

# Robustness Checks

## I. OLS/Logit Models

**Table 3A.** Table 3 with GDP as an alternative measure of power.

**Table 3B.** Table 3 with robust standard errors in addition to country-clustered errors.

**Table 3C.** Table 3 with a one-year lag of the dependent variable (Polity IV).

## II. Fixed-Effects Models

**Table 4A.** Table 4 with one-year lag of the dependent variable (Polity IV).

**Table 4B.** Table 4 with 5-year change in hegemonic power as independent variable.

*Notes:* Regression results when using GDP as a measure of power (Table 3A) are very similar to the results obtained when using CINC. Changes in the share of power still have a substantive and statistically significant effect on democratization in 5 of the 6 model variations. Compared to the results in Table 3 of the paper (the CINC measure), both the coefficients and the standard errors for the main IV are slightly larger, while the overall effects and p-values remain unchanged. (In general, changes in CINC and changes in GDP are broadly correlated for leading states. During the twentieth century, for example, the correlation coefficient between changes in US hegemonic power using CINC and changes in US GDP is 0.79. This suggests that the CINC measure has some external validity.) Using robust standard errors (Table 3B) did not affect the results, suggesting (though not proving) that the model is correctly specified. See King and Roberts (2012) on the use of robust standard errors as a test of model mis-specification.

Including a one-year lag of the dependent variable (Tables 3C and 4A) had some effects on the size of the coefficients but did not affect statistical significance. Including a lag of the DV inflates the R-sq scores (as seen in the tables) but is useful as a robustness check because the lag “soaks up” a lot of the variance. See Keele and Kelley 2006 on using lagged dependent variables in dynamic OLS models. In Table 3C, including the lag had the expected effect of shrinking the coefficients; however, the main independent variable retained the correct sign and statistical significance in all six models (with  $p < 0.01$  in five of those models). Per capita GDP, diffusion variables, and the British colony/Muslim state controls also shrank in size, so the relative effect of hegemonic power remained approximately the same. The effects were similar in 4C: smaller coefficients for most of the independent variables, while shifts in hegemonic power remained significant.

Finally, using an alternative measure of power in 4B (a five-year average) had a similar effect as in the OLS/Logit models, increasing the size of the coefficients associated with main variable (hegemonic power) and retaining or increasing their statistical significance. In particular, shifts in fascist hegemonic power became statistically significant at the 99% level in this model variation. The effect on control variables was minimal.

Table 3A: Determinants of democracy, 1900-2000, using GDP as the measure of hegemonic power.

<i>Variables</i>	<i>Model 1a</i> ( <i>USHegShare</i> )	<i>Model 1b</i> ( <i>USHegShare+</i> )	<i>Model 1c</i> ( <i>USHegShare</i> , 5-yr avg.)	<i>Model 2a</i> ( <i>USHegShare</i> )	<i>Model 2b</i> ( <i>USHegShare+</i> )	<i>Model 2c</i> ( <i>USHegShare</i> , 5-yr avg.)
<b>US share of hegemonic power</b>	3.803 (1.198)**	3.407 (1.127)**	19.261 (5.562)**	2.077 (1.028)*	1.596 (1.000)	12.164 (4.800)*
Per capita GDP	1.143 (0.368)**	0.824 (0.405)*	1.160 (0.374)**	0.651 (0.151)**	0.543 (0.182)**	0.659 (0.152)**
GDP growth	-0.013 (0.013)	-0.008 (0.013)	-0.012 (0.013)	0.002 (0.006)	0.008 (0.007)	0.003 (0.006)
Proportion of democr. neighbors	4.458 (0.994)**	2.560 (0.911)**	4.470 (1.011)**	1.066 (0.587)†	0.534 (0.582)	1.078 (0.592)†
Neighbor transitions to democracy	0.367 (0.191)†	0.594 (0.169)**	0.347 (0.188)†	0.285 (0.122)*	0.357 (0.122)**	0.251 (0.121)*
Global proportion of democracies	5.066 (2.226)*	10.854 (2.417)**	2.309 (2.301)	1.938 (1.695)	6.395 (1.707)**	0.272 (2.043)
Regime history (autocracy)	-0.069 (0.009)**	-0.072 (0.011)**	-0.068 (0.009)**	-0.016 (0.006)**	-0.020 (0.006)**	-0.016 (0.006)**
Regime history (democracy)	0.088 (0.017)**	0.074 (0.017)**	0.089 (0.018)**	0.243 (0.082)**	0.198 (0.068)**	0.240 (0.080)**
British colony	0.198 (0.723)	1.858 (0.867)*	0.236 (0.731)	-0.335 (0.325)	0.525 (0.484)	-0.312 (0.328)
Muslim state	-3.705 (0.786)**	-2.930 (1.256)*	-3.700 (0.794)**	-1.335 (0.337)**	-1.302 (0.503)**	-1.340 (0.382)**
<i>Observations</i>	7144	7144	6979	7079	6881	6914
<i>r</i> <sup>2</sup>	0.56	0.61	0.56	0.54	0.57	0.54

*Notes:* The table shows the effects of changes in the share of US hegemonic power on democratization. “US share of hegemonic power” is the annual change in the U.S. share of hegemonic power, *measured as GDP*, lagged by one year. The regression table shows results for two measures of democracy: Polity IV (Models 1a-1c) and Przeworski/Boix (Models 2a-2c). For each measure of democracy, three model specifications were used: the first (1a and 2a) includes the variables shown in the figure; the second (1b and 2b) incorporates additional controls in the form of regional variables and national culture proxies, as described in the paper; and the third uses an alternate specification of hegemonic power, a five-year average of changes, to capture the effects of sustained shifts in hegemonic power.

†p < .10; \*p < .05; \*\*p < .01.

Table 3B: Determinants of democracy, 1900-2000, with robust standard errors.

<i>Variables</i>	<i>Model 1a</i> ( <i>USHegShare</i> )	<i>Model 1b</i> ( <i>USHegShare+</i> )	<i>Model 1c</i> ( <i>USHegShare</i> , 5-yr avg.)	<i>Model 2a</i> ( <i>USHegShare</i> )	<i>Model 2b</i> ( <i>USHegShare+</i> )	<i>Model 2c</i> ( <i>USHegShare</i> , 5-yr avg.)
<b>US share of hegemonic power</b>	2.561 (0.699)**	2.367 (0.660)**	16.860 (3.455)**	1.111 (0.565)*	0.846 (0.540)	7.466 (3.273)*
Per capita GDP	1.144 (0.368)**	0.824 (0.405)*	1.204 (0.363)**	0.652 (0.151)**	0.545 (0.182)**	0.723 (0.162)**
GDP growth	-0.013 (0.013)	-0.008 (0.013)	-0.018 (0.013)	0.002 (0.006)	0.008 (0.007)	-0.002 (0.007)
Proportion of democr. neighbors	4.453 (0.994)**	2.556 (0.911)**	4.149 (0.991)**	1.064 (0.587)†	0.533 (0.582)	0.830 (0.611)
Neighbor transitions to democracy	0.370 (0.191)†	0.596 (0.170)**	0.295 (0.199)	0.292 (0.122)*	0.361 (0.122)**	0.313 (0.127)*
Global proportion of democracies	4.834 (2.207)*	10.626 (2.403)**	0.631 (2.245)	1.876 (1.712)	6.350 (1.709)**	0.402 (2.130)
Regime history (autocracy)	-0.069 (0.009)**	-0.072 (0.011)**	-0.071 (0.009)**	-0.016 (0.006)**	-0.020 (0.006)**	-0.016 (0.006)**
Regime history (democracy)	0.088 (0.017)**	0.074 (0.017)**	0.087 (0.018)**	0.243 (0.082)**	0.198 (0.068)**	0.238 (0.078)**
British colony	0.198 (0.723)	1.858 (0.867)*	-0.075 (0.730)	-0.336 (0.325)	0.524 (0.483)	-0.542 (0.351)
Muslim state	-3.705 (0.786)**	-2.929 (1.256)*	-3.574 (0.801)**	-1.334 (0.377)**	-1.301 (0.503)**	-1.307 (0.400)**
<i>Observations</i>	7144	7144	6828	7079	6881	6765
<i>r</i> <sup>2</sup>	0.56	0.61	0.57	0.54	0.57	0.55

*Notes:* The table shows the effects of changes in the share of US hegemonic power on democratization. “US share of hegemonic power” is the annual change in the U.S. share of hegemonic power. The model estimates robust standard errors in addition to country-clustered errors. The regression table shows results for two measures of democracy: Polity IV (Models 1a-1c) and Przeworski/Boix (Models 2a-2c). For each measure of democracy, three model specifications were used: the first (1a and 2a) includes the variables shown in the figure; the second (1b and 2b) incorporates additional controls in the form of regional variables and national culture proxies, as described in the paper; and the third uses an alternate specification of hegemonic power, a five-year average of changes, to capture the effects of sustained shifts in hegemonic power.

† $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ .

Table 3C: Determinants of democracy, 1900-2000, with a one-year lag of the DV.

<i>Variables</i>	<i>Model 1a</i> ( <i>USHegShare</i> )	<i>Model 1b</i> ( <i>USHegShare+</i> )	<i>Model 1c</i> ( <i>USHegShare</i> , 5-yr avrg.)	<i>Model 2a</i> ( <i>USHegShare</i> )	<i>Model 2b</i> ( <i>USHegShare+</i> )	<i>Model 2c</i> ( <i>USHegShare</i> , 5-yr avrg.)
<b>US share of hegemonic power</b>	1.013 (0.312)**	0.991 (0.312)**	2.294 (1.073)*	2.892 (0.864)**	2.483 (0.870)**	8.919 (2.956)**
One-year lag of Polity IV	0.950 (0.007)**	0.943 (0.008)**	0.949 (0.007)**	6.599 (0.217)**	6.388 (0.216)**	6.515 (0.217)**
Per capita GDP	0.132 (0.031)**	0.156 (0.038)**	0.131 (0.033)**	0.496 (0.104)**	0.491 (0.121)**	0.541 (0.111)**
GDP growth	-0.010 (0.003)**	-0.010 (0.003)**	-0.012 (0.004)**	0.002 (0.010)	0.003 (0.011)	-0.002 (0.012)
Proportion of democr. neighbors	0.278 (0.088)**	0.144 (0.103)	0.248 (0.088)**	0.666 (0.302)*	0.194 (0.349)	0.532 (0.307)†
Neighbor transitions to democracy	0.115 (0.064)†	0.138 (0.065)*	0.125 (0.064)†	0.764 (0.147)**	0.882 (0.148)**	0.754 (0.144)**
Global proportion of democracies	0.580 (0.314)†	1.110 (0.377)**	0.254 (0.446)	1.006 (1.197)	3.567 (1.279)**	-0.572 (1.422)
Regime history (autocracy)	0.001 (0.001)	0.001 (0.001)	-0.000 (0.001)	-0.005 (0.003)†	-0.007 (0.003)*	-0.006 (0.003)†
Regime history (democracy)	0.002 (0.001)	-0.001 (0.001)	0.001 (0.001)	0.048 (0.017)**	0.037 (0.017)*	0.049 (0.017)**
British colony	-0.019 (0.053)	0.041 (0.073)	-0.023 (0.051)	-0.127 (0.217)	0.270 (0.294)	-0.196 (0.236)
Muslim state	-0.223 (0.062)**	-0.296 (0.099)**	-0.223 (0.064)**	-0.972 (0.255)**	-1.275 (0.360)**	-0.964 (0.276)**
<i>Observations</i>	7125	7125	6813	7076	6878	6763
<i>r</i> <sup>2</sup>	0.94	0.94	0.56	0.86	0.86	0.86

*Notes:* The table shows the effects of changes in the share of US hegemonic power on democratization. “US share of hegemonic power” is the annual change in the U.S. share of hegemonic power, lagged by one year. This model also includes a one-year lag of the dependent variable (Polity IV). The regression table shows results for two measures of democracy: Polity IV (Models 1a-1c) and Przeworski/Boix (Models 2a-2c). For each measure of democracy, three model specifications were used: the first (1a and 2a) includes the variables shown in the figure; the second (1b and 2b) incorporates additional controls in the form of regional variables and national culture proxies, as described in the paper; and the third uses an alternate specification of hegemonic power, a five-year average of changes, to capture the effects of sustained shifts in hegemonic power.

†p < .10; \*p < .05; \*\*p < .01.

Table 4A: Determinants of democracy across hegemonic powers, 1900-2000, with fixed effects and one-year lag of the DV (Polity).

<i>Variables</i>	<i>Model 1</i> <i>(Democracy)</i>	<i>Model 2</i> <i>(Fascism)</i>	<i>Model 3</i> <i>(Communism)</i>
<b>Share of hegemonic power</b>	1.107 (0.329)**	-6.010 (4.242)	-4.544 (1.061)**
One-year lag of Polity IV	0.898 (0.006)**	0.728 (0.038)**	0.884 (0.007)**
Per capita GDP	0.378 (0.055)**	0.407 (0.888)	0.478 (0.068)**
GDP growth	-0.013 (0.003)**	-0.023 (0.014)	-0.013 (0.004)**
Proportion of democr. neighbors	0.150 (0.143)	-0.141 (0.812)	0.110 (0.179)
Neighbor transitions to democracy	0.135 (0.063)*	-0.247 (1.120)	0.178 (0.078)**
Global proportion of democracies	2.443 (0.386)**	4.827 (2.957)	3.123 (0.616)**
Regime history (autocracy)	-0.000 (0.001)	0.167 (0.050)**	-0.001 (0.002)
Regime history (democracy)	-0.012 (0.002)**	-0.016 (0.023)	-0.011 (0.003)**
<i>Observations</i>	7244	517	5812
$r^2$	0.94	0.54	0.94

*Notes:* “Share of hegemonic power” is the annual change in the relative share of hegemonic power for three states: the United States (Model 1), Nazi Germany (Model 2), and the Soviet Union (Model 3), lagged by one year. This model also includes a one-year lag of the dependent variable (Polity IV).

†p < .10; \*p < .05; \*\*p < .01.



Table 4B: Determinants of democracy across hegemonic powers, with fixed effects and 5-year change in hegemonic power as IV.

<i>Variables</i>	<i>Model 1</i> <i>(Democracy)</i>	<i>Model 2</i> <i>(Fascism)</i>	<i>Model 3</i> <i>(Communism)</i>
<b>Share of hegemonic power</b>	11.659 (1.761)**	-31.106 (12.494)**	-23.748 (4.368)**
Per capita GDP	1.470 (0.113)**	1.160 (1.172)	1.708 (0.131)**
GDP growth	-0.028 (0.007)**	-0.059 (0.018)**	-0.020 (0.007)**
Proportion of democr. neighbors	1.680 (0.292)**	-0.818 (1.075)	1.214 (0.344)**
Neighbor transitions to democracy	0.346 (0.130)**	1.393 (1.358)	0.444 (0.147)**
Global proportion of democracies	13.465 (0.936)**	13.252 (3.795)**	15.708 (1.167)**
Regime history (autocracy)	-0.087 (0.002)**	0.294 (0.066)**	-0.087 (0.003)**
Regime history (democracy)	-0.010 (0.005)*	0.198 (0.025)**	0.011 (0.006)†
<i>Observations</i>	6945	521	5830
$r^2$	0.41	0.18	0.22

*Notes:* “Share of hegemonic power” is the annual change, averaged over the previous five years, in the relative share of hegemonic power for three states: the United States (Model 1), Nazi Germany (Model 2), and the Soviet Union (Model 3), lagged by one year.

†p < .10; \*p < .05; \*\*p < .01.