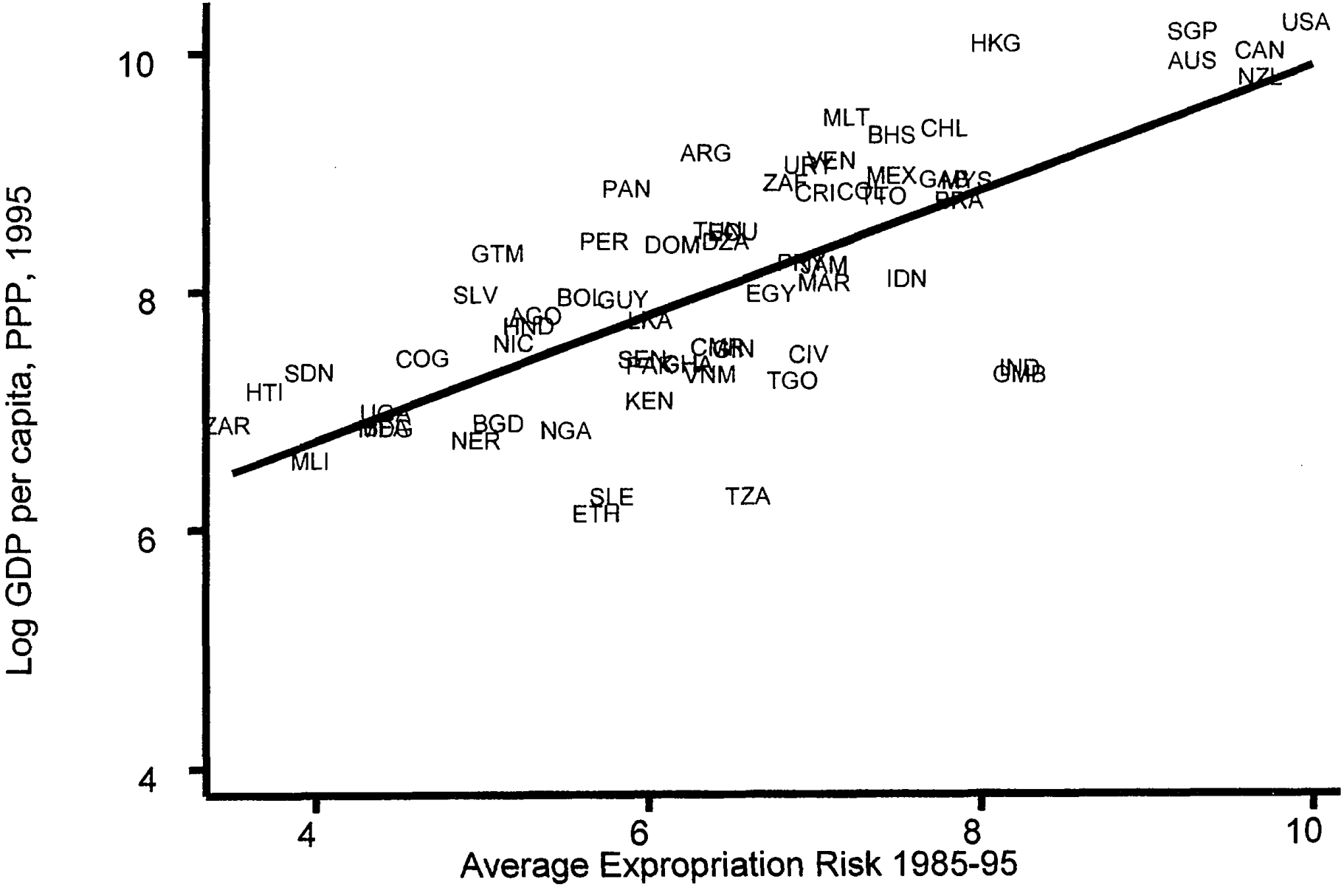

FIGURE 2. OLS RELATIONSHIP BETWEEN EXPROPRIATION RISK AND INCOME

TABLE 2—OLS REGRESSIONS

	Whole world (1)	Base sample (2)	Whole world (3)	Whole world (4)	Base sample (5)	Base sample (6)	Whole world (7)	Base sample (8)
	Dependent variable is log GDP per capita in 1995						Dependent variable is log output per worker in 1988	
Average protection against expropriation risk, 1985–1995	0.54 (0.04)	0.52 (0.06)	0.47 (0.06)	0.43 (0.05)	0.47 (0.06)	0.41 (0.06)	0.45 (0.04)	0.46 (0.06)
Latitude			0.89 (0.49)	0.37 (0.51)	1.60 (0.70)	0.92 (0.63)		
Asia dummy				−0.62 (0.19)		−0.60 (0.23)		
Africa dummy				−1.00 (0.15)		−0.90 (0.17)		
"Other" continent dummy				−0.25 (0.20)		−0.04 (0.32)		
R^2	0.62	0.54	0.63	0.73	0.56	0.69	0.55	0.49
Number of observations	110	64	110	110	64	64	108	61

Notes: Dependent variable: columns (1)–(6), log GDP per capita (PPP basis) in 1995, current prices (from the World Bank's World Development Indicators 1999); columns (7)–(8), log output per worker in 1988 from Hall and Jones (1999). Average protection against expropriation risk is measured on a scale from 0 to 10, where a higher score means more protection against expropriation, averaged over 1985 to 1995, from Political Risk Services. Standard errors are in parentheses. In regressions with continent dummies, the dummy for America is omitted. See Appendix Table A1 for more detailed variable definitions and sources. Of the countries in our base sample, Hall and Jones do not report output per worker in the Bahamas, Ethiopia, and Vietnam.

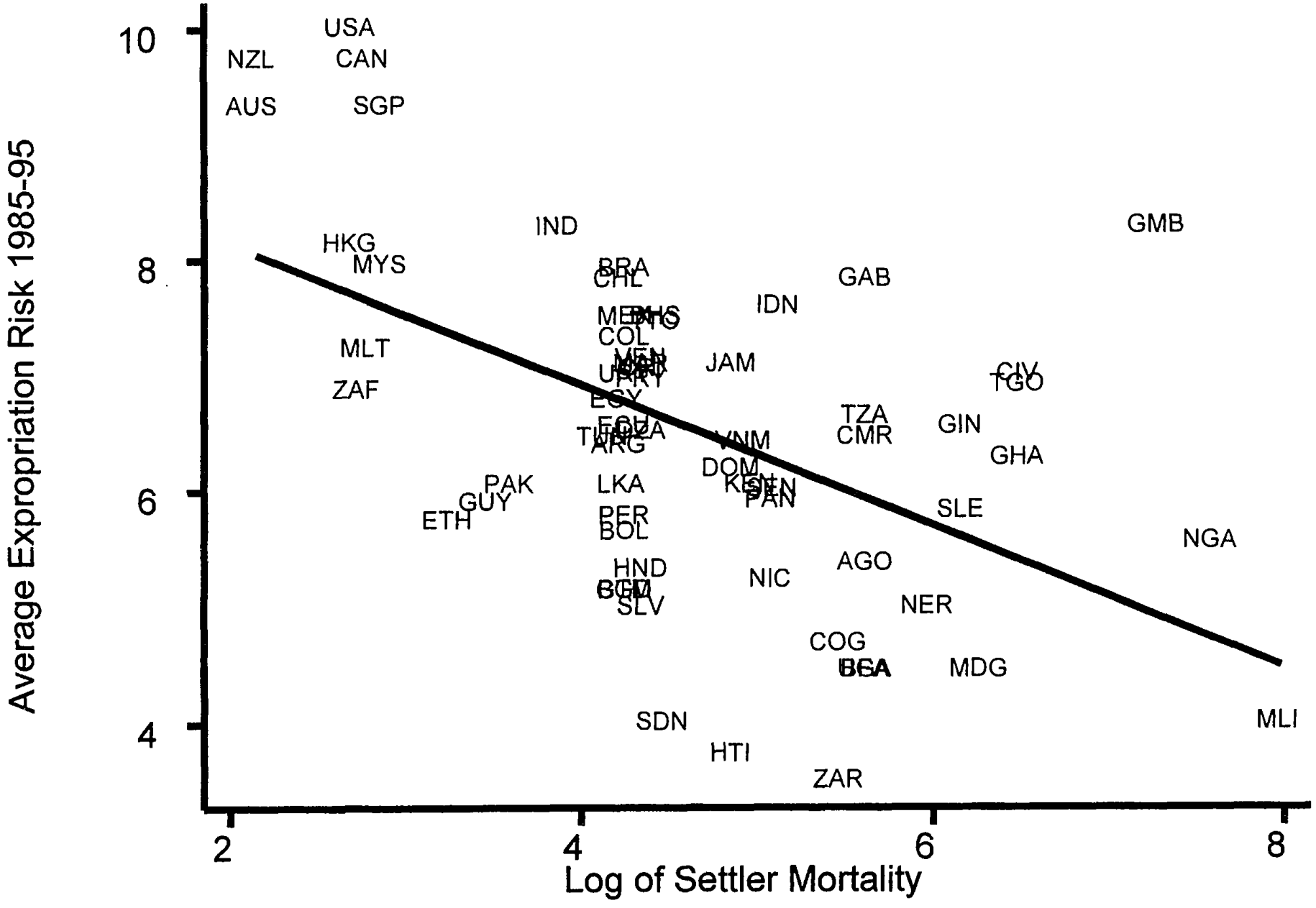

FIGURE 3. FIRST-STAGE RELATIONSHIP BETWEEN SETTLER MORTALITY AND EXPROPRIATION RISK

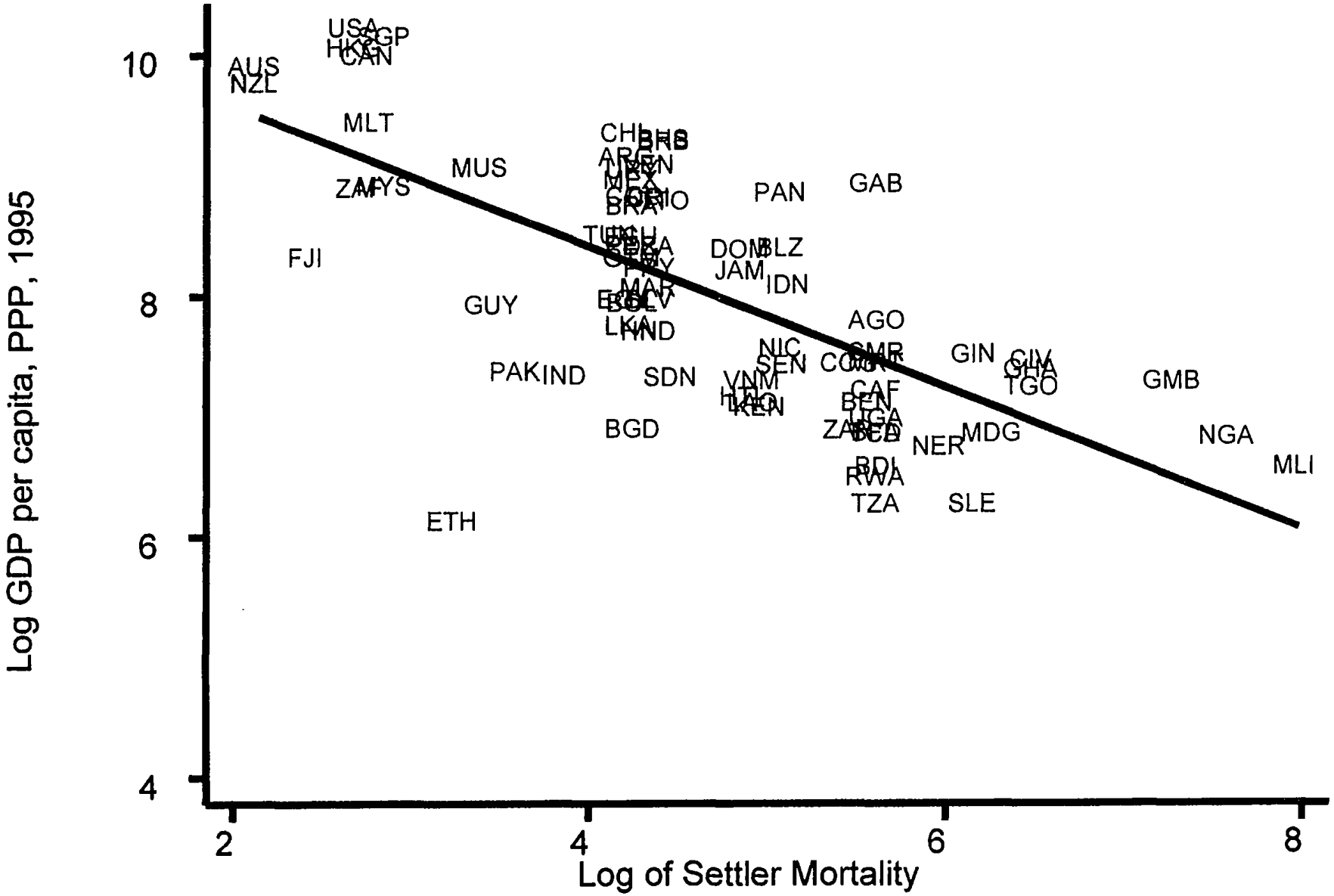

FIGURE 1. REDUCED-FORM RELATIONSHIP BETWEEN INCOME AND SETTLER MORTALITY

TABLE 3—DETERMINANTS OF INSTITUTIONS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A	Dependent Variable Is Average Protection Against Expropriation Risk in 1985–1995									
Constraint on executive in 1900	0.32	0.26								
	(0.08)	(0.09)								
Democracy in 1900			0.24	0.21						
			(0.06)	(0.07)						
Constraint on executive in first year of independence					0.25	0.22				
					(0.08)	(0.08)				
European settlements in 1900							3.20	3.00		
							(0.61)	(0.78)		
Log European settler mortality									−0.61	−0.51
									(0.13)	(0.14)
Latitude		2.20		1.60		2.70		0.58		2.00
		(1.40)		(1.50)		(1.40)		(1.51)		(1.34)
R^2	0.2	0.23	0.24	0.25	0.19	0.24	0.3	0.3	0.27	0.3
Number of observations	63	63	62	62	63	63	66	66	64	64

Panel B	Dependent Variable Is Constraint on Executive in 1900				Dependent Variable Is Democracy in 1900				Dependent Variable Is European Settlements in 1900	
European settlements in 1900	5.50	5.40			8.60	8.10				
	(0.73)	(0.93)			(0.90)	(1.20)				
Log European settler mortality			−0.82	−0.65			−1.22	−0.88	−0.11	−0.07
			(0.17)	(0.18)			(0.24)	(0.25)	(0.02)	(0.02)
Latitude		0.33		3.60		1.60		7.60		0.87
		(1.80)		(1.70)		(2.30)		(2.40)		(0.19)
R^2	0.46	0.46	0.25	0.29	0.57	0.57	0.28	0.37	0.31	0.47
Number of observations	70	70	75	75	67	67	68	68	73	73

Notes: All regressions are OLS. Standard errors are in parentheses. Regressions with constraint on executive in first year of independence also include years since independence as a regressor. Average protection against expropriation risk is on a scale from 0 to 10, where a higher score means more protection against expropriation of private investment by government, averaged over 1985 to 1995. Constraint on executive in 1900 is on a scale from 1 to 7, with a higher score indicating more constraints. Democracy in 1900 is on a scale from 0 to 10, with a higher score indicating more democracy. European settlements is percent of population that was European or of European descent in 1900. See Appendix Table A1 for more detailed variable definitions and sources.

TABLE 4—IV REGRESSIONS OF LOG GDP PER CAPITA

	Base sample (1)	Base sample (2)	Base sample without Neo-Europes (3)	Base sample without Neo-Europes (4)	Base sample without Africa (5)	Base sample without Africa (6)	Base sample with continent dummies (7)	Base sample with continent dummies (8)	Base sample, dependent variable is log output per worker (9)
Panel A: Two-Stage Least Squares									
Average protection against expropriation risk 1985–1995	0.94	1.00	1.28	1.21	0.58	0.58	0.98	1.10	0.98
	(0.16)	(0.22)	(0.36)	(0.35)	(0.10)	(0.12)	(0.30)	(0.46)	(0.17)
Latitude		−0.65		0.94		0.04		−1.20	
		(1.34)		(1.46)		(0.84)		(1.8)	
Asia dummy							−0.92	−1.10	
							(0.40)	(0.52)	
Africa dummy							−0.46	−0.44	
							(0.36)	(0.42)	
"Other" continent dummy							−0.94	−0.99	
							(0.85)	(1.0)	
Panel B: First Stage for Average Protection Against Expropriation Risk in 1985–1995									
Log European settler mortality	−0.61	−0.51	−0.39	−0.39	−1.20	−1.10	−0.43	−0.34	−0.63
	(0.13)	(0.14)	(0.13)	(0.14)	(0.22)	(0.24)	(0.17)	(0.18)	(0.13)
Latitude		2.00		−0.11		0.99		2.00	
		(1.34)		(1.50)		(1.43)		(1.40)	
Asia dummy							0.33	0.47	
							(0.49)	(0.50)	
Africa dummy							−0.27	−0.26	
							(0.41)	(0.41)	
"Other" continent dummy							1.24	1.1	
							(0.84)	(0.84)	
R^2	0.27	0.30	0.13	0.13	0.47	0.47	0.30	0.33	0.28
Panel C: Ordinary Least Squares									
Average protection against expropriation risk 1985–1995	0.52	0.47	0.49	0.47	0.48	0.47	0.42	0.40	0.46
	(0.06)	(0.06)	(0.08)	(0.07)	(0.07)	(0.07)	(0.06)	(0.06)	(0.06)
Number of observations	64	64	60	60	37	37	64	64	61

Notes: The dependent variable in columns (1)–(8) is log GDP per capita in 1995, PPP basis. The dependent variable in column (9) is log output per worker, from Hall and Jones (1999). "Average protection against expropriation risk 1985–1995" is measured on a scale from 0 to 10, where a higher score means more protection against risk of expropriation of investment by the government, from Political Risk Services. Panel A reports the two-stage least-squares estimates, instrumenting for protection against expropriation risk using log settler mortality; Panel B reports the corresponding first stage. Panel C reports the coefficient from an OLS regression of the dependent variable against average protection against expropriation risk. Standard errors are in parentheses. In regressions with continent dummies, the dummy for America is omitted. See Appendix Table A1 for more detailed variable descriptions and sources.

TABLE 5—IV REGRESSIONS OF LOG GDP PER CAPITA WITH ADDITIONAL CONTROLS

	Base sample (1)	Base sample (2)	British colonies only (3)	British colonies only (4)	Base sample (5)	Base sample (6)	Base sample (7)	Base sample (8)	Base sample (9)
Panel A: Two-Stage Least Squares									
Average protection against expropriation risk, 1985–1995	1.10	1.16	1.07	1.00	1.10	1.20	0.92	1.00	1.10
	(0.22)	(0.34)	(0.24)	(0.22)	(0.19)	(0.29)	(0.15)	(0.25)	(0.29)
Latitude		−0.75				−1.10		−0.94	−1.70
		(1.70)				(1.56)		(1.50)	(1.6)
British colonial dummy	−0.78	−0.80							
	(0.35)	(0.39)							
French colonial dummy	−0.12	−0.06							0.02
	(0.35)	(0.42)							(0.69)
French legal origin dummy					0.89	0.96			0.51
					(0.32)	(0.39)			(0.69)
p-value for religion variables							[0.001]	[0.004]	[0.42]
Panel B: First Stage for Average Protection Against Expropriation Risk in 1985–1995									
Log European settler mortality	−0.53	−0.43	−0.59	−0.51	−0.54	−0.44	−0.58	−0.44	−0.48
	(0.14)	(0.16)	(0.19)	(0.14)	(0.13)	(0.14)	(0.13)	(0.15)	(0.18)
Latitude		1.97				2.10		2.50	2.30
		(1.40)				(1.30)		(1.50)	(1.60)
British colonial dummy	0.63	0.55							
	(0.37)	(0.37)							
French colonial dummy	0.05	−0.12							−0.25
	(0.43)	(0.44)							(0.89)
French legal origin					−0.67	−0.7			−0.05
					(0.33)	(0.32)			(0.91)
R^2	0.31	0.33	0.30	0.30	0.32	0.35	0.32	0.35	0.45
Panel C: Ordinary Least Squares									
Average protection against expropriation risk, 1985–1995	0.53	0.47	0.61	0.47	0.56	0.56	0.53	0.47	0.47
	(0.19)	(0.07)	(0.09)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Number of observations	64	64	25	25	64	64	64	64	64

Notes: Panel A reports the two-stage least-squares estimates with log GDP per capita (PPP basis) in 1995 as dependent variable, and Panel B reports the corresponding first stage. The base case in columns (1) and (2) is all colonies that were neither French nor British. The religion variables are included in the first stage of columns (7) and (8) but not reported here (to save space). Panel C reports the OLS coefficient from regressing log GDP per capita on average protection against expropriation risk, with the other control variables indicated in that column (full results not reported to save space). Standard errors are in parentheses and *p*-values for joint significance tests are in brackets. The religion variables are percentage of population that are Catholics, Muslims, and "other" religions; Protestant is the base case. Our sample is all either French or British legal origin (as defined by La Porta et al., 1999).

TABLE 7—GEOGRAPHY AND HEALTH VARIABLES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Instrumenting only for average protection against expropriation risk						Instrumenting for all right-hand-side variables			Yellow fever instrument for average protection against expropriation risk	
Panel A: Two-Stage Least Squares											
Average protection against expropriation risk, 1985–1995	0.69	0.72	0.63	0.68	0.55	0.56	0.69	0.74	0.68	0.91	0.90
	(0.25)	(0.30)	(0.28)	(0.34)	(0.24)	(0.31)	(0.26)	(0.24)	(0.23)	(0.24)	(0.32)
Latitude		−0.57		−0.53		−0.1					
		(1.04)		(0.97)		(0.95)					
Malaria in 1994	−0.57	−0.60					−0.62				
	(0.47)	(0.47)					(0.68)				
Life expectancy			0.03	0.03				0.02			
			(0.02)	(0.02)				(0.02)			
Infant mortality					−0.01	−0.01			−0.01		
					(0.005)	(0.006)			(0.01)		
Panel B: First Stage for Average Protection Against Expropriation Risk in 1985–1995											
Log European settler mortality	−0.42	−0.38	−0.34	−0.30	−0.36	−0.29	−0.41	−0.40	−0.40		
	(0.19)	(0.19)	(0.17)	(0.18)	(0.18)	(0.19)	(0.17)	(0.17)	(0.17)		
Latitude		1.70		1.10		1.60	−0.81	−0.84	−0.84		
		(1.40)		(1.40)		(1.40)	(1.80)	(1.80)	(1.80)		
Malaria in 1994	−0.79	−0.65									
	(0.54)	(0.55)									
Life expectancy			0.05	0.04							
			(0.02)	(0.02)							
Infant mortality					−0.01	−0.01					
					(0.01)	(0.01)					
Mean temperature							−0.12	−0.12	−0.12		
							(0.05)	(0.05)	(0.05)		
Distance from coast							0.57	0.55	0.55		
							(0.51)	(0.52)	(0.52)		
Yellow fever dummy										−1.10	−0.81
										(0.41)	(0.38)
R^2	0.3	0.31	0.34	0.35	0.32	0.34	0.37	0.36	0.36	0.10	0.32
Panel C: Ordinary Least Squares											
Average protection against expropriation risk, 1985–1995	0.35	0.35	0.28	0.28	0.29	0.28	0.35	0.29	0.29	0.48	0.39
	(0.06)	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)	(0.06)	(0.06)
Number of observations	62	62	60	60	60	60	60	59	59	64	64

Notes: Panel A reports the two-stage least-squares estimates with log GDP per capita (PPP basis) in 1995, and Panel B reports the corresponding first stages. Panel C reports the coefficient from an OLS regression with log GDP per capita as the dependent variable and average protection against expropriation risk and the other control variables indicated in each column as independent variables (full results not reported to save space). Standard errors are in parentheses. Columns (1)–(6) instrument for average protection against expropriation risk using log mortality and assume that the other regressors are exogenous. Columns (7)–(9) include as instruments average temperature, amount of territory within 100 km of the coast, and latitude (from McArthur and Sachs, 2001). Columns (10) and (11) use a dummy variable for whether or not a country was subject to yellow fever epidemics before 1900 as an instrument for average protection against expropriation. See Appendix Table A1 for more detailed variable definitions and sources.

FIGURE 1.—GDP PER CAPITA VERSUS YEARS OF COLONIALISM

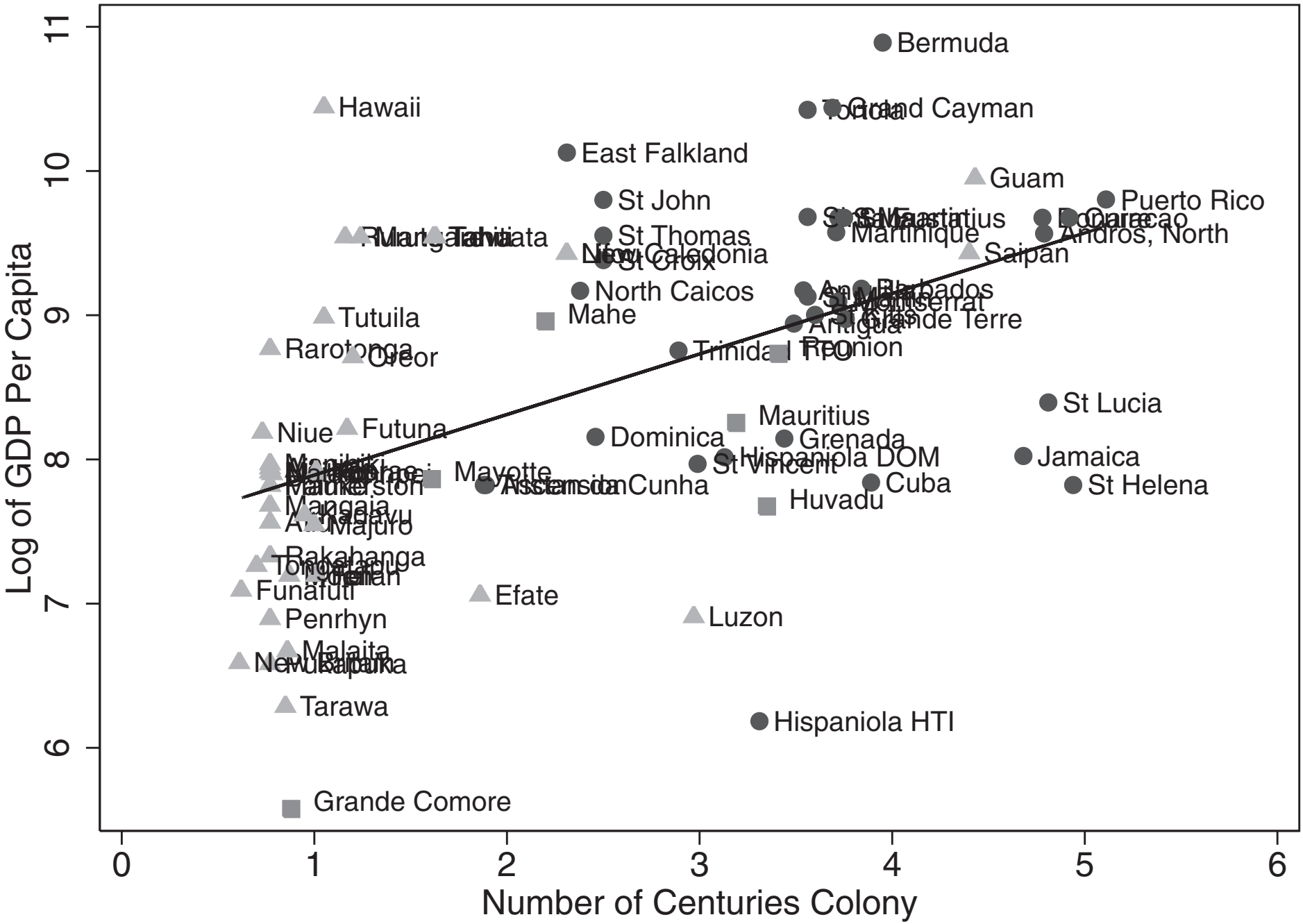

FIGURE 2.—YEARS OF COLONIALISM VERSUS EASTERLY VECTOR OF WIND

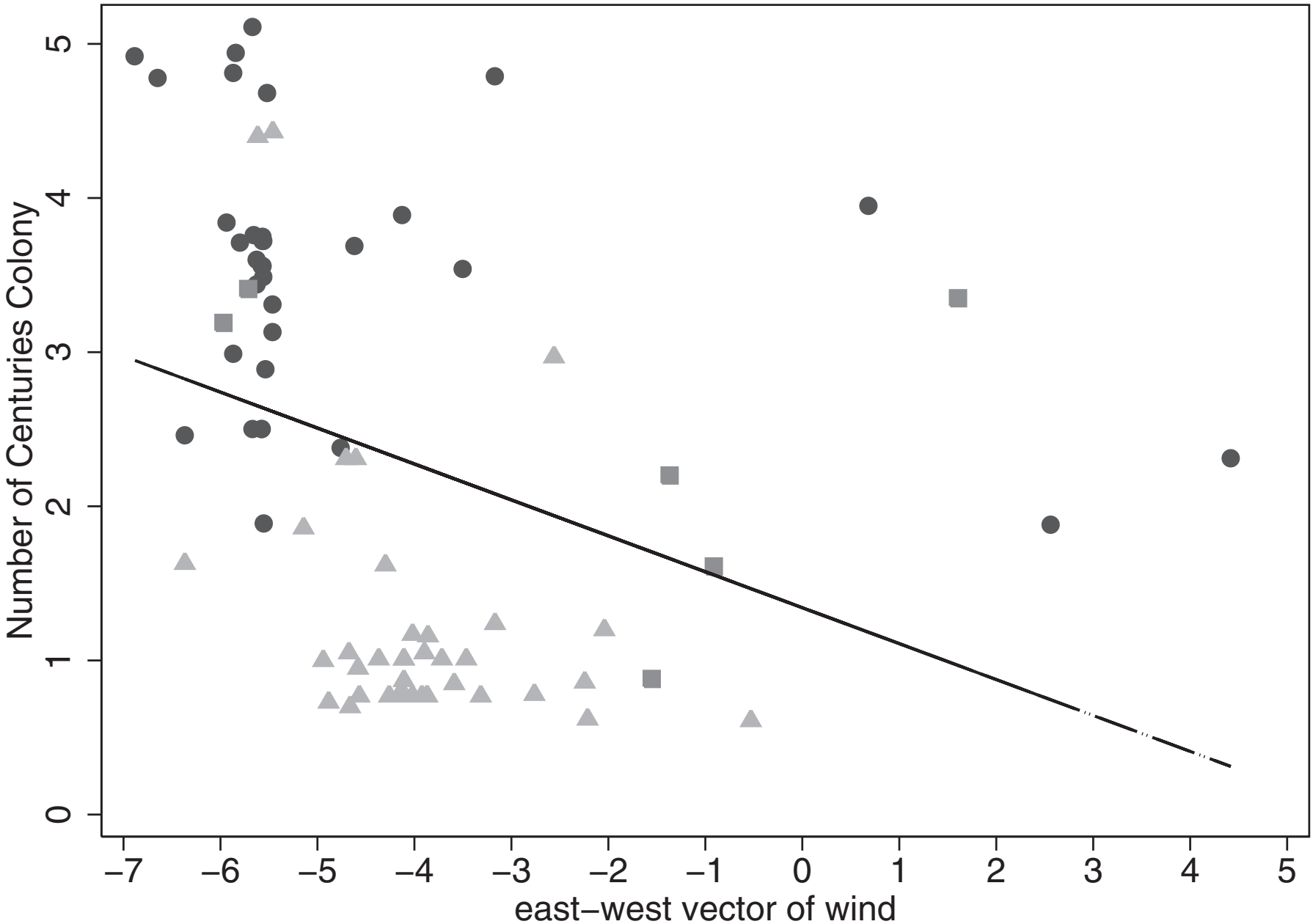

TABLE 4.—THE EFFECT OF COLONIALISM BY COLONIZING COUNTRIES

	(1) Log GDP per Capita	(2) Log GDP per Capita	(3) Log GDP per Capita—IV	(4) Log GDP per Capita—IV	(5) Log GDP per Capita	(6) Log GDP per Capita—IV
Centuries U.S.	2.145	1.959	1.320	5.641		
	(0.394)***	(1.352)	(0.842)	(10.135)		
Centuries Dutch	0.660	0.442	0.483	0.874		
	(0.117)**	(0.304)	(0.245)*	(1.433)		
Centuries British	0.512	0.579	0.096	0.163		
	(0.155)***	(0.214)***	(0.294)	(1.240)		
Centuries French	0.586	0.547	0.324	0.177		
	(0.144)***	(0.188)***	(0.263)	(0.632)		
Centuries Spanish	0.204	0.157	−0.006	0.425		
	(0.089)**	(0.130)	(0.178)	(0.877)		
Centuries Portuguese	−0.813	−1.237	−0.575	−0.348		
	(0.169)***	(0.737)*	(0.226)**	(1.391)		
Centuries German	1.332	−3.788	−3.181	−23.81		
	(1.199)	(1.581)**	(4.814)	(28.012)		
Centuries Japanese	−1.170	−7.113	1.536	−8.691		
	(0.781)	(4.014)*	(2.705)	(42.118)		
Centuries British legal					0.255	−0.190
					(0.192)	(0.204)
Centuries French legal					0.392	0.214
					(0.141)***	(0.143)
Centuries German legal					0.406	−0.017
					(0.629)	(0.776)
Abs (latitude)	0.054	0.048	0.052	0.053	0.055	0.056
	(0.013)***	(0.016)***	(0.018)***	(0.029)*	(0.014)***	(0.017)***
Area in millions of sq km	−13.940	−15.128	−13.184	16.814	−22.117	−24.496
	(5.851)**	(8.578)*	(4.975)**	(76.659)	(4.054)***	(5.303)***
Island is in Pacific	0.703	1.025	0.488	0.401	0.626	0.431
	(0.530)	(0.723)	(0.610)	(1.145)	(0.539)	(0.634)
Island is in Atlantic	0.472	0.666	0.893	0.826	0.738	1.216
	(0.444)	(0.686)	(0.538)	(1.984)	(0.493)	(0.558)**
Constant	5.849	5.952	6.574	6.488	6.348	6.948
	(0.636)***	(0.873)***	(1.000)***	(1.622)***	(0.654)***	(0.765)***
Dummies for identity of colonizers?	NO	YES	NO	YES	NO	NO
Observations	81	81	81	81	81	81
R-squared	0.645	0.685	0.539	0.456	0.497	0.413

Columns 1, 2, and 5 are OLS. Years under British, French, and German legal systems are constructed by categorizing the colonizers legal system using the definitions in LaPorta et al. (1997). Columns 3, 4, and 6 are instrumental variables regressions in which the instruments are the interactions between dummies for having ever been colonized by the United States, Dutch, British, French, Spanish, Portuguese, Germans, or Japanese interacted with easterly wind speed and standard deviation of easterly wind. We interact the eight country dummies with each of the two wind variables. Column 3 includes the eight country dummies in the OLS regression. Column 4 includes the eight dummies in the first and second stages of the IV regression.

Robust standard errors in parentheses. Standard errors are clustered at the island group level.

*significant at 10%; **significant at 5%; ***significant at 1%.