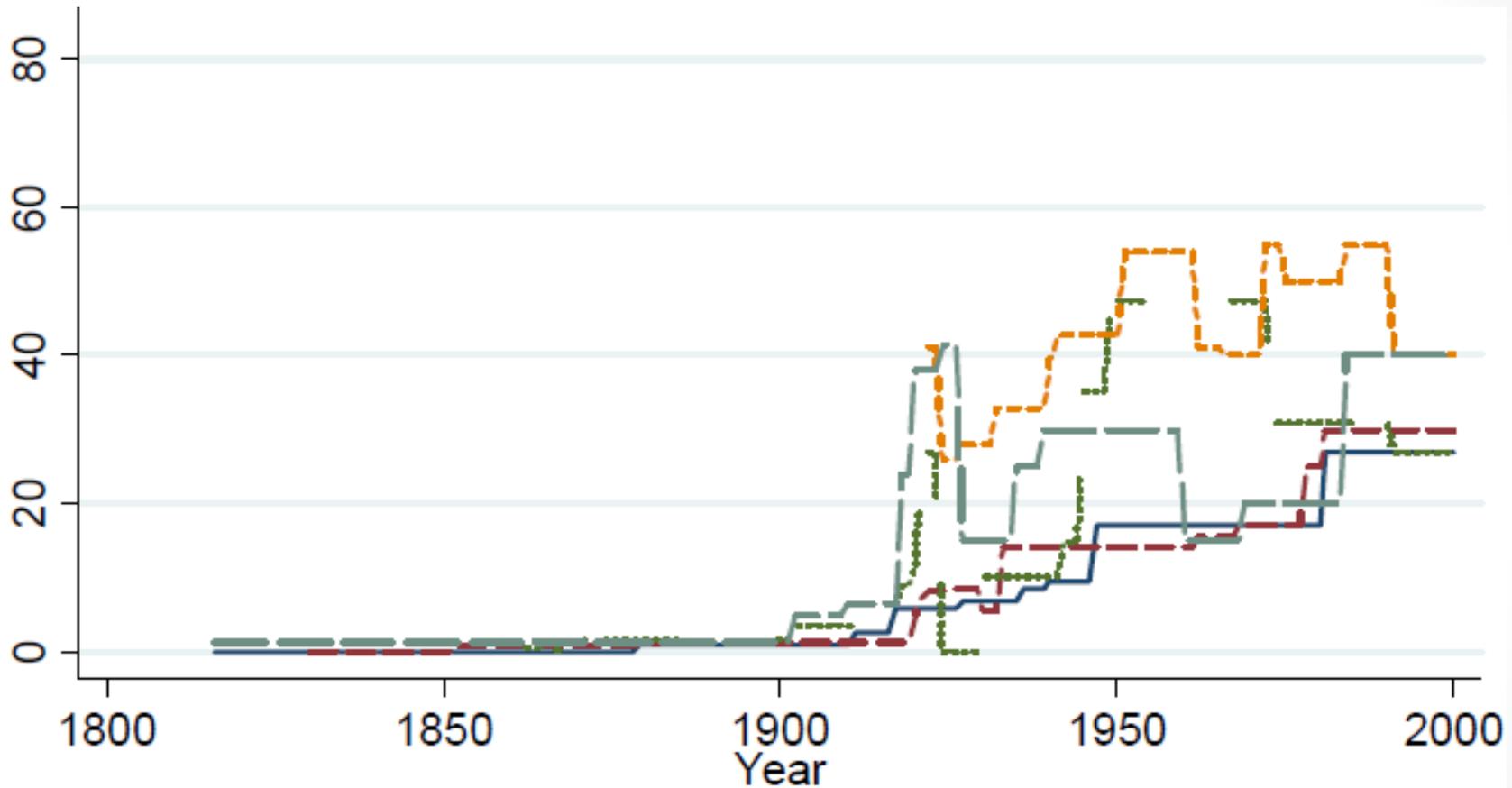
Data

- 19 countries from 1816 to 2000: the USA, the UK, France, Japan, Germany, Australia, Korea, Nordic countries...
- Focus on the top marginal inheritance tax rate for direct descendants:
 - Easiest way to collect data (kind of self-reported tax + less extensive bureaucratic capacity)
 - Useful measure for progressivity
 - Crucial to investigate the rate at which a society taxes its wealthiest citizens
- Sources: government sources and/or legislation

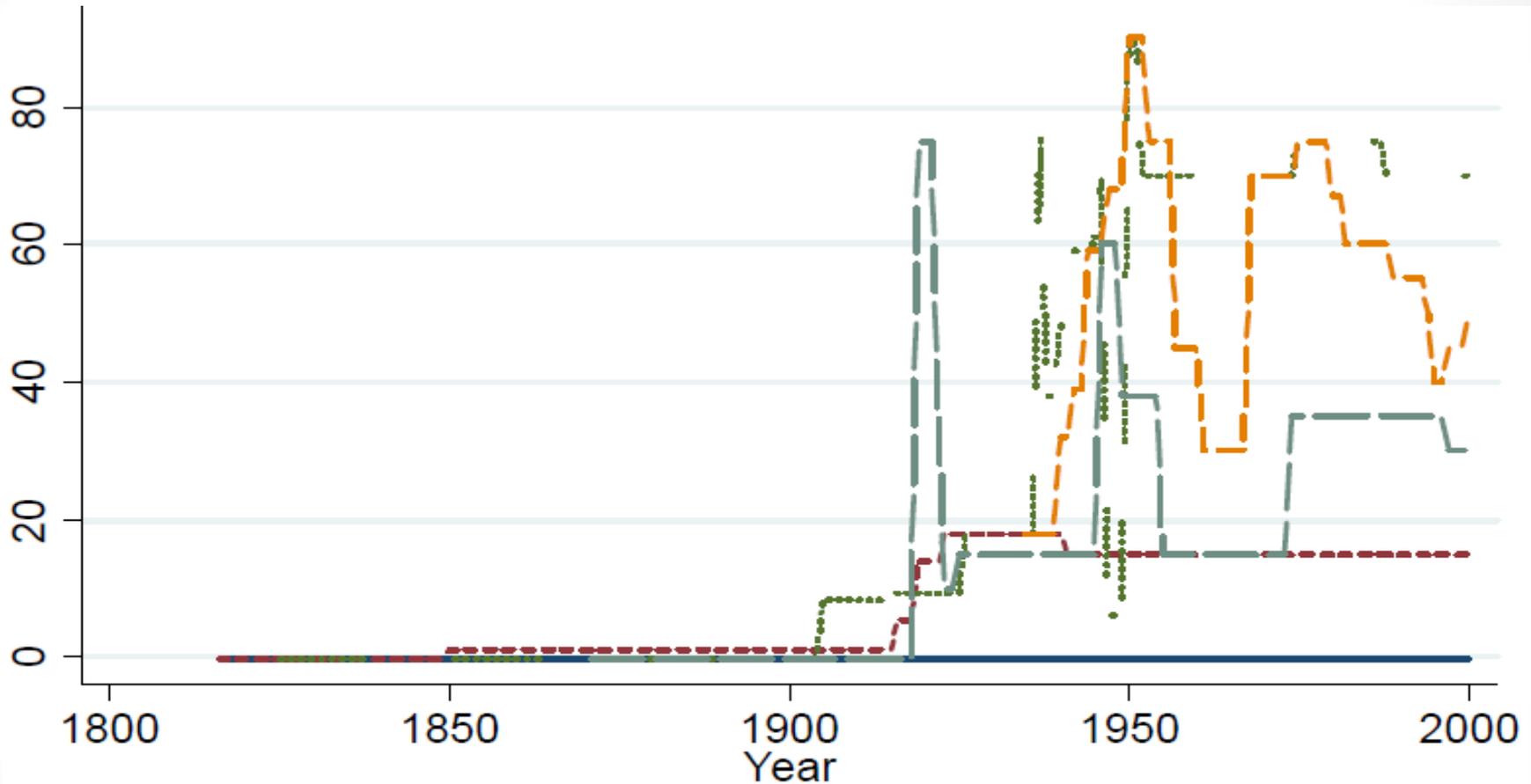
Historical Trends



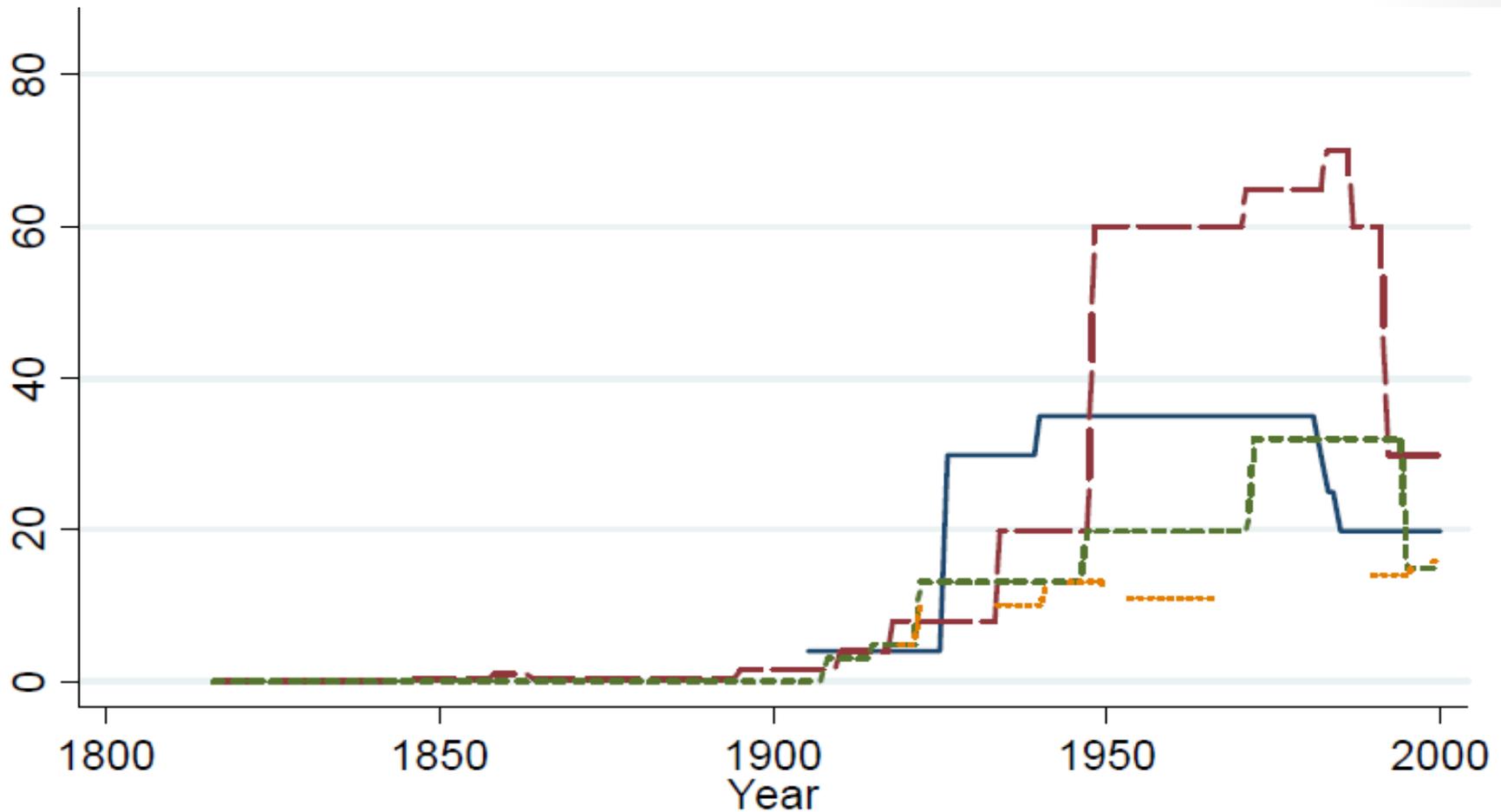
Historical Trends (2)



Historical Trends (3)



Historical Trends (4)



Econometric models

$$T_{it} = \alpha + \beta_1 D_{it-1} + \beta_2 W_{it-1} + \gamma X_{it-1} + \eta_i + \theta_t + \varepsilon_{it}$$

- T is the top inheritance tax rate for direct descendants
- D is the extent of democracy (universal male suffrage, share of adults eligible to vote, Boix-Rosato indicator, presence of upper house...)
- W is the measure of participation in mass warfare (dummy equal to 1 if in a particular year, the country was engaged in an interstate war and at least 2 percent of the population was serving in the military)
- X_{it} is a vector of control variables (partisan control of the government and GDP per capita)

Econometric models (2)

$$T_{it} = \alpha + \rho T_{it-1} + \beta_1 D_{it-1} + \beta_2 W_{it-1} + \gamma X_{it-1} + \theta_t + \varepsilon_{it}$$

- Same specification BUT:
→ lagged variables for top rates instead of country fixed effects to tackle the issue of potential time-varying unobservables which might bias B_1 and B_2 in the first specification.

Results

	5-year Data						10-year Data	
	Country Fixed Effects			Lag DV			Country FE	Lag DV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Top Rate</i> _{t-1}				0.866 (0.040)	0.868 (0.037)	0.656 (0.063)		0.359 (0.128)
				0.000	0.000	0.000		0.005
<i>War Mobilization</i> _{t-1}	23.379 (6.046)	21.368 (5.803)	20.083 (5.765)	17.884 (3.913)	17.898 (4.021)	16.517 (4.219)	30.074 (12.007)	26.774 (11.103)
	0.001	0.002	0.003	0.000	0.000	0.000	0.022	0.016
<i>Universal Male Suffrage</i> _{t-1}	4.212 (7.202)	7.313 (6.704)	-0.634 (4.097)	-2.921 (1.553)	-3.399 (1.564)	0.620 (1.671)	-0.189 (5.264)	3.593 (2.846)
	0.566	0.290	0.879	0.060	0.030	0.711	0.972	0.207
<i>Left Executive</i> _{t-1}		0.558 (5.544)	4.271 (3.638)		3.391 (1.615)	4.577 (1.677)	5.750 (6.070)	4.703 (3.094)
		0.921	0.256		0.036	0.006	0.356	0.128
<i>GDP per capita</i> _{t-1}		0.001 (0.002)	0.000 (0.001)		-0.000 (0.000)	0.001 (0.000)	0.001 (0.002)	0.001 (0.001)
		0.532	0.722		0.496	0.072	0.588	0.094
Period Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-specific Time Trends	No	No	Yes	No	No	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	No	No	No	Yes	No
R-squared	0.713	0.723	0.842	0.878	0.876	0.892	0.848	0.840
Number of Observations	510	489	489	509	488	488	240	239

Results (2)

	5-year Data						10-year Data	
	Country Fixed Effects			Lag DV			Country FE	Lag DV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Top Rate</i> _{t-1}				0.871 (0.039)	0.877 (0.037)	0.660 (0.062)		0.382 (0.126)
				0.000	0.000	0.000		0.002
<i>War Mobilization</i> _{t-1}	23.860 (6.183)	23.278 (6.309)	20.126 (5.948)	16.869 (4.002)	16.539 (4.172)	16.479 (4.308)	29.808 (12.463)	27.549 (11.359)
	0.001	0.002	0.003	0.000	0.000	0.000	0.028	0.015
<i>Boix-Rosato</i> _{t-1}	0.071 (7.856)	3.118 (6.191)	0.380 (2.870)	-1.424 (1.287)	-1.899 (1.207)	-0.462 (1.225)	-0.774 (3.711)	-0.106 (2.062)
	0.993	0.621	0.896	0.272	0.115	0.706	0.837	0.959
<i>Left Executive</i> _{t-1}		0.497 (5.581)	4.193 (3.758)		3.213 (1.615)	4.691 (1.708)	5.835 (6.328)	5.118 (3.235)
		0.930	0.279		0.036	0.006	0.369	0.114
<i>GDP per capita</i> _{t-1}		0.001 (0.002)	0.000 (0.001)		-0.000 (0.000)	0.001 (0.000)	0.001 (0.002)	0.001 (0.001)
		0.599	0.738		0.941	0.083	0.600	0.164
Period Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-specific Time Trends	No	No	Yes	No	No	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	No	No	No	Yes	No
R-squared	0.711	0.719	0.842	0.877	0.875	0.892	0.848	0.839
Number of Observations	510	489	489	509	488	488	240	239

Results (3)

	5-year Data						10-year Data	
	Country Fixed Effects				Lag DV		Country FE	Lag DV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Top Rate</i> _{t-1}				0.866 (0.039)	0.872 (0.037)	0.644 (0.064)		0.343 (0.128)
				0.000	0.000	0.000		0.007
<i>War Mobilization</i> _{t-1}	27.593 (6.088)	26.027 (6.600)	21.772 (6.158)	20.295 (3.406)	20.099 (4.172)	19.924 (3.686)	31.176 (12.473)	30.102 (11.454)
	0.000	0.001	0.002	0.000	0.000	0.000	0.022	0.009
<i>No Upper</i> _{t-1}	14.383 (6.047)	16.155 (7.145)	5.696 (6.021)	1.205 (1.040)	0.904 (1.049)	4.813 (1.489)	5.104 (5.628)	9.204 (2.919)
	0.029	0.036	0.357	0.247	0.389	0.001	0.376	0.002
<i>Left Executive</i> _{t-1}		0.552 (5.602)	4.147 (5.602)		2.977 (1.578)	4.690 (1.671)	5.687 (6.425)	5.031 (3.162)
		0.930	0.304		0.059	0.005	0.388	0.112
<i>GDP per capita</i> _{t-1}		0.001 (0.002)	0.000 (0.001)		-0.000 (0.000)	0.001 (0.000)	0.001 (0.002)	0.001 (0.001)
		0.647	0.753		0.756	0.160	0.580	0.072
Period Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-specific Time Trends	No	No	Yes	No	No	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	No	No	No	Yes	No
R-squared	0.731	0.742	0.843	0.879	0.877	0.896	0.849	0.846
Number of Observations	509	488	488	508	487	487	240	239

Robustness checks

- Alternative measures of democracy (secret ballot, direct elections...)
- Alternative measures of war mobilization (>5% of the population enrolled, significant participation to WW)
- Dummy for occupied countries (Japan by the US for ex.)

→ **Conclusion:** still strong correlation between war mobilization and top rates and absence of correlation between democracy and top rates

Criticisms

- Omitted variable ?
- For many countries, WWII is the only war that fulfills the conditions → Problem to generalize the results
- Long run determinants different from short-run ones: fiscal competition, economic crisis...
- Institutionnal features
- **Imperfect proxies:**
 - Universal male suffrage ≠ awareness of inequalities
 - War: 21st century wars: very economic in terms of human resources