

Efectos de muy largo plazo

Franco et al. / Garfias

12-5-2025

- 1 La ruta inca
- 2 Otras vetas
- 3 Capacidad estatal

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La ruta inca



Infraestructura monumental

- 30mil kms
- almacenes c/ 20kms
- símil vías romanas

- Imperio inca estableció ruta
 - tributo/comercio a Cuzco
 - mover tropas
 - comunicación entre ciudades
- Franco et al. rastrean sus efectos de desarrollo
- Díaz Cayeros: correl. pirámides – pobreza S. XXI

Los datos

Encuesta nacional hogares
2007–17 georref.

- sueldo
- educación
- edad, lengua, rel. jefe

NASA:

- altitud
- accidentes
- ríos

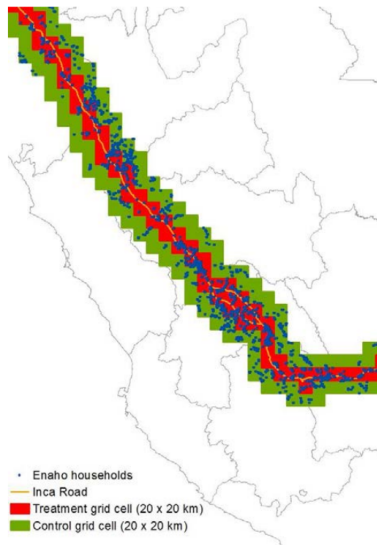


Table 1: Descriptive Statistics

Grid cells of:	10 x 10 km			15 x 15 km			20 x 20 km			25 x 25 km		
	Treatment (1)	Control (2)	Diff	Treatment (3)	Control (4)	Diff	Treatment (5)	Control (6)	Diff	Treatment (7)	Control (8)	Diff
<i>GIS</i>												
<i>controls:</i>												
Elevation	3488.5	3619.6	131.1**	3525.4	3609.4	84.0	3559.4	3563.1	3.7	3575.9	3533.8	-42.1
Slope	6.36	6.74	0.37	6.35	7.08	0.73**	6.42	7.44	1.02***	6.63	7.48	0.85*
Density of rivers	3.38	3.63	0.25	3.40	3.47	0.77	3.44	3.89	0.45	3.78	4.23	0.45
Observations	277	519		181	340		135	257		108	204	

Note: Statistics reported at the grid cell level. The figures given for elevation are the average elevation of the grid cells, measured in hundreds of meters above sea level. Those shown for the slope represent the average slope of the grid cells measured in degrees. The figures for the density of rivers reflect the combined length (in kilometers) of the rivers located within the relevant grid cells. *, ** and *** denote the statistical difference from 0 at the 10%, 5% and 1% levels, respectively, in the test for difference of means.

Table 2: Inca Road and development outcomes

	Dependent variable:							
	Log hourly wage, 2007-2017		Malnutrition, 2005 (% of 6-9 year old children)		Schooling, 2007-2017 (No. of years)		Math Test Score, 2015 (Std. Dev.)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean of dep. var. [Std. Dev.]	2.150 [1.147]	2.150 [1.147]	0.443 [0.210]	0.443 [0.210]	7.406 [5.164]	7.406 [5.164]	4.622 [0.999]	4.622 [0.999]
Inca Road	0.105*** (0.037)	0.097*** (0.035)	-0.034*** (0.012)	-0.035*** (0.011)	1.642*** (0.336)	1.550*** (0.361)	0.256*** (0.030)	0.242*** (0.034)
<i>Baseline controls:</i>								
Year fixed effects	yes	yes			yes	yes		
Region fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Demographic controls	yes	yes			yes	yes	yes	yes
<i>GIS controls:</i>								
Elevation		yes		yes		yes		yes
Slope		yes		yes		yes		yes
Density of rivers		yes		yes		yes		yes
No. observations	115,641	115,641	10,153	10,153	151,398	151,398	1,068,070	1,068,070
R ²	0.306	0.307	0.168	0.197	0.335	0.338	0.051	0.052

Note: OLS estimates are reported with robust standard errors clustered at the 20-km grid cell level in parenthesis. Regressions are at the individual level, but treatment variable is at the 20-km grid cell level. "Inca Road" is an indicator variable that takes the value of one if the individual lives in a household located within the treated 20-km grid cell. "Log hourly wage" is a

Table 3: **Mechanisms**

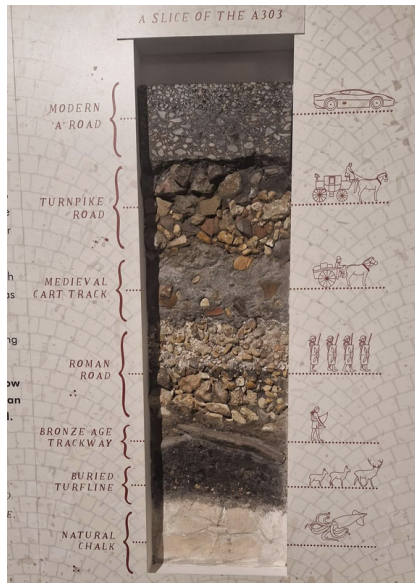
	Dependent Variable:		
	Roads (1)	Schools (2)	Property rights (3)
Mean of dependent variable	0.260	22.143	60.980
[std. dev.]	[0.210]	[24.860]	[66.652]
Inca Road	0.082*** (0.024)	18.009*** (2.475)	48.015*** (6.641)
<i>Baseline controls:</i>			
GIS controls:			
Elevation	yes	yes	yes
Slope	yes	yes	yes
Density of rivers	yes	yes	yes
No. Observations	320	392	392
R^2	0.073	0.162	0.160

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Vías romanas



Partición polaca 1795-1918

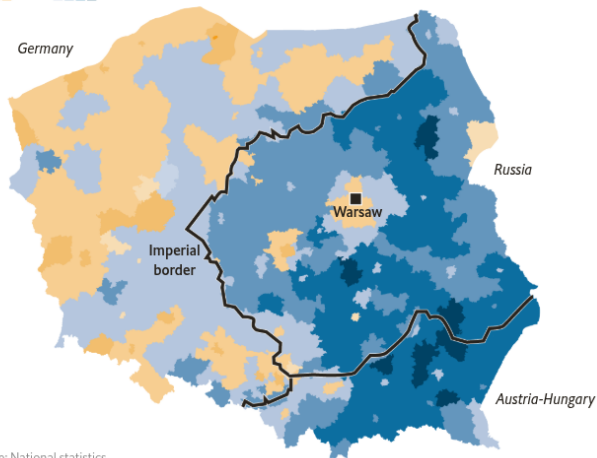
Old times' sake

Poland, vote share won by larger of two main parties

Parliamentary election, 2023, % of vote by county

PO

PiS



Source: National statistics

Pobreza en México

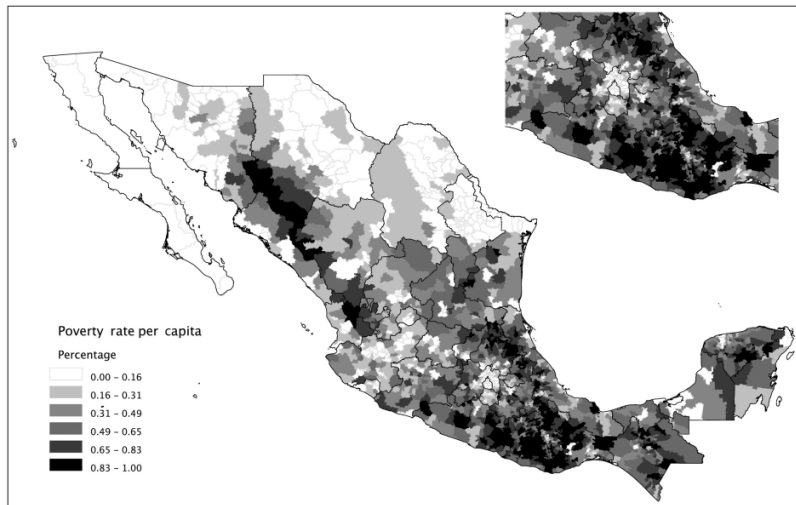


FIGURE 2.2. Share of population living under nutritional poverty line (CONEVAL), 2002.

Tixcacaltuyub, Yucatán

- [↗ Science 384, 2024](#)
- 64 osamentas de infantes, embodegadas en 1967
- juventud impidió determinar sexo
- ADN reveló
 - ninguna era niña, como siempre se especuló (fertilidad)
 - emparentados con la comunidad aledaña 1000 años después

Predictores de pobreza

TABLE 2.2. *Geographic Correlates of Poverty in Mexican Municipalities*

	1	2	3	4	5	6
	Poverty headcount w/ Natural Geography	Poverty headcount w/ Human Geography	Marginality index w/ Natural Geography	Marginality index w/ Human Geography	HDI w/ Natural Geography	HDI w/ Human Geography
Spatial lag	0.265 (0.054)**	0.169 (0.043)**	0.174 (0.057)**	0.117 (0.048)*	0.123 (0.062)*	0.06 (0.054)
North (Km/1000)	-0.963 (0.069)**	-0.706 (0.070)**	-0.97 (0.069)**	-0.755 (0.071)**	1.001 (0.071)**	0.74 (0.072)**
East (Km/1000)	0.509 (0.054)**	0.568 (0.051)**	0.356 (0.055)**	0.444 (0.053)**	-0.275 (0.054)**	-0.398 (0.054)**
Temperature (°C)	-0.014 (0.003)**	-0.004 (0.002)	-0.015 (0.003)**	-0.006 (0.003)*	0.012 (0.003)**	0.005 (0.003)
Rainfall (Meters)	0.762 (0.100)**	0.905 (0.081)**	0.963 (0.099)**	0.997 (0.085)**	-0.813 (0.099)**	-0.851 (0.084)**
Coastline (1= coast/border)	-0.697 (0.073)**	-0.504 (0.070)**	-0.772 (0.074)**	-0.643 (0.071)**	0.84 (0.070)**	0.678 (0.070)**
Rugged Terrain (st. dev. Km)	0.95 (0.377)*	0.599 (0.292)*	0.998 (0.390)*	0.642 (0.291)*	-0.814 (0.323)*	-0.484 (0.249)
Altitude (km)	-0.893 (0.375)*	-0.482 (0.291)	-1.067 (0.388)**	-0.657 (0.291)*	0.791 (0.322)*	0.396 (0.249)
Distance City (Km)		0.002 (0.000)**		0.002 (0.001)**		-0.003 (0.000)**
Distance Rail (km)		0.004 (0.001)**		0.004 (0.001)**		-0.005 (0.001)**
Distance Road (km)		0.018 (0.001)**		0.019 (0.002)**		(0.002)**
Population (Log)		-0.222 (0.012)**		-0.14 (0.014)**		0.159 (0.014)**
Area (Km ² /1000)		0.044 (0.010)**		0.038 (0.011)**		(0.009)**
Constant	-0.432 (0.160)**	0.736 (0.192)**	-0.041 (0.163)	0.405 (0.215)	-0.003 (0.163)	-0.504 (0.221)*
Observations	2425	2375	2425	2375	2425	2375
R-squared	0.33	0.57	0.3	0.48	0.27	0.48

Note: Robust standard errors in parenthesis.

* Significant at the 5% level; ** significant at the 1% level.

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Aptitud para instrumentar políticas y cumplir objetivos

- recaudar
- coerción legítima
- protección
- establecer incentivos
- ...

Tilly

- Unidad de análisis nacional, amenaza del vecino
- Garfias adopta perspectiva subnacional

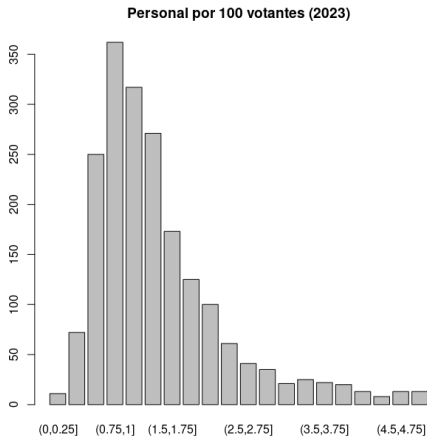
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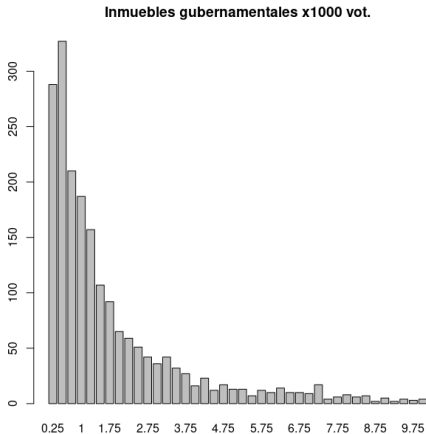
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Censo de gobiernos municipales



Censo de gobiernos municipales



Presupuesto mensual per cápita (2021)

