

Additional tables for
Ruggedness:
The blessing of bad geography in Africa

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Table 7: Basic summary statistics, inside and outside of Africa

	Mean	Standard deviation	Minimum	Maximum	Corr. with ruggedness
Within Africa					
Ruggedness	1.110	1.279	0.115	6.202	
Log real GDP per person 2000	7.487	0.935	6.146	9.796	0.261*
Diamonds	21.224	63.875	0	368.230	-0.118
% Fertile Soil	31.660	21.318	0	81.699	0.098
% Tropical Climate	52.098	42.985	0	100	-0.203
Distance Coast	0.430	0.357	0.000	1.254	-0.308**
Slave export intensity	4.095	3.165	0	8.868	-0.538***
Outside Africa					
Ruggedness	1.424	1.113	0.003	5.301	
Log real GDP per person 2000	8.934	0.979	6.666	10.965	-0.231**
Diamonds	0.502	3.382	0	34.385	-0.139
% Fertile soil	42.767	26.527	0	100	0.040
% Tropical climate	35.862	45.601	0	100	-0.150
Distance to coast	0.273	0.433	0.000	2.206	0.040

Notes: The table reports summary statistics, inside and outside of Africa, for our ruggedness measure and for our core set of control variables. The table also reports pair-wise correlation coefficients between ruggedness and each control variable. For these, ***, **, and * indicate significance at the 1, 5, and 10 percent levels. In the sample, the number of African countries is 49, and the number of non-African countries is 121.

Table 8: Differential effect of ruggedness for Africa, alternative income and ruggedness measures

		Dependent variable:			
		Log real GDP per person 2000 (World Bank)	Log real GDP per person 2000 (Maddison)	Log real GDP per person 1950 (Maddison)	Log real GDP per person 1950–2000 average (Maddison)
Ruggedness measure:	Ruggedness	0.321 (0.127)**	0.250 (0.113)**	0.284 (0.129)**	0.284 (0.123)**
	Average slope	0.098 (0.044)**	0.076 (0.040)*	0.083 (0.047)*	0.084 (0.045)*
	Local std. dev. of elevation	1.105 (0.459)**	0.835 (0.414)**	0.919 (0.460)**	0.922 (0.443)**
	% highly rugged land	0.017 (0.006)***	0.014 (0.006)**	0.017 (0.006)***	0.017 (0.006)***
	Pop.-weighted ruggedness	0.726 (0.220)***	0.664 (0.206)***	0.393 (0.192)**	0.531 (0.190)***
	Observations	170	159	137	137

Notes: Each entry of the table reports the coefficient and robust standard errors for Ruggedness $\cdot I^{\text{Africa}}$ from the specification of column (6) in table 1 in the main text, estimated using an alternative income measure as the dependent variable and an alternative measure of ruggedness. The alternative income measure is reported above the corresponding column, and the alternative ruggedness measure is reported to the left of the corresponding row. ***, **, and * indicate significance at the 1, 5, and 10 percent levels.

Table 9: Robustness with respect to influential observations

	Dependent variable: Log real GDP per person 2000				
	Omit 10 most rugged	Omit 10 smallest	Omit if $ DFBETA > 2/\sqrt{N}$	Using ln(Ruggedness)	Box-Cox Trans. of Ruggedness
	(1)	(2)	(3)	(4)	(5)
Ruggedness	-0.202 (0.083)**	-0.221 (0.083)***	-0.261 (0.068)***	-0.171 (0.051)***	-0.249 (0.075)***
Ruggedness · I^{Africa}	0.286 (0.133)**	0.188 (0.099)*	0.223 (0.116)*	0.234 (0.119)**	0.333 (0.142)**
I^{Africa}	-1.448 (0.454)***	-1.465 (0.405)***	-1.510 (0.406)***	-1.083 (0.394)***	-1.139 (0.391)***
Diamonds	0.073 (0.031)**	0.029 (0.010)***	0.026 (0.010)***	0.029 (0.012)**	0.027 (0.012)**
Diamonds · I^{Africa}	-0.071 (0.031)**	-0.027 (0.011)**	-0.024 (0.010)**	-0.027 (0.012)**	-0.025 (0.012)**
% Fertile soil	-0.002 (0.003)	-0.002 (0.004)	-0.002 (0.003)	-0.003 (0.003)	-0.002 (0.003)
% Fertile soil · I^{Africa}	-0.010 (0.008)	-0.005 (0.007)	-0.005 (0.007)	-0.008 (0.007)	-0.008 (0.007)
% Tropical climate	-0.010 (0.002)***	-0.010 (0.002)***	-0.009 (0.002)***	-0.009 (0.002)***	-0.009 (0.002)***
% Tropical climate · I^{Africa}	0.006 (0.004)*	0.005 (0.004)	0.003 (0.003)	0.005 (0.004)	0.006 (0.004)
Distance to coast	-1.064 (0.208)***	-1.015 (0.197)***	-1.023 (0.192)***	-1.052 (0.206)***	-1.058 (0.199)***
Distance to coast · I^{Africa}	-0.185 (0.400)	-0.180 (0.395)	-0.176 (0.397)	-0.216 (0.383)	-0.191 (0.383)
Constant	9.898 (0.206)***	9.936 (0.212)***	9.989 (0.188)***	9.631 (0.197)***	9.665 (0.193)***
Observations	160	160	164	170	170
R^2	0.520	0.545	0.564	0.527	0.533

Notes: Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5, and 10 percent levels.

Table 10: Considering differential effects of ruggedness by characteristics prevalent in Africa

	Dependent variable: Log real GDP per person 2000				
	(1)	(2)	(3)	(4)	(5)
Ruggedness	-0.259 (0.101)**	-0.322 (0.160)**	-0.374 (0.161)**	-0.386 (0.176)**	-0.543 (0.179)***
Ruggedness · I^{Africa}	0.357 (0.130)***	0.400 (0.155)***	0.360 (0.140)**	0.399 (0.203)**	0.435 (0.135)***
I^{Africa}	-1.814 (0.213)***	-1.977 (0.223)***	-1.818 (0.218)***	-1.740 (0.337)***	-1.994 (0.216)***
Ruggedness · % Tropical cl.	0.001 (0.002)		0.001 (0.002)	0.002 (0.002)	0.002 (0.002)
% Tropical climate	-0.007 (0.002)***		-0.007 (0.003)***	-0.007 (0.003)**	-0.010 (0.003)***
Ruggedness · % Fertile soil		0.003 (0.003)	0.003 (0.003)	0.004 (0.003)	0.002 (0.003)
% Fertile soil		-0.005 (0.004)	-0.003 (0.004)	-0.005 (0.004)	0.001 (0.003)
Ruggedness · $I^{\text{British col. orig.}}$				-0.089 (0.244)	
$I^{\text{British col. orig.}}$				0.062 (0.379)	
Ruggedness · $I^{\text{French col. orig.}}$				-0.108 (0.244)	
$I^{\text{French col. orig.}}$				-0.175 (0.511)	
Ruggedness · $I^{\text{Portuguese col. orig.}}$				0.361 (0.259)	
$I^{\text{Portuguese col. orig.}}$				-0.393 (0.467)	
Ruggedness · $I^{\text{Spanish col. orig.}}$				-0.105 (0.334)	
$I^{\text{Spanish col. orig.}}$				0.004 (0.538)	
Ruggedness · $I^{\text{Other European col. orig.}}$				-0.234 (0.328)	
$I^{\text{Other European col. orig.}}$				-0.703 (0.519)	
$I^{\text{French civil law}}$					-0.154 (0.222)
Ruggedness · $I^{\text{French civil law}}$					0.120 (0.127)
$I^{\text{Socialist law}}$					-1.181 (0.278)***
Ruggedness · $I^{\text{Socialist law}}$					0.194 (0.150)
$I^{\text{German civil law}}$					-0.087 (0.302)
Ruggedness · $I^{\text{German civil law}}$					0.528 (0.133)***
$I^{\text{Scandinavian law}}$					0.164 (0.221)
Ruggedness · $I^{\text{Scandinavian law}}$					0.666 (0.174)***
Constant	9.505 (0.168)***	9.427 (0.213)***	9.627 (0.223)***	9.681 (0.306)***	9.946 (0.232)***
Observations	170	170	170	170	170
R^2	0.404	0.363	0.408	0.430	0.559

Notes: Coefficients are reported with robust standard errors in brackets. ***, **, and * indicate significance at the 1, 5, and 10 percent levels.