

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.

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.

The Frisch-Waugh Theorem (Frisch and Waugh, 1933)

Consider:

(1) Estimate $Y_j = \alpha Z_j + \beta' X_j + e_j$ by OLS (Z_j a scalar, X_j potentially a vector).

(2) (a) Estimate $Y_j = \gamma' X_j + \varepsilon_j$ by OLS. Call the residuals u_j 's.

(b) Estimate $Z_j = \lambda' X_j + \delta_j$ by OLS. Call the residuals v_j 's.

(c) Estimate $u_j = \alpha v_j$ by OLS.

Theorem: The 2 estimates of α are numerically identical.

TABLE IV

NATIONAL INSTITUTIONS AND REGIONAL DEVELOPMENT ACROSS AND WITHIN PARTITIONED ETHNIC GROUPS

	(1)	(2)	(3)	(4)
	Rule of law			
	Panel A: Country-ethnic homeland level			
Institutional quality	0.6510***	0.1943	0.5150**	0.2159
Double-clustered std. err.	(0.1951)	(0.1898)	(0.2024)	(0.2135)
Adjusted <i>R</i> -squared	0.292	0.792	0.392	0.798
Within <i>R</i> -squared		0.061		0.067
Observations	507	507	507	507
Ethnicity fixed effects	No	Yes	No	Yes
Pop. dens. and area	Yes	Yes	Yes	Yes
Location controls	No	No	Yes	Yes
Geographic controls	No	No	Yes	Yes

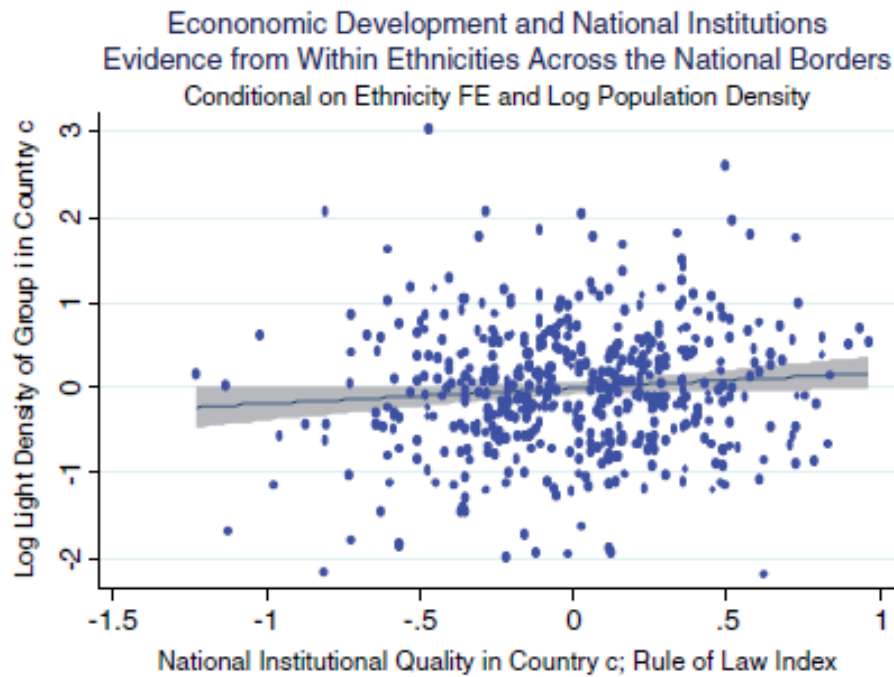


FIGURE IVA

Rule of Law and Subnational Development within Partitioned Ethnic Homelands

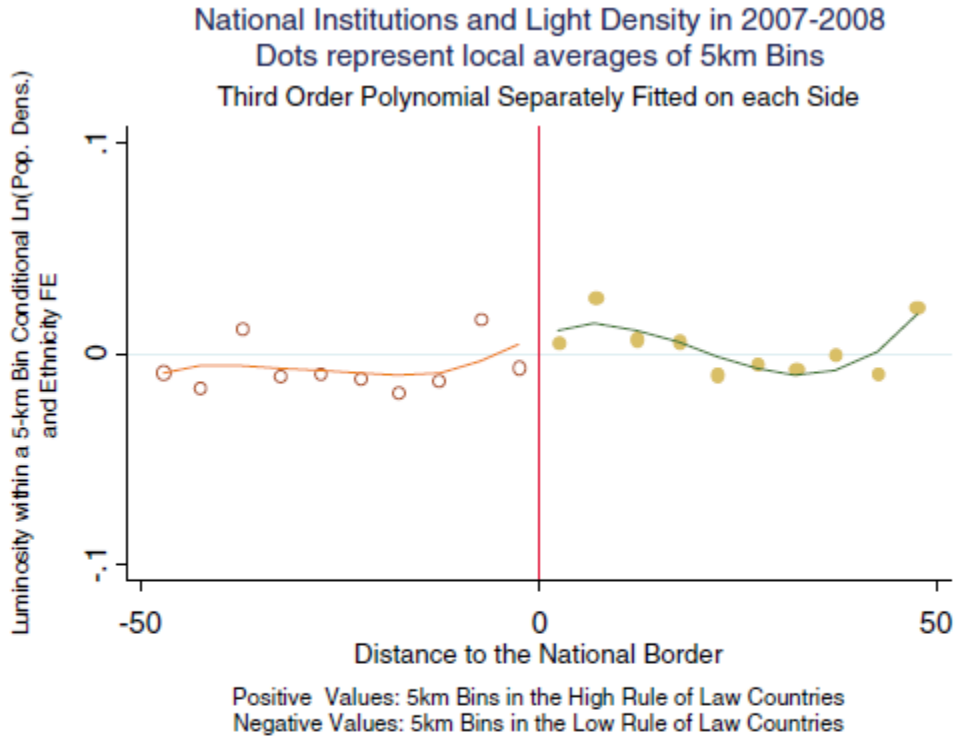


FIGURE VB

National Institutions and Subnational Development at the Border: Regression
Discontinuity Estimates B

TABLE VIII

HETEROGENEITY: NATIONAL INSTITUTIONS AND REGIONAL DEVELOPMENT WITHIN PARTITIONED ETHNICITIES CLOSE TO AND FAR FROM THE CAPITAL CITIES

	(1)	(2)	(3)	(4)
	Rule of law		Control of corruption	
	Absolute distance to the capital			
	Close	Far	Close	Far
Panel A: All observations/pixels				
Institutional quality	0.0675	0.0206	0.1220**	0.0330
Double-clustered std. err.	(0.0438)	(0.0233)	(0.0581)	(0.0258)
Adjusted <i>R</i> -squared	0.421	0.210	0.423	0.211
Within <i>R</i> -squared	0.089	0.062	0.091	0.063
Observations	12,546	15,225	12,546	15,225
Number of ethnicities	85	95	85	95
Ethnicity fixed effects	Yes	Yes	Yes	Yes
Pop. dens. and area	Yes	Yes	Yes	Yes
Location and geography	Yes	Yes	Yes	Yes

“5 PAPERS IN 15 MINUTES”

A. THE ACCOUNTING APPROACH

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Schoellman, Todd. 2016. “Early Childhood Human Capital and Development.” *American Economic Journal: Macroeconomics* 8 (July): 145–174.

B. THE STATISTICAL APPROACH

Jones, Benjamin F., and Benjamin A. Olken. 2005. “Do Leaders Matter? National Leadership and Growth since World War II.” *Quarterly Journal of Economics* 120 (August): 835–864.

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C. CAN THERE REALLY BE MILLION DOLLAR BILLS ON THE SIDEWALK?

Schmitz, James A., Jr. 2005. “What Determines Productivity? Lessons from the Dramatic Recovery of the U.S. and Canadian Iron Ore Industries Following Their Early 1980s Crisis.” *Journal of Political Economy* 113 (June): 582–625.

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