

TABLE 2 GROWTH, INSTITUTIONS AND POLITICAL VIOLENCE: ICRG

	(1)	(2)	(3)	(4)
Intercept	1.980	3.028	0.254	1.345
<i>ICRG82</i>	1.980	2.851	0.237	1.091
			0.092	0.072
			3.420	2.499
<i>REVC7489</i>		-1.630		-1.115
		-1.904		-1.302
<i>ASSN7489</i>		-3.486		-2.278
		-1.695		-1.108
<i>GDP70</i>	-0.401	-0.482	-0.692	-0.683
	-2.564	-3.141	-4.055	-4.030
<i>SEC70</i>	6.083	6.284	5.051	5.411
	3.819	4.083	3.286	3.524
<i>PRIM70</i>	-0.690	-0.959	-0.532	-0.752
	-0.758	-1.072	-0.617	-0.862
<i>GCON7489</i>	-5.222	-6.388	-4.289	-5.286
	-1.213	-1.527	-1.051	-1.293
<i>PPI74DEV</i>	-0.920	-0.985	-0.892	-0.941
	-2.243	-2.482	-2.3	-2.439
R-Square	0.198	0.270	0.291	0.318
N	97	97	97	97

Dependent variable: Average annual per capita GDP growth, 1974-1989.
 Numbers in italics are t-statistics.

TABLE 3 GROWTH, INSTITUTIONS AND POLITICAL VIOLENCE: BERI

	(1)	(2)	(3)	(4)
Intercept	1.022	0.356	-0.977	-0.627
<i>BERI72</i>	0.644	0.205	-0.545	-0.336
			0.376	0.263
			2.111	1.357
<i>REVC7489</i>		-1.653		-1.630
		-1.304		-1.300
<i>ASSN7489</i>		-23.015		-14.695
		-1.710		-1.003
<i>GDP0</i>	-0.501	-0.594	-0.694	-0.721
	-2.751	-3.277	-3.520	-3.566
<i>SEC70</i>	5.376	4.624	4.047	4.026
	2.805	2.411	2.083	2.067
<i>PRIM70</i>	0.653	2.793	0.580	2.018
	0.377	1.389	0.349	0.976
<i>GCON7489</i>	-1.145	-1.508	-2.968	-3.052
	-0.183	-0.249	-0.489	-0.500
<i>PPI74DEV</i>	-0.929	-0.894	-0.711	-0.748
	-1.921	-1.938	-1.495	-1.595
R-Square	0.276	0.375	0.350	0.405
N	46	46	46	46

Dependent variable: Average annual per capita GDP growth, 1974-1989.

Numbers in italics are t-statistics.

TABLE I
PRODUCTIVITY CALCULATIONS: RATIOS TO U. S. VALUES

Country	Y/L	Contribution from		
		$(K/Y)^{\alpha/(1-\alpha)}$	H/L	A
United States	1.000	1.000	1.000	1.000
Canada	0.941	1.002	0.908	1.034
Italy	0.834	1.063	0.650	1.207
West Germany	0.818	1.118	0.802	0.912
France	0.818	1.091	0.666	1.126
United Kingdom	0.727	0.891	0.808	1.011
Hong Kong	0.608	0.741	0.735	1.115
Singapore	0.606	1.031	0.545	1.078
Japan	0.587	1.119	0.797	0.658
Mexico	0.433	0.868	0.538	0.926
Argentina	0.418	0.953	0.676	0.648
U.S.S.R.	0.417	1.231	0.724	0.468
India	0.086	0.709	0.454	0.267
China	0.060	0.891	0.632	0.106
Kenya	0.056	0.747	0.457	0.165
Zaire	0.033	0.499	0.408	0.160
Average, 127 countries:	0.296	0.853	0.565	0.516
Standard deviation:	0.268	0.234	0.168	0.325
Correlation with Y/L (logs)	1.000	0.624	0.798	0.889
Correlation with A (logs)	0.889	0.248	0.522	1.000

The elements of this table are the empirical counterparts to the components of equation (3), all measured as ratios to the U. S. values. That is, the first column of data is the product of the other three columns.

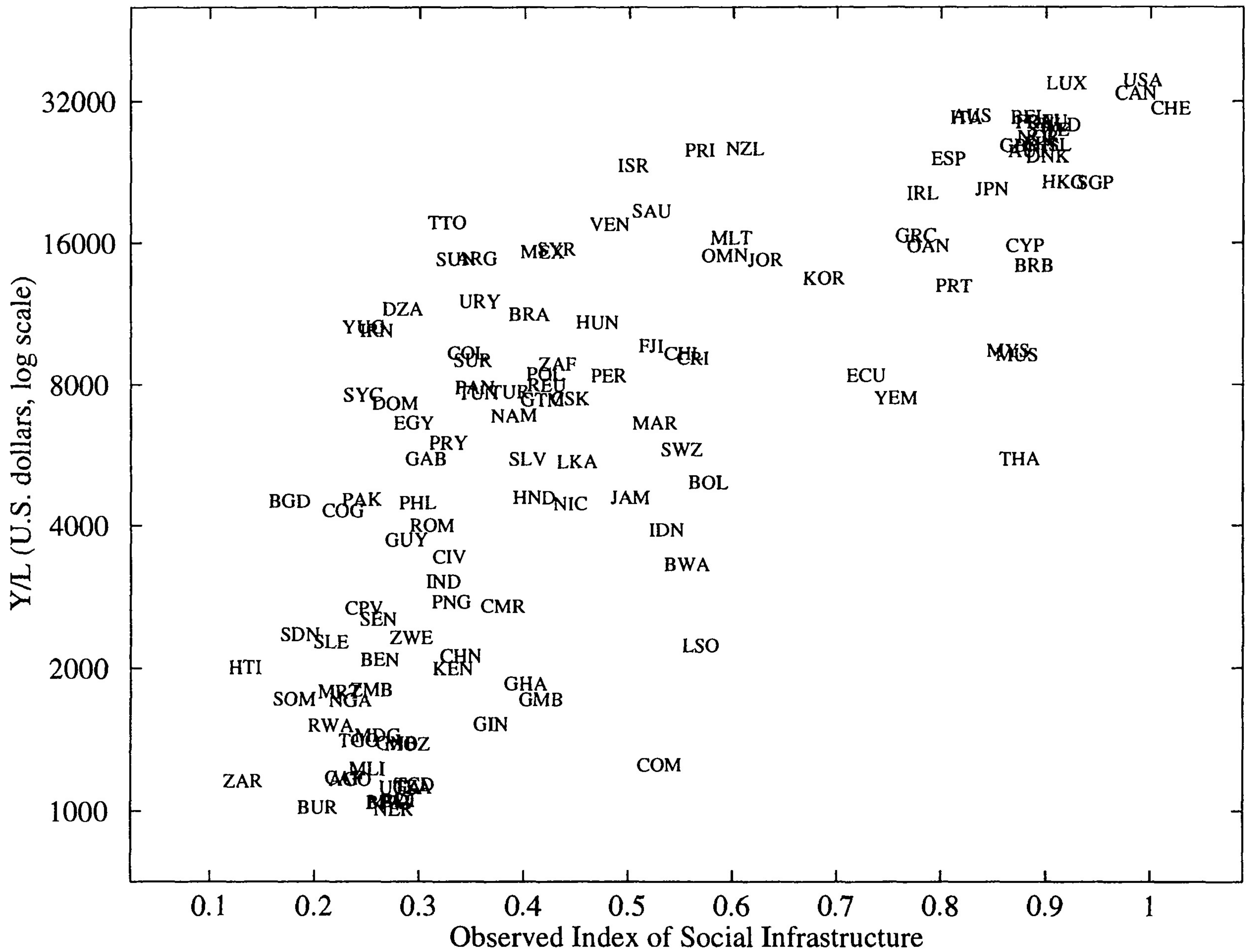


FIGURE II
Social Infrastructure and Output per Worker

TABLE II
 BASIC RESULTS FOR OUTPUT PER WORKER
 $\log Y/L = \alpha + \beta \tilde{S} + \tilde{\epsilon}$

Specification	Social infrastructure	OverID test <i>p</i> -value test result	Coeff test <i>p</i> -value test result	$\hat{\sigma}_{\tilde{\epsilon}}$
1. Main specification	5.1432 (.508)	.256 Accept	.812 Accept	.840
<i>Alternative specifications to check robustness</i>				
2. Instruments: Distance, Frankel-Romer	4.998 (.567)	.208 Accept	.155 Accept	.821
3. No imputed data 79 countries	5.323 (.607)	.243 Accept	.905 Accept	.889
4. OLS	3.289 (.212)	—	.002 Reject	.700

The coefficient on Social infrastructure reflects the change in log output per worker associated with a one-unit increase in measured social infrastructure. For example, the coefficient of 5.14 means that a difference of .01 in our measure of social infrastructure is associated with a 5.14 percent difference in output per worker. Standard errors are computed using a bootstrap method, as described in the text. The main specification uses distance from the equator, the Frankel-Romer instrument, the fraction of the population speaking English at birth, and the fraction of the population speaking a Western European language at birth as instruments. The OverID test column reports the result of testing the overidentifying restrictions, and the Coeff test reports the result of testing for the equality of the coefficients on the *GADP* policy index variable and the openness variable. The standard deviation of $\log Y/L$ is 1.078.

TABLE IV
RESULTS FOR $\log K/Y$, $\log H/L$, and $\log A$
Component = $\alpha + \beta\tilde{S} + \tilde{\epsilon}$

	Dependent variable		
	$\frac{\alpha}{1-\alpha} \log K/Y$	$\log H/L$	$\log A$
Social infrastructure	1.052 (.164)	1.343 (.171)	2.746 (.336)
OverID test (p)	.784	.034	.151
Test result	Accept	Reject	Accept
$\hat{\sigma}_{\tilde{\epsilon}}$.310	.243	.596
$\hat{\sigma}_{\text{Depvar}}$.320	.290	.727

Estimation is carried out as in the main specification in Table II. Standard errors are computed using a bootstrap method, as described in the text.

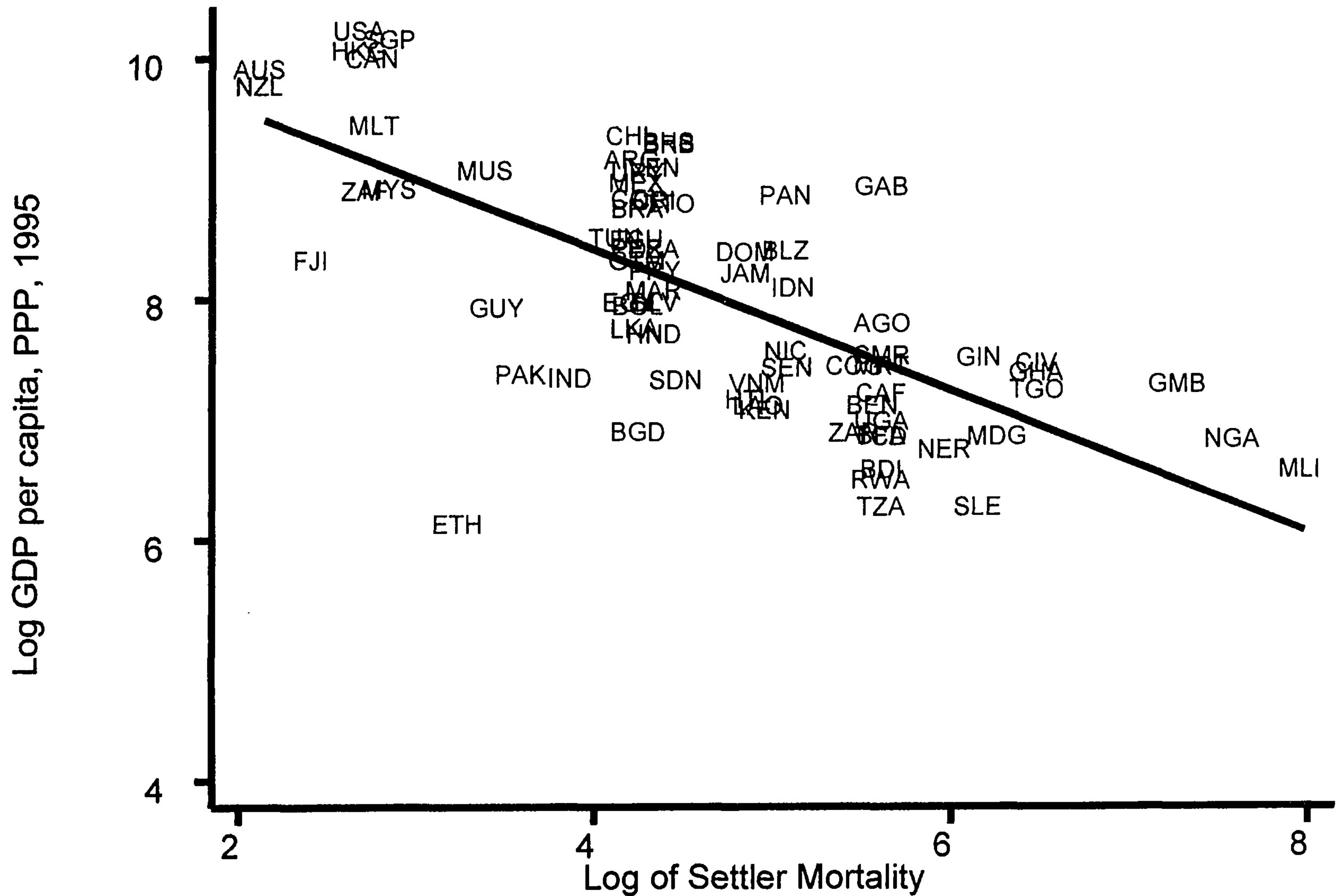


FIGURE 1. REDUCED-FORM RELATIONSHIP BETWEEN INCOME AND SETTLER MORTALITY

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.

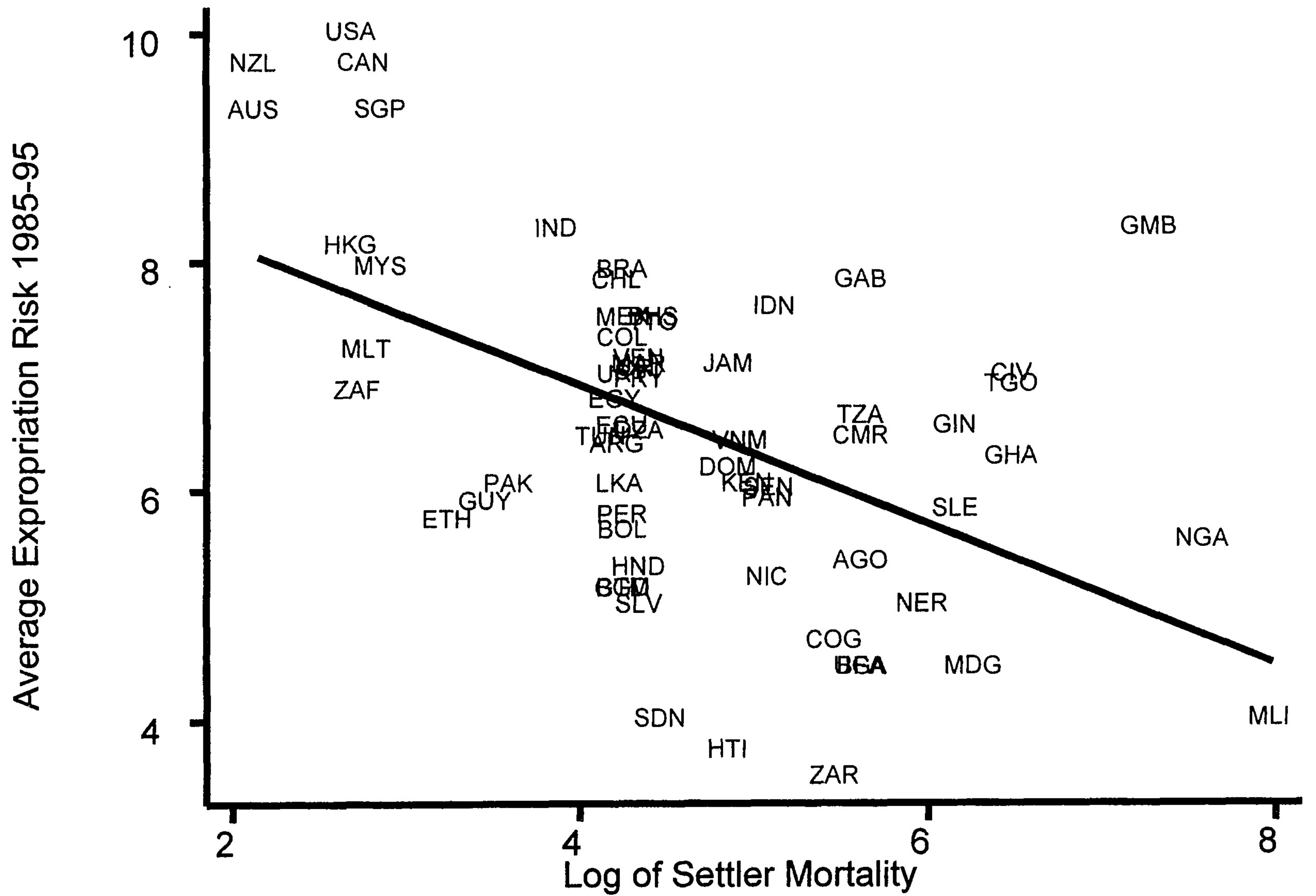


FIGURE 3. FIRST-STAGE RELATIONSHIP BETWEEN SETTLER MORTALITY AND EXPROPRIATION RISK

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 (0.08)	0.26 (0.09)								
Democracy in 1900			0.24 (0.06)	0.21 (0.07)						
Constraint on executive in first year of independence					0.25 (0.08)	0.22 (0.08)				
European settlements in 1900							3.20 (0.61)	3.00 (0.78)		
Log European settler mortality									−0.61 (0.13)	−0.51 (0.14)
Latitude		2.20 (1.40)		1.60 (1.50)		2.70 (1.40)		0.58 (1.51)		2.00 (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 (0.73)	5.40 (0.93)			8.60 (0.90)	8.10 (1.20)				
Log European settler mortality			−0.82 (0.17)	−0.65 (0.18)			−1.22 (0.24)	−0.88 (0.25)	−0.11 (0.02)	−0.07 (0.02)
Latitude		0.33 (1.80)		3.60 (1.70)		1.60 (2.30)		7.60 (2.40)		0.87 (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 (0.16)	1.00 (0.22)	1.28 (0.36)	1.21 (0.35)	0.58 (0.10)	0.58 (0.12)	0.98 (0.30)	1.10 (0.46)	0.98 (0.17)
Latitude		−0.65 (1.34)		0.94 (1.46)		0.04 (0.84)		−1.20 (1.8)	
Asia dummy							−0.92 (0.40)	−1.10 (0.52)	
Africa dummy							−0.46 (0.36)	−0.44 (0.42)	
“Other” continent dummy							−0.94 (0.85)	−0.99 (1.0)	
Panel B: First Stage for Average Protection Against Expropriation Risk in 1985–1995									
Log European settler mortality	−0.61 (0.13)	−0.51 (0.14)	−0.39 (0.13)	−0.39 (0.14)	−1.20 (0.22)	−1.10 (0.24)	−0.43 (0.17)	−0.34 (0.18)	−0.63 (0.13)
Latitude		2.00 (1.34)		−0.11 (1.50)		0.99 (1.43)		2.00 (1.40)	
Asia dummy							0.33 (0.49)	0.47 (0.50)	
Africa dummy							−0.27 (0.41)	−0.26 (0.41)	
“Other” continent dummy							1.24 (0.84)	1.1 (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 (0.06)	0.47 (0.06)	0.49 (0.08)	0.47 (0.07)	0.48 (0.07)	0.47 (0.07)	0.42 (0.06)	0.40 (0.06)	0.46 (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.