

Online Appendix to: “Are Western-educated Leaders Less Prone to Initiate Militarized Disputes?”

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A List of non-Western countries included in the main analysis

The list of 147 non-Western countries that are included in the analyses throughout the paper is the following:

Afghanistan, Albania, Algeria, Angola, Argentina, Armenia, Azerbaijan, Bahrein, Barbados, Benin, Burkina Faso, Bahamas, Bhutan, Belarus, Belize, Bangladesh, Bolivia, Bosnia-Herzegovina, Botswana, Brazil, Brunei, Burundi, Bulgaria, Cambodia, Cameroon, Cape Verde, Ivory Coast, Central African Republic, Chad, Chile, China, Colombia, Comoros, Republic of Congo, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Djibouti, Dominican Republic, Congo (DRC), Vietnam, Ecuador, Egypt, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guinea-Bissau, Georgia, Guatemala, Republic of Guinea, Guayana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kenya, Kuwait, Kyrgyzstan, Kazakhstan, Laos, Latvia, Liberia, Lebanon, Lesotho, Libya, Lithuania, Mauritania, Macedonia, Madagascar, Malaysia, Mauritius, Malawi, Mexico, Moldova, Mali, Malta, Mongolia, Morocco, Myanmar, Mozambique, Namibia, Nepal, Nicaragua, Nigeria, Niger, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Papua New Guinea, Poland, Korea (DR), Qatar, Korea R., Romania, Russian Federation/USSR, Vietnam N., Rwanda, South Africa, El Salvador, Saudi Arabia, Senegal, Sierra Leone, Singapore, Slovakia, Slovenia, Somalia, Sri Lanka, Sudan, Swziland, Syria, Tajikistan, Taiwan, Tanzania, Thailand, Turkmenistan, Togo, Trinidad and Tobago, Tunisia, Turkey, United Arab Emirates, Uganda, Ukraine, Uruguay, Uzbekistan, Venezuela, Yemen Arab Republic/North Yemen, Republic of Yemen, South Yemen, Yugoslavia/Serbia, Zambia, Zanzibar, Zimbabwe.

B Robustness Checks: Militarized Interstate Disputes Initiated by the leader only

The next table re-estimates the main finding but taking only into account those militarized interstate disputes that were initiated by the leader, so excluding inherited wars.

Table B.1: The Effect of Western-Democratic Education on Militarized Interstate Disputes Initiated by the Leader Only

	<i>Dependent variable: Interstate Dispute Initiation</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Western Education	-1.16*** (0.24)	-0.89*** (0.21)	-0.79*** (0.23)	-0.81*** (0.21)	-0.76*** (0.23)	-0.57** (0.21)
Leader Controls						
Secondary Studies			0.61 (0.51)		0.70 (0.51)	0.81 (0.50)
Undergraduate			0.61 (0.48)		0.27 (0.48)	0.55 (0.46)
Post-graduate			0.59 (0.51)		0.70 (0.51)	0.62 (0.48)
Foreign education (non-Western)			-0.33 (0.27)		-0.26 (0.26)	-0.41 (0.25)
Top University			0.07 (0.35)		0.14 (0.35)	0.45 (0.32)
Prior occupation dummies?	N	N	Y	N	Y	Y
Country Controls						
Democracy Score				-0.03 (0.02)	-0.03 (0.02)	-0.01 (0.02)
GDPpc				-0.35*** (0.11)	-0.35** (0.11)	-0.32** (0.14)
Last War Won				0.76* (0.37)	0.77* (0.38)	0.85*** (0.32)
Last War Lost				0.32 (0.33)	0.25 (0.35)	0.12 (0.31)
Material Capabilities				19.7*** (5.78)	19.8** (5.81)	-8.33 (8.41)
Student Flow (000')				0.08*** (0.02)	0.07** (0.02)	0.01 (0.02)
Ethnic Fractionalization				0.04 (0.13)	0.06 (0.13)	
Colonial legacy				-0.62 (0.32)	-0.63 (0.33)	
Distance to the West (000')				0.02 (0.01)	0.03 (0.07)	
Random/Fixed Effects						
Leader RE	Y	Y	Y	Y	Y	Y
Year RE/FE	N	FE	FE	FE	FE	FE
Country RE/FE	N	RE	RE	RE	RE	FE
Constant	-2.38*** (0.12)	-3.29*** (0.58)	-3.27*** (0.70)	-0.72 (0.93)	-1.31 (1.07)	-0.41 (1.27)
N	6,209	6,209	6,209	6,209	6,209	5,258
N Countries	147	147	147	147	147	111
N Years	55	55	55	55	55	55
N Leaders	902	902	902	902	902	744
LL	-2,329	-2,210	-2,205	-2,188	-2,184	-2,024
AIC	4,664	4,536	4,553	4,510	4,528	4,420
BIC	4,684	4,926	5,032	4,961	5,066	5,642

Note: *p<0.05; **p<0.01; ***p<0.001. Models are logistic mixed effects. GDPpc, ethnic fractionalization and student flow are included in their logarithmic scale since this is the most appropriate functional form in the relationship between these variables and the outcome variable.

C Robustness Checks: Coding sensitivity of Western education

The next three table re-estimate the main finding after re-coding Western education by: 1) including in the definition of Western-based democratic education those non-Western countries that have been democratic throughout the entire period (Table C.1); 2) excluding in the definition of Western-based democratic education those countries that have not been democratic throughout the entire period (Table C.2); and, 3) by including in the definition of Western-based democratic education only those non-Western countries that have been democratic throughout the entire period and, also, excluding in the definition of Western-based democratic education those Western countries that have not been democratic throughout the entire period (Table C.3). See footnote 12 in the main text for greater details on the countries. The conclusion across these different specification is that results are largely unaltered by defining the countries as Western (Table ?? in main body of the article), Western or democratic (Table C.1), Western-democratic (Table C.2), or only Democratic (Table C.3). This consistency supports the thesis that Western countries and democratic regime types have been historically too closely connected to empirically distinguish them in these analyses.

Table C.1: The Effect of Western-Democratic Education on Militarized Interstate Disputes (Western and/or Democratic Education)

	<i>Dependent variable: Interstate Dispute Initiation</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Western Education	-1.28*** (0.26)	-0.91*** (0.20)	-0.86*** (0.22)	-0.83*** (0.20)	-0.84*** (0.22)	-0.80*** (0.23)
Leader Controls						
Secondary Studies			0.60 (0.50)		0.68 (0.50)	0.68 (0.49)
Undergraduate			0.48 (0.47)		0.57 (0.46)	0.42 (0.44)
Post-graduate			0.64 (0.50)		0.74 (0.49)	0.55 (0.47)
Foreign education (non-Western)			-0.13 (0.25)		-0.08 (0.25)	-0.19 (0.24)
Top University			0.07 (0.34)		0.15 (0.33)	0.43 (0.31)
Prior occupation dummies?	N	N	Y	N	Y	Y
Country Controls						
Democracy Score				-0.03 (0.01)	-0.03 (0.01)	-0.01 (0.01)
GDPpc				-0.38*** (0.11)	-0.38** (0.11)	-0.40** (0.14)
Last War Won				0.69* (0.35)	0.73* (0.37)	0.78* (0.32)
Last War Lost				0.30 (0.31)	0.25 (0.33)	0.14 (0.29)
Material Capabilities				21.8*** (5.96)	22.0*** (5.99)	-3.55 (8.38)
Student Flow (000')				0.08*** (0.02)	0.08*** (0.02)	0.13 (0.02)
Ethnic Fractionalization				0.08 (0.11)	0.06 (0.13)	
Colonial legacy				-0.61 (0.33)	-0.52 (0.33)	
Distance to the West (000')				0.02 (0.07)	0.02 (0.14)	
Random/Fixed Effects						
Leader RE	Y	Y	Y	Y	Y	Y
Year RE/FE	N	FE	FE	FE	FE	FE
Country RE/FE	N	RE	RE	RE	RE	FE
Constant	-2.23*** (0.12)	-3.29*** (0.58)	-3.75*** (0.74)	-0.56 (0.93)	-1.08 (1.05)	-0.41 (1.27)
N	6,209	6,209	6,209	6,209	6,209	5,258
N Countries	147	147	147	147	147	111
N Years	55	55	55	55	55	55
N Leaders	902	902	902	902	902	744
LL	-2,385	-2,236	-2,221	-2,216	-2,213	-2,042
AIC	4,776	4,595	4,614	4,566	4,586	4,457
BIC	4,797	4,985	5,091	5,018	5,125	5,678

Note: *p<0.05; **p<0.01; ***p<0.001. Models are logistic mixed effects. GDPpc, ethnic fractionalization and student flow are included in their logarithmic scale since this is the most appropriate functional form in the relationship between these variables and the outcome variable.

Table C.2: The Effect of Western-Democratic Education on Militarized Interstate Disputes (Democratic Education)

	<i>Dependent variable: Interstate Dispute Initiation</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Western Education	-1.23*** (0.27)	-1.05*** (0.24)	-0.99*** (0.25)	-0.94*** (0.24)	-0.91*** (0.20)	-0.82*** (0.23)
Leader Controls						
Secondary Studies			0.55 (0.50)		0.64 (0.50)	0.68 (0.48)
Undergraduate			0.42 (0.47)		0.51 (0.47)	0.42 (0.44)
Post-graduate			0.53 (0.49)		0.62 (0.49)	0.55 (0.47)
Foreign education (non-Western)			-0.16 (0.25)		-0.10 (0.25)	-0.18 (0.24)
Top University			0.11 (0.33)		0.20 (0.33)	0.42 (0.31)
Prior occupation dummies?	N	N	Y	N	Y	Y
Country Controls						
Democracy Score				-0.02 (0.01)	-0.03 (0.01)	-0.01 (0.01)
GDPpc				-0.37*** (0.11)	-0.36*** (0.11)	-0.40** (0.14)
Last War Won				0.71* (0.35)	0.73 (0.37)	0.78* (0.32)
Last War Lost				0.31 (0.31)	0.24 (0.33)	0.13 (0.29)
Material Capabilities				21.8*** (6.00)	21.98*** (6.04)	-3.63 (8.38)
Student Flow (000')				0.08*** (0.02)	0.08*** (0.02)	0.01 (0.02)
Ethnic Fractionalization				0.07 (0.11)	0.08 (0.11)	
Colonial legacy				-0.65 (0.33)	-0.67 (0.34)	
Distance to the West				0.02 (0.07)	0.02 (0.07)	
Random/Fixed Effects						
Leader RE	Y	Y	Y	Y	Y	Y
Year RE/FE	N	FE	FE	FE	FE	FE
Country RE/FE	N	RE	RE	RE	RE	FE
Constant	-2.33*** (0.12)	-3.33*** (0.58)	-3.72*** (0.74)	-0.68 (0.93)	-1.15 (1.05)	-0.41 (1.27)
N	6,209	6,209	6,209	6,209	6,209	5,258
N Countries	147	147	147	147	147	111
N Years	55	55	55	55	55	55
N Leaders	902	902	902	902	902	744
LL	-2,390	-2,240	-2,235	-2,216	-2,213	-2,042
AIC	4,786	4,595	4,613	4,567	4,588	4,456
BIC	4,806	4,896	5,091	5,019	5,126	5,678

Note: *p<0.05; **p<0.01; ***p<0.001. Models are logistic mixed effects. GDPpc, ethnic fractionalization and student flow are included in their logarithmic scale since this is the most appropriate functional form in the relationship between these variables and the outcome variable.

Table C.3: The Effect of Western-Democratic Education on Militarized Interstate Disputes (Western and Democratic Education)

	<i>Dependent variable: Interstate Dispute Initiation</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Western Education	-1.27*** (0.27)	-1.08*** (0.24)	-1.02*** (0.22)	-0.98*** (0.23)	-0.94*** (0.24)	-0.82** (0.23)
Leader Controls						
Secondary Studies			0.55 (0.50)		0.64 (0.50)	0.68 (0.48)
Undergraduate			0.42 (0.47)		0.51 (0.47)	0.42 (0.44)
Post-graduate			0.54 (0.49)		0.63 (0.49)	0.55 (0.47)
Foreign education (non-Western)			-0.15 (0.25)		-0.09 (0.25)	-0.18 (0.24)
Top University			0.09 (0.33)		0.19 (0.33)	0.42 (0.31)
Prior occupation dummies?	N	N	Y	N	Y	Y
Country Controls						
Democracy Score				-0.03 (0.01)	-0.03 (0.01)	-0.01 (0.01)
GDPpc				-0.34*** (0.11)	-0.36** (0.11)	-0.40** (0.14)
Last War Won				0.70* (0.35)	0.73* (0.37)	0.78* (0.32)
Last War Lost				0.31 (0.31)	0.23 (0.33)	0.13 (0.29)
Material Capabilities				23.7*** (5.95)	21.9*** (6.03)	-3.62 (8.38)
Student Flow (000')				0.08*** (0.02)	0.08*** (0.02)	0.01 (0.02)
Ethnic Fractionalization				0.04 (0.11)	0.08 (0.13)	
Colonial legacy				-0.51 (0.32)	-0.67* (0.34)	
Distance to the West				0.02 (0.14)	0.02 (0.07)	
Random/Fixed Effects						
Leader RE	Y	Y	Y	Y	Y	Y
Year RE/FE	N	FE	FE	FE	FE	FE
Country RE/FE	N	RE	RE	RE	RE	FE
Constant	-2.32*** (0.12)	-3.29*** (0.58)	-3.71*** (0.70)	-1.32 (0.93)	-1.17 (1.05)	-1.321 (1.27)
N	6,209	6,209	6,209	6,209	6,209	5,258
N Countries	147	147	147	147	147	111
N Years	55	55	55	55	55	55
N Leaders	902	902	902	902	902	744
LL	-2,389	-2,239	-2,235	-2,218	-2,213	-2,042
AIC	4,784	4,594	4,612	4,565	4,586	4,456
BIC	4,805	4,984	5,090	4,995	5,125	5,678

Note: *p<0.05; **p<0.01; ***p<0.001. Models are logistic mixed effects. GDPpc, ethnic fractionalization and student flow are included in their logarithmic scale since this is the most appropriate functional form in the relationship between these variables and the outcome variable.

D Alternative Hybrid Matching Approach: Nearest and Exact Matching

This Appendix presents the results for an alternative matching procedure that combines a nearest neighbor matching for continuous variables and an exact matching for categorical variables. While this procedure allows for exact matching on some key predictors, the matching on continuous covariates is less perfect than in the procedure that uniquely matches through a nearest neighbor. Additionally, the number of observations that can be matched here are substantially lower than those observations that are used in the nearest neighbor approach. Therefore, I present the nearest neighbor approach in the main text because I believe that it is a superior technique for the analysis of this dataset. Yet, I also report the hybrid approach below:

Table D.1: The Effect of Western Education on War Initiation (Hybrid Matching Approach: Nearest and Exact)

<i>Dependent variable: Interstate Dispute Initiation</i>				
	<i>OLS</i>	<i>Logistic Regression Models</i>		
Western education	-0.05*** (0.02)	-0.73*** (0.24)	-0.77*** (0.22)	-1.04*** (0.29)
Intercept	0.40 (0.02)	1.39 (0.91)	1.05 (1.38)	33.43 (35.37)
Controls	Y	Y	Y	Y
Year FE	N	N	Y	Y
Country FE	N	N	N	Y
N Treatment Group	861	861	861	456
N Control Group	861	861	861	562
N Total	1,722	1,722	1,722	1,018
Balance of Covariates	Treatment Group	Control Group	Control Group	Treatment Group
	Means/proportions	Means/proportions	Standard deviation	Diff. in means/proportions
Level of Education	2.32	2.32	0.76	0.000
Businesspeople	0.087	0.087	0.282	0.000
Gentry	0.105	0.105	0.307	0.000
Blue-collar worker	0.064	0.064	0.245	0.000
Military	0.180	0.180	0.384	0.000
Lawyers	0.287	0.287	0.453	0.000
Religious	0.000	0.000	0.000	0.000
Scientists	0.053	0.053	0.225	0.000
Service	0.329	0.329	0.0.47	0.000
Democracy Score	0.24	1.19	6.67	-0.95
GDPpc	7.08	7.12	1.39	-0.039
Last War Won	0.007	0.007	0.0.08	0.00
Last War Lost	0.02	0.02	0.15	0.00
Material Capabilities	0.001	0.003	0.007	-0.002
Student Flow (000')	-0.208	0.448	3.63	-0.65
Ethnic Fractionalization	-0.777	0.916	-1.35	0.16
Colonial Legacy	0.863	0.863	0.344	0.000
Distance to the West	3,954	4,247	2,289	-292.9

*Note:**p<0.1; **p<0.05; ***p<0.01. Models report cluster-robust standard error by leader to correct for the within-leader correlation of observations.

E Robustness Checks: Country-Specific Time Trends

This Appendix presents the results for an alternative way to adjust for smooth country-level trends in unobserved confounders by including linear, quadratic, and cubic country specific time trends into the model. This procedure is suggested by (Carter and Signorino, 2010). The main finding of the paper is unaffected by the inclusion of these time trends. Yet, I believe that the inclusion of year dummies, which controls for common international shocks, is the most appropriate form to control for time due to the nature of the dependent variable. Note that it is more reasonable to believe that the likelihood of countries to get involved in war is a function of the international environment to a specific year – which is shared by most other countries – rather than a function of time from which the country emerged as an independent nation state in the sample. In other words, the likelihood that a country will be involved in a war in, say, 1970, is much more affected by international events in that year, say, the Second Indochina War, just to mention an active war in that year, than by the fact that that country has been an independent state for x number of years, regardless of the functional form given to time.

Table E.1: The Effect of Western-educated Leaders on Militarized Interstate Disputes

	<i>Dependent variable: Interstate Dispute Initiation</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Western Education	-1.24*** (0.24)	-0.88*** (0.20)	-0.84*** (0.21)	-0.80*** (0.20)	-0.81*** (0.21)	-0.65** (0.19)
Leader Controls						
Secondary Studies			0.65 (0.50)		0.72 (0.49)	0.81 (0.47)
Undergraduate			0.52 (0.46)		0.60 (0.46)	0.54 (0.44)
Post-graduate			0.65 (0.49)		0.75 (0.48)	0.67 (0.46)
Foreign education (non-Western)			-0.10 (0.25)		-0.05 (0.24)	-0.13 (0.23)
Top University			0.04 (0.33)		0.12 (0.33)	0.38 (0.30)
Prior occupation dummies?	N	N	Y	N	Y	Y
Country Controls						
Democracy Score				-0.03 (0.01)	-0.03 (0.02)	-0.02 (0.01)
GDPpc				-0.37*** (0.10)	-0.36*** (0.11)	-0.38** (0.13)
Last War Won				0.66* (0.34)	0.72* (0.36)	0.79* (0.31)
Last War Lost				0.27 (0.30)	0.24 (0.32)	0.12 (0.29)
Material Capabilities				22.5*** (5.83)	22.8*** (5.86)	-1.35 (8.10)
Student Flow (000')				0.07*** (0.02)	0.07*** (0.02)	0.01 (0.02)
Ethnic Fractionalization				0.08 (0.10)	0.06 (0.13)	
Colonial legacy				-0.58 (0.33)	-0.52 (0.33)	
Distance to the West				0.01 (0.07)	0.02 (0.14)	
Random/Fixed Effects						
Leader RE	Y	Y	Y	Y	Y	Y
Time Trends	Y	Y	Y	Y	Y	Y
Country RE/FE	N	RE	RE	RE	RE	FE
Constant	-2.23*** (0.12)	-2.88*** (0.34)	-3.36*** (0.57)	-0.40 (0.79)	-1.23 (0.74)	-0.41 (1.27)
N	6,209	6,209	6,209	6,209	6,209	5,258
N Countries	147	147	147	147	147	111
N Years	55	55	55	55	55	55
N Leaders	902	902	902	902	902	744
LL	-2,385	-2,292	-2,288	-2,267	-2,266	-2,095
AIC	4,776	4,598	4,617	4,566	4,589	4,461
BIC	4,797	4,645	4,751	4,673	4,784	5,347

Note: *p<0.05; **p<0.01; ***p<0.001. Models are logistic mixed effects. GDPpc, ethnic fractionalization and student flow are included in their logarithmic scale since this is the most appropriate functional form in the relationship between these variables and the outcome variable. Following (Carter and Signorino, 2010), time trends incorporate linear, quadratic, and cubic country specific time trends to account for smooth country trends in unobserved confounders.

References

Carter, David B and Curtis S Signorino. 2010. "Back to the Future: Modeling Time Dependence in Binary Data." *Political Analysis* 18(3):271–292.