Albouy vs AJR

Una pelea por una variable instrumental y datos cuestionables

Martín Fuentes Santelices

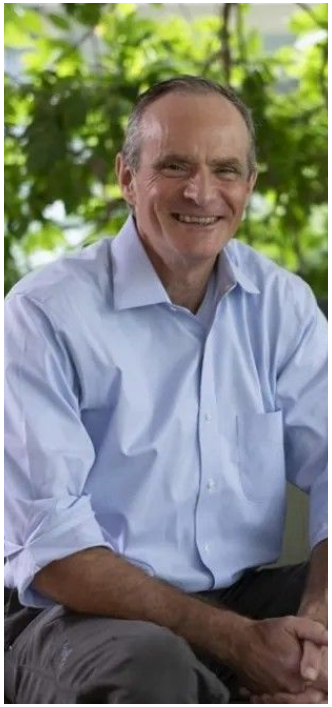
Albouy vs AJR

2001 - 2012

Martín Fuentes Santelices

Personajes principales

Acemoglu, Johnson, y Robinson



- **Acemoglu:** MIT. Macroeconomía, economía política y del desarrollo.
- **Johnson:** MIT. Management, economía del trabajo y del desarrollo. Ex CE del IMF.
- **Robinson:** Chicago. Economía política, desarrollo y economías comparativas.

David Albouy

- University of Illinois
- PhD Berkeley, M.A. Yale
- Economía del trabajo, urbana y política.
- The Unequal Geographical Burden of Federal Taxation (2009)
- Are Big Cities Bad Places To Live? Estimating Quality Of Life Across Metropolitan Areas (2008)

La publicación

The Colonial Origins of Comparative Development

AJR • 2001

Abstract

- Busca mostrar efecto causal entre instituciones y desarrollo de un país.
- Derechos de propiedad, instituciones educacionales abiertas a toda la población, etc.
- Demostración econométrica formal.

Main Takeaways

1. The type of colonial institutions determined long term development
2. The effect was caused by settler mortality shaping institutional choices

El modelo de AJR

- Se desea ver el efecto de las instituciones de un país en su crecimiento.
- $log\ y_i = \mu + \alpha R_i + X_i'\gamma + \epsilon_i$
- Problema: faltan estimadores confiables del efecto de las instituciones en el rendimiento económico de un país. *IE las economías más ricas pueden elegir/construir mejores instituciones.*
- **Economías que son distintas entre sí difieren en sus instituciones y su PIB.**
- Instituciones: es una variable R, que es el *Average expropriation risk 85 - 95*, escala de 0 - 100.
- Para estimar el impacto de las instituciones, se necesita fuente de variación exógena.
- Se utiliza una variable instrumental para las instituciones, basándose en tres pilares fundamentales:

El modelo de AJR

1 : **Diferentes tipos de colonizaciones crearon distintos tipos de instituciones.**

- Estados extractivos (ie el Congo Belga): pocos derechos a propiedad. Objetivo era transferir recursos a metrópolis.
- Estados “Neo Europeos” (ie Australia, Canadá, USA): replicar estados europeos, muchos derechos a propiedad.

2: **La mortalidad del lugar afecta la estrategia de colonización.**

- Si mortalidad en colonia es alta, más complejo establecer Neo Europas, más probable que se formen estados extractivos.

3: Los estados coloniales y sus instituciones persisten, incluso luego de su independencia.

El modelo de AJR

- Por lo tanto: **mortalidad en las colonias europeas como variable instrumental para instituciones.**

$$\text{(potential) settler mortality} \Rightarrow \text{settlements} \Rightarrow \text{early institutions} \Rightarrow \text{current institutions} \Rightarrow \text{current performance.}$$

Datos de mortalidad;

- Datos de siglos 17 hasta 19 de Philip Curtin de mortalidad de soldados, marinos y obispos designados a colonias. Regla de primera tasa disponible *
- Pero …
- Asignar razones de mortalidad a países vecinos con ambiente de enfermedades similares.
- Para sudamérica: casi no hay datos de soldados, se usan datos de mortalidad de obispos y se escalan al mismo tamaño de cantidad de soldados designados.
- **Recordatorio: IV debe cumplir exogeneidad y relevancia.**

El modelo de AJR

$$log\ y_i = \mu + \alpha R_i + X_i'\gamma + \epsilon_i$$

y_i: GDP per capita
R_i: protection agains expropriation measure
X_i: controls

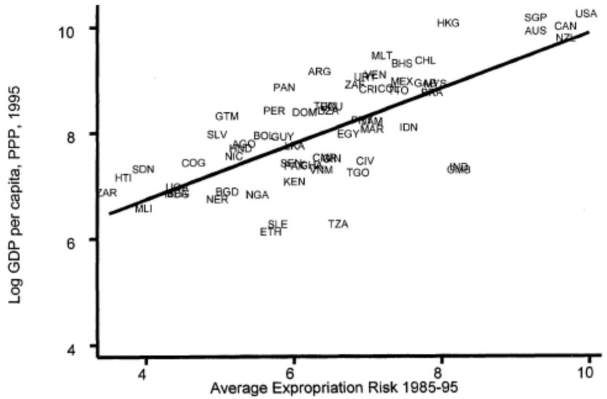


Figure 1: OLS Relationship Between Institutions and Development

- Relación por OLS entre instituciones y GDP.
- Instituciones es una variable R, que es el *Average expropriation risk 85 - 95*, escala de 0 - 100.
- Problema: endogeneidad de la variable R.
- Se instrumenta la variable R ocupando mortality de la colonia del país relevante *M*.

Anexo 1: controles

- **Latitude** (absolute distance from the equator)
- **Temperature variables** (average, min/max monthly highs and lows)
- **Humidity variables** (morning/afternoon min/max humidity)
- **Climate/soil type dummies** (e.g., steppe, desert, highland)
- **Malaria prevalence in 1994** (percentage of population in malaria-endemic areas)
- **Dummy for landlocked countries**
- **Colonial origin dummies** (e.g., British, French, Spanish, Portuguese)
- **Legal origin dummies** (British common law vs. French civil law)
- **Years since independence**
- **Religion variables** (% Catholic, Muslim, Protestant, Other)
- **Ethnolinguistic fragmentation** (index of ethnic and linguistic diversity)
- **Percent of population of European descent** (in 1900 and 1975)
- **Natural resource measures** (share of world gold, iron, zinc reserves; oil reserves per capita)
- **Soil quality** (various soil type dummies)
- **Natural resource measures** (share of world gold, iron, zinc reserves; oil reserves per capita)
- **Soil quality** (various soil type dummies)
- **Life expectancy**
- **Infant mortality**
- **Malaria risk** (as noted above)
- **Yellow fever historical dummy**
- **Continent dummies** for Africa, Asia, America (baseline), and "Other"

Nota: se pegaron y cortaron partes de la tabla 4 para generar esto, para mayor facilidad de lectura.

Resultados de la primera etapa

	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 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

$$R_i = \zeta + \beta \log M_i + \mathbf{X}_i'\delta + v_i$$

By today's standards, we would say that their instrument is **strong in the full sample but weak in important subsamples**, particularly when the "Neo-Europes" are excluded, or the continent dummies are added.

- Resultados estadísticamente significativos.
- El F no está reportado directamente, pero es fácil de calcular (22 > 10). Fuerte…
- … pero no en todos los resultados. En Africa es débil.
- "The relationship between settler mortality and institutions is weaker within Africa."

Main results

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

- **Relevant Instrument:** Settler mortality predicts institutions (panel B)
- **The Causal Effect is large:** improving institutions has a huge impact on income.
- **Controlling for Latitude (Col 2):** The institution coefficient remains large (~1.00) and latitude becomes insignificant.
- **Excluding Neo-Europes (Cols 3-4):** The result is not driven by the USA, Canada, Australia, and New Zealand.
- **Excluding Africa (Cols 5-6):** The result is not driven by the African continent.
- **Including Continent Dummies (Cols 7-8):** The Africa dummy becomes insignificant, suggesting Africa's poverty is explained by its institutions, not other fixed characteristics.
- **Using an Alternative Outcome Measure (Col 9):** The result holds using "output per worker" instead of "GDP per capita."

Relevancia ok, pero... exogeneidad?

1. **Historical and Medical Evidence on Disease Immunity:** the factor that made settlement impossible (disease mortality) is not the same factor that would cause long-term poverty. It was a "strangers' disease."
2. **The Timing of the Instrument:** poco creíble que mortalidad de hace más de 100 años tenga un efecto directo en instituciones hoy.
3. **Controlling for Plausible Confounding Channels:** Current Disease Environment, Geography and Climate, Culture and Demography, Colonial Identity and Legal Origin.
4. **Overidentification testing:** Test de Sargan con otros instrumentos potenciales (early settlements, early institutions) no rechazan exogeneidad de instrumentos. However…

Relevancia ok, pero... exogeneidad?

- **“This approach is useful since it is a direct test of our exclusion restriction. However, such tests may not lead to a rejection if all instruments are invalid, but still highly correlated with each other. Therefore, the results have to be interpreted with caution”.**
- “In some specifications, the over identification tests using measures of early institutions reject at that 10-percent level (but not at the 5-percent level). There are in fact good reasons to expect institutions circa 1900 to have a direct effect on income today (and hence the overidentifying tests to reject our restrictions): these institutions should affect physical and human capital investment the beginning of the century, and have some effect on current income levels through this channel.”

Lo más probable es que si sea exo.

Round 1

2004 - 2005

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

- Cuestiona principalmente la calidad de los datos de mortalidad de colonos europeos utilizados como IV.
- Validez y robustez de sus resultados econométricos.

for their input and advice. I am particularly grateful to David Card and Chad Jones for their lengthy discussions and suggestions, to Francesco Trebbi for providing me with data, and especially to Daron Acemoglu, Simon Johnson, and Jim Robinson for their openness, graciousness, and cooperation. Any errors are my own. Please e-mail any comments to albouy@econ.berkeley.edu.

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

- **i) Problemas con datos de mortalidad:**
- **1. Falta de relevancia geográfica:** Las tasas de mortalidad a menudo se asignan a países sin una base geográfica sólida.
- **2. Imprecisión estadística:** Algunas estimaciones se basan en muestras pequeñas, períodos cortos o circunstancias excepcionales.
- **3. Falta de comparabilidad:** Se mezclan datos de soldados en campaña con soldados en barracas, e incluso con sacerdotes, lo que introduce sesgos.
- Esto generaría un sesgo en la primera etapa de MC2E, lo que matemáticamente sesgaría los resultados, en este caso **inflando la robustez del instrumento.**

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

(1) $$R_i = \beta M_i + \mathbf{X'}_i \delta + \tilde{\eta}_i$$

(2) $$Y_i = \alpha R_i + \mathbf{X'}_i \gamma + \tilde{\varepsilon}_i$$

and has no effect on the consistency of $\hat{\alpha}_{IV}$. Correlated measurement error, on the other hand, may increase the estimate and significance of $\hat{\beta}_{OLS}$ and could render $\hat{\alpha}_{IV}$ inconsistent. Modeling measurement error as $\mu_i = m_i - m_i^*$ where m_i^* is the true value of log settler mortality and m_i is its measured counterpart, I show in Appendix A in the case where μ_i may be arbitrarily correlated with any of the variables or error terms, the following probability limits apply to the estimators

(3) $$\text{plim}\hat{\beta}_{OLS} = \frac{\beta\sigma_{m^*}^2 + \sigma_{\mu r}}{\sigma_{m^*}^2 + \sigma_{\mu}^2 + 2\sigma_{\mu m^*}}$$

(4) $$\text{plim}\hat{\alpha}_{IV} = \alpha + \frac{\sigma_{\mu\varepsilon}}{\beta\sigma_{m^*}^2 + \sigma_{\mu r}}$$

where $\sigma_x^2 = E[(x_i)^2]$ and $\sigma_{wx} = E[w_i x_i]$ for any w_i and x_i. Equation (3) implies that if $\sigma_{\mu r}$ or $\sigma_{\mu m^*}$ is non-zero, i.e. measurement error is correlated with measures of expropriation risk or mortality, then the OLS estimate may be biased *away* from zero, rather than towards zero. Equation (4) states that if $\sigma_{\mu\varepsilon} \neq 0$, i.e. measurement error is correlated with the error term in (2'), the excludability restriction is violated and the IV estimate is inconsistent. Although not shown here, correlated measurement error may artificially decrease the estimate of $\text{var}(\hat{\beta}_{OLS}) = \hat{\sigma}_{\hat{\eta}}^2 / N\hat{\sigma}_m^2$, increasing the significance of $\hat{\beta}_{OLS}$ and the apparent strength of the IV design.

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

- Albouy argumenta que **el error si está correlacionado**, porque:
- **AJR** mezcla **tasas de mortalidad de soldados en campaña para estimar la mortalidad de soldados en barracas.**
- Soldados en barracas = países colonizados, instituciones desarrolladas (USA).
- Soldados en campañas = países en conquista, instituciones frágiles (MEX).
- **AJR tiende a usar tasas max. vs usar promedios en países con altas tasas de expropiación** (ie: Kenia y Tanzania)**.**
- Etc, otras asignaciones que Albouy determina como arbitrarias.

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

- **ii) Robustez econométrica de resultados:**
- Albouy argumenta que una vez corregidos los datos de mortalidad, la relación entre mortalidad y riesgo de expropiación se debilita.
- El estimador de IV se vuelve inestable y sesgado en muestras pequeñas.
- Propone usar estadístico Anderson Rubin como alternativa al F (Wald), que teóricamente es más estable (pero menos útil?)

proposed by Anderson and Rubin (1949). The AR statistic under the null that H_0: $\alpha = \alpha_0$ is the standard F-statistic of the instrument m_i regressed on the residual computed under the null $\varepsilon_i = y_i - \alpha_0 r_i$. Moreira (2003) proves that in the exactly identified case AR tests are uniformly most powerful amongst unbiased tests, making them optimal for this application. Confidence regions are constructed by computing the AR test over a fine grid of values for α_0, including in the region all values of α_0 the AR test cannot reject. Zivot, Startz, and Nelson (1998) show that all confidence regions will either take a bounded form $[\alpha_L, \alpha_H]$ or an unbounded form $(-\infty,\alpha_L]\cup[\alpha_H,+\infty)$, where the latter occurs whenever the first stage $\hat{\beta}_{OLS}$ is not significantly different from zero in the first stage at the same significance level. For the sake of comparison I also

Intermission: Anderson Rubin statistic

Intuitivamente: variable Y, variable endógena X, instrumento Z

Propiedad clave de IV: Z debe afectar a Y **solo a través** de X. Es decir Corr(Z, u) = 0

- Plantear hipótesis: el efecto de X en Y es de $\beta = \lambda$.
- Luego, calculamos $u = Y - \lambda X$ y revisamos si Z puede predecir ese resultado (residuo).
- Si Z puede predecir ese residuo -> $Corr(Z, u) \neq 0 \rightarrow$ *Z no se está comportando como un IV para ese valor, por lo que queda fuera del intervalo.*
- Si Z no logra predecir ese residuo -> No podemos rechazar que $Corr(Z, u) = 0 \rightarrow$ *Z se comporta, bajo esa hipótesis, como un instrumento válido. Ese valor λ queda dentro del intervalo.*
- Ie: el IC de AR al 95% es de [0.8 , 1.2], quiere decir que si el efecto Y~X está entre esos números, Z se comporta como un instrumento válido.
- **Si incluye al 0, el instrumento no puede descartar que el efecto sea nulo**
- **Si incluye valores $\pm\infty$, es un instrumento débil.**

Intermission: Anderson Rubin statistic

Matemáticamente:

Modelo

$$y_i = \beta x_i + u_i \quad \text{(Ecuación estructural)} \tag{1}$$
$$x_i = \pi z_i + v_i \quad \text{(Primera etapa)} \tag{2}$$

Donde:

- y_i: Log del PIB per cápita (variable resultado).
- x_i: Protección contra expropiación (variable endógena).
- z_i: Log de mortalidad de colonizadores (instrumento).
- β: Efecto causal de interés.

Paso 1: Postular una hipótesis. Se plantea la hipótesis nula de que el efecto verdadero es igual a un valor específico β_0:

$$H_0 : \beta = \beta_0$$

Paso 2: Calcular el residuo estructural bajo H_0. Bajo la hipótesis, se construye la variable dependiente transformada:

$$\tilde{y}_i = y_i - \beta_0 x_i$$

Si H_0 es cierta, entonces $\tilde{y}_i = u_i$ (el error estructural).

Paso 3: Regresión del residuo sobre el instrumento. Se estima por MCO la siguiente regresión:

$$\tilde{y}_i = \gamma z_i + \varepsilon_i$$

El parámetro estimado es $\hat{\gamma}(\beta_0)$, que depende de β_0.

Paso 4: Calcular el estadístico de prueba. Se calcula el estadístico t para $\hat{\gamma}$:

$$t(\beta_0) = \frac{\hat{\gamma}(\beta_0)}{ee\left(\hat{\gamma}(\beta_0)\right)}$$

Paso 5: Criterio de decisión para β_0.

- Si $|t(\beta_0)| > 1.96$, se **rechaza** H_0. El valor β_0 queda **fuera** del intervalo.
- Si $|t(\beta_0)| \leq 1.96$, **no se rechaza** H_0. El valor β_0 queda **dentro** del intervalo.

Paso 6: Construcción del intervalo AR. Se repiten los pasos 1 a 5 para un conjunto continuo de valores β_0 (por ejemplo, $\beta_0 \in [-2, 3]$). El intervalo de confianza AR al 95% es el conjunto de todos los β_0 no rechazados:

$$IC_{AR}^{95\%} = \{\beta_0 : |t(\beta_0)| \leq 1.96\}$$

Intermission: Anderson Rubin statistic

Matemáticamente: (para Ovando et al)

Consider the following structural equation:

$$y = Y\beta + X\gamma + u \tag{1}$$

where:

- y is an $n \times 1$ vector of outcomes.
- Y is an $n \times g$ matrix of endogenous regressors.
- β is a $g \times 1$ vector of structural parameters of interest.
- X is an $n \times k$ matrix of exogenous control variables (included instruments/exogenous covariates).
- γ is a $k \times 1$ vector of coefficients for the controls.
- u is an $n \times 1$ vector of structural errors.

The reduced-form relationship between the instruments and the endogenous variables is:

$$Y = X\Pi_X + Z\Pi_Z + V = W\Pi + V \tag{2}$$

where V is an $n \times g$ matrix of reduced-form errors.

Substituting the first stage into the structural equation yields the reduced form for y:

$$\begin{aligned} y &= (W\Pi + V)\beta + X\gamma + u \\ &= X(\Pi_X\beta + \gamma) + Z(\Pi_Z\beta) + (u + V\beta) \\ &= X\delta + Z\pi + \epsilon \end{aligned} \tag{3}$$

where $\epsilon = u + V\beta$ is the reduced-form error.

The Anderson-Rubin (AR) test is designed to test the null hypothesis:

$$H_0 : \beta = \beta_0 \tag{4}$$

where β_0 is a hypothesized vector of coefficients. Under H_0, the moment condition $\mathbb{E}[Z'\epsilon] = 0$ should hold, where $\epsilon = y - Y\beta_0 - X\gamma$.

To construct the statistic, we first partial out the exogenous covariates X. Define the projections:

$$\tilde{y} = M_X y \tag{5}$$

$$\tilde{Y} = M_X Y \tag{6}$$

$$\tilde{Z} = M_X Z \tag{7}$$

These represent y, Y, and Z after removing the linear influence of X.

Under the null hypothesis $H_0 : \beta = \beta_0$, we define the restricted residual:

$$\tilde{e}(\beta_0) = \tilde{y} - \tilde{Y}\beta_0 \tag{8}$$

Adaptado de Staiger, Douglas and Stock, James H. "Instrumental Variables Regression with Weak Instruments." Econometrica, May 1997, 65(3), pp. 557-86

Intermission: Anderson Rubin statistic

The AR statistic is derived from the F-test (or χ^2 test) of the joint significance of θ in the auxiliary regression:

$$\tilde{e}(\beta_0) = \tilde{Z}\theta + \xi \tag{9}$$

where θ is an $l \times 1$ vector.

Under the null, θ should be zero, as the instruments $\tilde{Z}$ should have no explanatory power for the restricted residual $\tilde{e}(\beta_0)$.

The Anderson-Rubin statistic is computed as:

$$AR(\beta_0) = \frac{(\tilde{e}(\beta_0)'\tilde{Z})(\tilde{Z}'\tilde{Z})^{-1}(\tilde{Z}'\tilde{e}(\beta_0))/l}{(\tilde{e}(\beta_0)'M_{\tilde{Z}}\tilde{e}(\beta_0))/(n-k-l)} \tag{10}$$

where $M_{\tilde{Z}} = I - \tilde{Z}(\tilde{Z}'\tilde{Z})^{-1}\tilde{Z}'$.

Under the null hypothesis $H_0 : \beta = \beta_0$ and standard regularity conditions, the statistic follows an F-distribution:

$$AR(\beta_0) \sim F(l,\ n-k-l) \tag{11}$$

Nota: si sólo hay 1 instrumento y 1 variable endógena, el estadístico se puede escribir análogamente bajo una distribución T Student.

Interpretation for Weak Instrument Detection

The AR statistic is pivotal to weak instrument-robust inference.

- **Weak Instrument Robustness:** Unlike the standard t-statistic on $\hat{\beta}_{IV}$, the distribution of $AR(\beta_0)$ holds even if the instruments Z are weak (i.e., Π_Z is close to zero in equation (2)). This is because the AR test directly tests the reduced form implication that $\pi = \Pi_Z\beta = 0$ in equation (3).
- **Joint Hypothesis:** Rejecting $H_0 : \beta = \beta_0$ implies that either the structural parameters are not equal to β_0, or the instruments are not valid (i.e., the exclusion restriction fails), or the instruments are relevant but identify a different parameter value.
- **Confidence Sets:** Inverting the AR statistic provides a confidence set for β that is robust to weak instruments:

$$CS_{AR} = \{\beta_0 : AR(\beta_0) < c_\alpha\} \tag{12}$$

where c_α is the critical value from the $F(l, n-k-l)$ distribution.

Adaptado de Staiger, Douglas and Stock, James H. “Instrumental Variables Regression with Weak Instruments.” Econometrica, May 1997, 65(3), pp. 557-86

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

- **ii) Robustez econométrica de resultados:**
- **Si el IC-AR excluye el cero =** estadísticamente significativo. El instrumento, *asumiendo que es válido*, ha detectado un efecto.
- **Si el IC-AR es muy amplio o infinito =** muy débil. No podemos precisar el efecto, pero eso no significa que el instrumento sea inválido (puede ser válido pero poco informativo).
- Albouy corre mismas regresiones…

Especificación	Wald 95% CI	Anderson-Rubin 95% CI
Sin controles	[0.52, 1.34]	[0.66, 1.85]
Con latitud	[0.42, 1.50]	[0.64, 2.33]
Con continentes	[0.25, 1.70]	[0.50, 7.51] ∪ (-∞, …)

Resumen de tabla con ayuda de DeepSeek, a modo de facilitar lectura

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

- **ii) Robustez econométrica de resultados:**
- Albouy afirma que los resultados de AJR dependen mucho de algunas observaciones

TABLE 4: FIRST STAGE SENSITIVITY TO THE MORTALITY DATA
(Dependent variable: Expropriation Risk, no control varaibles included)

Panel A: High Revision	Full Sample (1)	Better Subsample (2)	Top 10 Changers Original (3)	No Africa (4)	No Africa or Neo-Europes (5)	Median Regress-ion (6)
Log Mortality	-0.56	-0.49	-0.63	-1.26	-0.55	-0.47
(clustered s.e.)	(0.29)	(0.33)	(0.18)	(0.27)	(0.56)	(0.42)
p- value	0.063	0.151	0.001	0.000	0.340	0.268
Sample Size	64	36	64	37	33	64
Clusters	31	26	35	17	14	-

Panel B: Low Revision	Full Sample (1)	No Late Obs (2)	Gutierrez Data High (3)	No Africa (4)	No Africa or Neo-Europes (5)	Median Regress-ion (6)
Log Mortality	-0.57	-0.82	-1.02	-0.94	-0.34	-0.33
(clustered s.e.)	(0.34)	(0.39)	(0.33)	(0.43)	(0.34)	(0.38)
p- value	0.081	0.053	0.006	0.044	0.338	0.390
Sample Size	43	37	43	35	31	43
Clusters	22	18	21	18	14	-

- High Revision: 64 paises, tasa de mortalidad de soldados en campaña, todo el siglo XIX. Distintos efectos en mortalidad (+ y -), en Gambia elimina epidemia excepcional (-), en USA usa Guerra Civil (+)
- Low Revision: 43 paises, datos de mortalidad en barracas. Efecto en mortalidad (-)
- Full Sample: si
- Better Subsample: elimina observaciones con datos muy dudosos (ej. extrapolaciones de Gutierrez, países africanos con datos de esclavos, Hong Kong)
- T10CH: Albouy toma los 10 países donde la revision cambio más los datos, y los revierte (diapo siguiente)
- No Africa: lol. Instrumento es casi perfecto sacando el 42% de la muestra.
- No Africa or Neo Europes: prueba el punto de que en realidad la significancia viene de comparar extremos, no de un comportamiento generalizado.
- Median Regression: robusto a Outliers, signif desaparece
- No Late Obs: a modo de mantener consistencia temporal
- Gutierrez Data High: Toma paises de LATAM, y les da las tasas más altas posibles. Signif comes back!

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

País	Original AJR	High Revision
Gambia	1470	353
Nigeria	2004	266.5
Mali	2940	200.24
Sudán	88.2	13.87
EE.UU.	15	53.4
Canadá	16.1	53.4
Malta	16.3	61
Malasia	17.7	60.88
Singapur	17.7	60.88
Hong Kong	14.9	66.45

Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

- **ii) Robustez econométrica de resultados:**
- Albouy además prueba con otras dos medidas alternativas de instituciones que AJR mismos usaron en versiones previas de su paper.
- **1: Constraints on Executive (1990) [1 - 7]:** Mide límites al poder ejecutivo, mayor puntaje = más restricciones = mejores instituciones
- **2: Law and Order Tradition (1995) [0 - 6]:** Mide tradicion legal y orden, mayor puntaje = más ley y orden = mejores instituciones.
- TLDR: al usar estas como el X e instrumentar la variable con mortalidad, al incluir controles como continentes, temperatura, % europeo, la significancia desaparece.
- Posibles explicaciones: Mortalidad es OV (geografia, composición étnica), no es exogena.

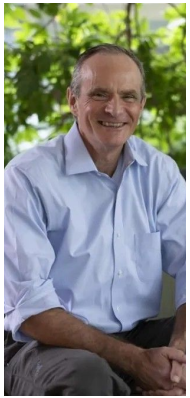
Albouy (2004): The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data

TLDR;

"No podemos rechazar la hipótesis de que el efecto de las instituciones sobre el PIB sea **cualquier número real**, positivo o negativo, grande o pequeño, con los datos disponibles."

AJR (2005): A Response to Albouy's "A Reexamination Based on Improved Settler Mortality Data"

stitutions today. In this note we show that his claims are without foundation. Our original coding of the data was not inconsistent, questionable, or erroneous. Instead, Albouy's results are entirely driven by inconsistent, incorrect, selective, and/or unreasonable revisions to our original data, particularly, but not exclusively, for Africa.


*We thank Francisco Gallego and Tarek Hassan for excellent research assistance and David Autor and Jerry Hausman for discussion and comments. We are also most grateful for helpful discussions with Stephen Greenberg and other reference librarians at the National Library of Medicine.

AJR (2005): A Response to Albouy's "A Reexamination Based on Improved Settler Mortality Data"

- i) Respuesta al punto de datos de mortalidad
- **Albouy**: Solo reconoce 2 datos válidos en África Occidental para su serie barracks (Senegal y Ghana) y los asigna solo a **Gambia** y **Costa de Marfil**, respectivamente, ignorando al resto de vecinos.
- **AJR**: Esto es **arbitrario e inconsistente**. Si se asigna a **todos los vecinos** (como ellos hicieron originalmente), los resultados mejoran dramáticamente:

Serie	β (sin controles)	p-valor
Albouy barracks original	-0.59	~0.06
Con asignación a todos vecinos	-0.80	<0.05
Con corrección americana	-0.98	<0.001

Resumen de tabla 1A y 1B con ayuda de DeepSeek, a modo de facilitar lectura

AJR (2005): A Response to Albouy's "A Reexamination Based on Improved Settler Mortality Data"

- ii) Respuesta al problema de LATAM: obispos vs soldados
- **Albouy** usa mucho las tasas de obispos, asumiendo que son directamente comparables con los datos de soldados.
- **AJR**: aw hell naw
- Los obispos vivían mejor, tenían mejor nutrición y podían huir de epidemias
- Cuando hay datos que solapan (México, Jamaica), la tasa de soldados es ~3× la de obispos
- La literatura histórica (Tulloch, Balfour) muestra que **oficiales y civiles tenían mortalidad ~50% menor que soldados**

AJR (2005): A Response to Albouy's "A Reexamination Based on Improved Settler Mortality Data"

- iii) Respuesta al problema de campañas vs barracas
- **Albouy** en sus serie de campaña usa la guerra civil de USA, expediciones pequeñas en África como proxys, y usa promedios ponderados para Sudán pero no para Vietnam
- **AJR:**
- Guerra Civil de USA no es comparable con expediciones coloniales. Usar tasas de campañas británicas en USA mejora resultados.
- Usar promedios ponderados inconsistentemente hace que se caiga la significancia estadística en varios resultados.

AJR (2005): A Response to Albouy's "A Reexamination Based on Improved Settler Mortality Data"

- iv) Respuesta al problema de instrumento débil
- **Albouy** usando sus datos encuentra intervalos AR no acotados = débil
- **AJR** luego de aplicar correcciones a datos (incluye datos mejorados de Tulloch), los F stats son cercanos a 10 (9.algo en casi todos) y los intervalos AR son estables excluyen valores cercanos a 0.
- Tablas 2A, 2B, 3A

Table 2B
Second Stage Regressions

	(1)	(2)	(3)	(4)
	Alternative series for settler mortality			
	Unweighted averages		*Mixing weighted and unweighted*	*Unweighted averages*
	Original AJR series	Original AJR series, capped at 250	Albouy campaign series	Albouy campaign revision, correct American data and expeditions in Africa (capped)
No covariates	0.93	0.82	1.27	0.90
AR confidence interval	[0.66,1.40]	[0.62,1.14]	[0.81,4.51]	[0.66,1.40]
AR confidence interval, clustered	[0.66,1.84]	[0.60,1.23]	[-∞,-4.70]U[0.71,∞]	[0.60,1.91]
F-stat, first stage	23.34	35.55	6.37	19.12
F-stat, first stage, clustered	12.45	28.09	3.07	10.30
With latitude	0.96	0.79	1.62	0.95
AR confidence interval	[0.65,1.79]	[0.55,1.26]	[-∞,-3.06]U[0.81,∞]	[0.62,2.01]
AR confidence interval, clustered	[0.62,2.90]	[0.54,1.24]	[-∞,-0.68]U[0.69,∞]	[0.54,3.17]
F-stat, first stage	13.48	21.82	2.24	10.14
F-stat, first stage, clustered	7.30	19.26	1.07	6.29
Without neo-Europes	1.24	1.04	2.98	1.27
AR confidence interval	[0.79,3.15]	[0.67,2.05]	[-∞,-1.53]U[1.11,∞]	[0.76,4.92]
AR confidence interval, clustered	[0.79,7.39]	[0.63,2.27]	[-∞,-0.58]U[1.00,∞]	[-∞,-36.03]U[0.66,∞]
F-stat, first stage	8.89	13.22	0.82	6.08
F-stat, first stage, clustered	5.54	11.27	0.49	3.79
Without Africa	0.61	0.61	0.67	0.62
AR confidence interval	[0.41,0.87]	[0.41,0.89]	[0.40,1.23]	[0.39,0.99]
AR confidence interval, clustered	[0.43,0.89]	[0.43,0.89]	[0.37,1.19]	[0.40,0.93]
F-stat, first stage	30.62	30.62	11.48	16.36
F-stat, first stage, clustered	45.98	45.98	25.16	16.48
With continent dummies	0.97	0.78	2.57	0.90
AR confidence interval	[0.59,3.32]	[0.52,1.45]	[-∞,-0.45]U[0.79,∞]	[0.55,3.02]
AR confidence interval, clustered	[0.49, 10.08]	[0.42, 1.56]	[-∞,-0.11]U[0.62,∞]	[-∞,-0.65.40]U[0.44,∞]
F-stat, first stage	6.49	13.32	0.40	6.25
F-stat, first stage, clustered	4.68	10.61	0.26	3.90
With percent of European descent in 1975	0.92	0.71	2.20	0.87
AR confidence interval	[0.56,2.35]	[0.44,1.29]	[-∞,-0.73]U[0.73,∞]	[0.49,3.00]
AR confidence interval, clustered	[0.51, 6.91]	[0.33,1.27]	[-∞,-0.14]U[0.56,∞]	[-∞,-11.50]U[0.35,∞]
F-stat, first stage	8.67	15.32	0.64	6.35
F-stat, first stage, clustered	4.92	12.92	0.35	3.67
With malaria	0.62	0.50	1.58	0.56
AR confidence interval	[0.32,1.42]	[0.28,0.83]	[-∞,∞]	[0.21,1.80]
AR confidence interval, clustered	[0.27, 2.24]	[0.23,0.77]	[-∞,∞]	[-∞,∞]
F-stat, first stage	8.64	18.49	0.46	5.82
F-stat, first stage, clustered	5.63	16.71	0.23	3.40

2SLS regressions, one observation per country. Coefficients and standard errors for covariates, where included, are not reported to save space. Originalsettler mortality series and covariates are from AJR (2001); Albouy series is from Albouy (2004b). Construction of alternative series is explained in section 3 of the text and summarized here in the column heading; the first stage for columns 1 through 3 in the corresponding column of Table 1B, the first stage for column 4 is in column 7 of Table 1B.

AJR (2005): A Response to Albouy's "A Reexamination Based on Improved Settler Mortality Data"

- v) Respuesta a la sensibilidad a Outliers
- **Albouy:** T10CH, los resultados son dependientes de 10 observaciones y de comparar outliers entre sí (Africa con Neo Europas, etc)
- **AJR:** corrigiendo arbitrariedades en correcciones de Albouy y ocupando datos de Tulloch, los resultados son consistentes y significativos **siempre.**

Table 3A
First Stage Regressions

	(1)	(2)	(3)	(4)	(5)
	Alternative series for settler mortality				
	Original AJR series	AJR series with robustness data from Tulloch	AJR series with robustness data from Tulloch, capped at 250	AJR series with robustness data from Tulloch and new alternative estimates Latin America	AJR series with robustness data from Tulloch and new alternative estimates Latin America, capped at 250
	Only coefficient and standard error for log settler mortality are reported				
No covariates	-0.61	-0.56	-0.87	-0.50	-0.70
(standard error)	(0.13)	(0.13)	(0.17)	(0.12)	(0.15)
(clustered standard error)	(0.17)	(0.17)	(0.19)	(0.15)	(0.19)
Number of clusters	36	38	38	39	39
Number of observations	64	64	64	64	64
With latitude	-0.52	-0.45	-0.75	-0.39	-0.59
(standard error)	(0.14)	(0.15)	(0.20)	(0.13)	(0.17)
(clustered standard error)	(0.19)	(0.19)	(0.23)	(0.17)	(0.21)
Number of clusters	36	38	38	39	39
Number of observations	64	64	64	64	64
Without neo-Europes	-0.40	-0.33	-0.55	-0.31	-0.46
(standard error)	(0.13)	(0.14)	(0.19)	(0.12)	(0.15)
(clustered standard error)	(0.17)	(0.17)	(0.21)	(0.13)	(0.15)
Number of clusters	33	34	34	35	35
Number of observations	60	60	60	60	60
Without Africa	-1.21	-1.02	-1.05	-0.72	-0.73
(standard error)	(0.22)	(0.25)	(0.25)	(0.23)	(0.23)
(clustered standard error)	(0.18)	(0.30)	(0.29)	(0.30)	(0.30)
Number of clusters	19	21	21	22	22
Number of observations	37	37	37	37	37
With continent dummies	-0.44	-0.36	-0.66	-0.34	-0.54
(standard error)	(0.17)	(0.17)	(0.22)	(0.16)	(0.19)
(clustered standard error)	(0.20)	(0.20)	(0.25)	(0.16)	(0.19)
Number of clusters	36	38	38	39	39
Number of observations	64	64	64	64	64
With percent of European descent in 1975	-0.42	-0.33	-0.60	-0.26	-0.44
(standard error)	(0.14)	(0.16)	(0.21)	(0.15)	(0.20)
(clustered standard error)	(0.19)	(0.20)	(0.25)	(0.19)	(0.24)
Number of clusters	36	38	38	39	39
Number of observations	64	64	64	64	64
With malaria	-0.52	-0.41	-0.78	-0.35	-0.60
(standard error)	(0.18)	(0.19)	(0.23)	(0.17)	(0.21)
(clustered standard error)	(0.22)	(0.22)	(0.27)	(0.19)	(0.24)
Number of clusters	35	36	36	37	37
Number of observations	62	62	62	62	62

OLS regressions, one observation per country. Coefficients and standard errors for covariates, where included, are not reported to save space. Originalsettler mortality series and covariates are from AJR (2001). Construction of alternative series is explained in section 5 of the text and summarized here in the column heading.

AJR (2005): A Response to Albouy's "A Reexamination Based on Improved Settler Mortality Data"

- vi) Contraataque: problemas en las revisiones de Albouy
- **AJR** menciona muchas inconsistencias por parte de Albouy.
- **Inconsistencias metodológicas:** promedios ponderados en algunos países vecinos pero en otros no, excluye datos de barracks en Africa pero que luego usa en campaign, en Latam obispos = soldados pero ajusta en campaign…
- **Problemas de interpretación:** Uso incorrecto de cifras de Cohen y Feinberg, usa datos de Gregory que en realidad fueron por hambruna pero no enfermedades.
- **Selección Arbitraria:** usa datos de USA de guerra civil pero ignora campañas británicas, etc

Round 2

2006

Albouy (2006): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

settlers as an instrument for the risk of capital expropriation. Returning to their original sources, I find the settler mortality data suffer from a number of inconsistencies, comparability problems, and questionable geographic assignments. When various methods are used to deal with these issues, the first-stage relationship between mortality and expropriation risk is no longer robust and typically insignificant. Consequently instrumental variable estimates are unreliable and suffer from weak instrument pathologies.

* I thank Pranab Bardhan, Christina Berkley, Chris Blattman, David Card, Brad DeLong, William Easterly, Tarek Hassan, Chang-Tai Hsieh, Michael Jansson, Chad Jones, Ian McLean, Ted Miguel, Kris Mitchener, Marcelo Moreira, Maurice Obstfeld, Rohini Pande, Gerard Roland, Christina Romer, David Romer, Emmanuel Saez, Andrei Shleifer, Francesco Trebbi, the Editor and four anonymous referees, and the participants at the Berkeley Development Lunch and the Economic History and Macroeconomics Seminars for their help, input, and advice. I am particularly grateful to Daron Acemoglu, Simon Johnson, and James Robinson for their goodwill, providing me with data, and sharing with me both a preliminary response and a later formal response to my work. Any mistakes are my own. Please e-mail any comments to albouy@econ.berkeley.edu.

Albouy (2006): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

- i) Inconsistencia con la selección de los datos
- AJR viola su propia regla de tomar la primera tasa de mortalidad disponible: Sudán, Egipto, Madagascar y Mali
- ii) Falta de comparabilidad de campaña vs barracas
- En el Norte de África, usan tasas de campañas habiendo datos de barracas disponibles, y en el Sudeste Asiatico y América ocurren situaciones similares
- iii) Asignaciones geográficas dudosas
- AJR asigna 3 tasas distintas de distintos lugares a Mali, usan datos de campaña de Beijing en datos de barracas en Hong Kong, y en LATAM hay 16 países que usan tasas benchmark de obispos multiplicadas por constantes similares.

Albouy (2006): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

- Albouy parte por eliminar las “inconsistencias obvias”, usando las verdaderas tasas primeramente disponibles.
- Al agregar esos datos, la primera etapa pierde significancia.

Especificación	Original (p)	+Sudán	+Egipto/Madagascar	+Malí unificado	+Congo promedio
Sin controles	**0.001**	0.01	0.01	0.02	**0.03**
Con latitud	**0.01**	0.05	0.08	0.14	**0.21**
Con continentes	**0.04**	0.17	0.22	0.30	**0.43**

Resumen de tabla 2 con ayuda de DeepSeek, a modo de facilitar lectura

Albouy (2006): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

- Albouy luego analiza si la procedencia de la fuente es significativa (no debería serlo, es una forma de revisar si hay sesgo sistemático).
- En la práctica, estima

$$\text{Expropiación} = \beta \cdot \log(\text{mortalidad}) + \gamma_1 \cdot D\_\text{Campaña} + \gamma_2 \cdot D\_\text{Laboral} + \text{controles} + \text{error}$$

Muestra	Mortalidad (p)	Dummies campaña (p)
Original + dummies	0.02	0.16
Datos consistentes + dummies	**0.15**	**<0.001**

- Campaña (alta) = Africa/LATAM/Asia = institución típicamente mala
- Barracas (bajas) = Neo Europas/Colonias = institución típicamente buena

Resumen de tabla 3 con ayuda de DeepSeek, a modo de facilitar lectura

Albouy (2006): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

- Albouy intenta restringir una parte de la muestra a sólo aquellos que tengan datos respectivos de sus propios territorios (ie: no datos extrapolados)

Muestra	Sin controles (p)	Con latitud (p)	Con continentes (p)
Original	0.001	0.01	0.04
Solo países fuente (N=28)	0.01	0.07	0.13
+Eliminar inconsistencias (N=27)	0.16	**0.77**	**0.77**
+Dummies campaña (N=27)	**0.55**	**0.81**	**0.90**

- Con la muestra “confiable” de Albouy, la mortalidad nunca es significativa

Resumen de tabla 4 con ayuda de DeepSeek, a modo de facilitar lectura

Albouy (2006): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

- Computando las regresiones con los datos corregidos, los estadísticos AR nuevamente dan cuenta de un instrumento débil (intervalos no acotados y grandes).
- **El instrumento sólo funciona cuando se cumplen 3 condiciones: eliminando Africa (42% de la muestra), usando datos de barracas (Neo Europeas), y con el benchmarking de obispos.**

TABLE 5: INSTRUMENTAL VARIABLE ESTIMATES AND CONFIDENCE REGIONS FOR REPRESENTATIVE CASES
(Second Stage Dependent Variable, Log GDP per Captia, 1995, PPP basis)

Control Variables	No Controls (1)	Latitude Control (2)	Continent Dummies (3)
Panel A: Original data			
Expropriation risk (α)	0.93	0.93	0.97
Wald 95% conf. region	[0.52, 1.34]	[0.42, 1.50]	[0.24, 1.70]
AR "95%" conf. region	[0.66, 1.83]	[0.64, 2.39]	[0.50, 9.02]
First stage t-statistic	-3.53	-2.70	-2.16
Panel B: Eliminating inconsistencies			
Expropriation risk (α)	1.09	1.34	1.88
Wald 95% conf. region	[0.36, 1.81]	[-0.24, 2.91]	[-2.04, 5.81]
AR "95%" conf. region	[0.69, 7.48]	$(-\infty, -2.17] \cup [0.74, +\infty)$	$(-\infty, -0.47] \cup [0.68, +\infty)$
First stage t-statistic	-2.26	-1.29	-0.80
Panel C: Adding campaign and laborer dummies, cumulative from Panel B			
Expropriation risk (α)	1.40	1.73	2.11
Wald 95% conf. region	[-0.14, 2.94]	[-1.41, 4.86]	[-3.57, 7.79]
AR "95%" conf. region	$(-\infty, -2.24] \cup [0.70, +\infty)$	$(-\infty, -0.63] \cup [0.70, +\infty)$	$(-\infty, -0.21] \cup [0.63, +\infty)$
First stage t-statistic	-1.46	-0.90	-0.63
Panel D: Eliminating countries with rates from other countries, cumulative from Panel C			
Expropriation risk (α)	2.12	-2.24	8.13
Wald 95% conf. region	[-3.82, 8.05]	[-23.3, 18.9]	[-118, 134]
AR "95%" conf. region	$(-\infty, -0.24] \cup [0.68, +\infty)$	$(-\infty, +\infty)$	$(-\infty, 0.01] \cup [0.60, +\infty)$
First stage t-statistic	-0.61	0.25	-0.13

AR "95%" Confidence Region refers to Anderson-Rubin (1949) confidence regions with 5 percent size. Corresponding first stage estimates using log mortality as an instrument for expropriation risk reported in columns (1), (2), and (4) of Table 2, Panels A and E; Table 3, Panel D, and Table 4, Panel E. See text and other tables for further details.

Albouy (2006): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

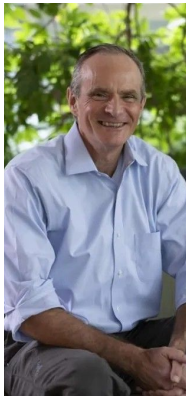
TLDR;

"Dados los limitados datos disponibles, las regresiones de crecimiento entre países no pueden separar el efecto de la mortalidad de colonos del de otras variables como geografía, clima y desarrollo preexistente."

AJR (2006):

Reply to the Revised (May 2006) version of David Albouy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data."

David Albouy's (2006) third comment on our "Colonial Origins of Comparative Development" (hereafter AJR, 2001) is not an improvement on his earlier work. The


previous 2005 response to Albouy, and in this note, **our results regarding the positive effect of institutions on income per capita are just as strong without African data in the sample (and this is confirmed by Albouy's own preferred data series).**

AJR (2006):

Reply to the Revised (May 2006) version of David Albouy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data."

- AJR argumentan que en su paper original, utilizando clustering conservador, los resultados son más robustos al excluir a África de la muestra.
- **"The conclusion from this exercise should be clear: editing the African data in order to criticize the findings in AJR (2001) is not a particularly fruitful direction. The results are statistically at least as strong without Africa; they are in no way driven by African observations."**

Especificación	Original AJR	Sin África	Con capping (250)
Sin controles	-0.61 (0.17)	**-1.21 (0.18)**	-0.70 (0.19)
Con latitud	-0.52 (0.19)	**-1.14 (0.19)**	-0.59 (0.21)
Sin Neo-Europes	-0.40 (0.17)	**-0.83 (0.27)**	-0.46 (0.15)
Con continentes	-0.44 (0.20)	**-1.30 (0.31)**	-0.54 (0.19)

Resumen de tabla 1 con ayuda de DeepSeek, a modo de facilitar lectura

AJR (2006):

Reply to the Revised (May 2006) version of David Albouy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data."

- AJR identifican que casi todo el efecto estadístico de las revisiones de Albouy viene de los cambios que le está haciendo a un sólo país: **Sudán**
- **" In general, the tone and content of Albuoy's comment agrees with our principle (expressed in AJR 2001 and reiterated in AJR 2005) that, where available, peacetime data are a preferable measure for the mortality rates faced by potential European settlers. But for Sudan, inexplicably, Albouy (2006) then prefers data from a substantial war, even though peacetime data were available. He therefore modifies our data in a way that, according to his own argument, creates an inconsistency. This single inconsistent modification drives a large part of the results."**

Serie	β (sin controles)	¿Qué cambió?
Original AJR	-0.61	Sudán = 88.2 (tasa de paz)
Albouy	-0.46	Sudán = 10.9 (tasa de campaña)
AJR con cambios de Albouy (sin Sudán)	-0.58	Casi vuelve al original

Resumen de tabla 1 con ayuda de DeepSeek, a modo de facilitar lectura

AJR (2006):

Reply to the Revised (May 2006) version of David Albouy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data."

In addition to selecting a Sudanese estimate in a way that is inconsistent, Albouy does not pause to reflect that according to his preferred number, Sudan was one of the healthiest places in the world for Europeans in the 19th century (and healthier than Britain was for the British)! If Albouy is even close to being right, why did the leading British medical authorities view it as a highly unhealthy place that should be evacuated "in the face of heat and disease" (see Appendix I below)?

AJR (2006):

Reply to the Revised (May 2006) version of David Albouy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data."

- AJR revisan meticulosamente el efecto de incorporar las otras sugerencias de Albouy respecto a las demás tasas de mortalidad africanas, y su efecto en los resultados.
- Sin África, los intervalos AR son acotados y excluyen cero
- Con la serie de Albouy, los intervalos son no acotados pero la parte negativa es implausible
- Corrigiendo solo Sudán, Egipto y Madagascar, los intervalos mejoran

Table 2
Second Stage Regressions

	(1)	(2)	(3)	(4)	(5)
	Alternative series for settler mortality				
	Original AJR series	Original AJR series, without Africa	AJR series with robustness data from Tulloch and new alternative estimates Latin America, capped at 250	Albouy series	Albouy series, minimally corrected
	Dependent variable is log GDP per capita in 1995				
No covariates	0.93	0.61	0.89	1.09	0.96
AR confidence interval	[0.69,1.40]	[0.41,0.87]	[0.64,1.35]	[0.75,2.24]	[0.70,1.51]
AR confidence interval, clustered	[0.66,1.84]	[0.43,0.89]	[0.63,1.59]	[0.69,8.00]	[0.67,2.34]
F-stat, first stage	23.34	23.34	22.17	10.30	18.95
F-stat, first stage, clustered	12.45	45.98	14.12	5.12	9.83
With latitude	0.96	0.60	0.90	1.43	1.04
AR confidence interval	[0.65,1.78]	[0.37,0.94]	[0.58,1.77]	[0.77,137.3]	[0.69,2.15]
AR confidence interval, clustered	[0.62,2.90]	[0.41,0.88]	[0.58,2.10]	[-∞,-1.23]U[0.69,∞]	[0.64,4.89]
F-stat, first stage	13.48	13.48	12.00	3.96	10.67
F-stat, first stage, clustered	7.30	37.89	7.88	1.68	5.78
Without neo-Europes	1.24	0.77	1.14	1.98	1.35
AR confidence interval	[0.78,3.09]	[0.36,1.94]	[0.70,2.91]	[-∞,-3.31]U[0.97,∞]	[0.83,4.85]
AR confidence interval, clustered	[0.79,7.39]	[0.36,2.25]	[0.70,2.93]	[-∞,-1.30]U[0.83,∞]	[-∞,-12.70]U[0.77,∞]
F-stat, first stage	23.34	23.34	8.92	10.30	18.95
F-stat, first stage, clustered	5.54	9.47	8.98	1.11	3.55
Without Africa	0.61	n.a.	0.66	0.61	0.61
AR confidence interval	[0.41,0.87]		[0.37,1.29]	[0.41,0.87]	[0.41,0.87]
AR confidence interval, clustered	[0.43,0.89]		[0.35,2.22]	[0.43,0.89]	[0.43,0.89]
F-stat, first stage	23.34		10.43	10.30	18.95
F-stat, first stage, clustered	45.98		5.83	43.98	45.98
With continent dummies	0.97	0.72	0.68	1.88	1.17
AR confidence interval	[0.59,3.21]	[0.52,1.10]	[0.35,1.62]	[-∞,-1.15]U[0.82,∞]	[0.69,17.03]
AR confidence interval, clustered	[0.49,10.08]	[0.47,1.32]	[0.16,1.32]	[-∞,-0.47]U[0.67,∞]	[-∞,-8.13]U[0.53,∞]
F-stat, first stage	6.49	11.54	8.06	1.09	4.31
F-stat, first stage, clustered	4.68	17.04	8.25	0.65	3.59
With percent of European descent in 1975	0.92	0.50	0.77	1.38	1.01
AR confidence interval	[0.55,2.31]	[0.27,0.84]	[0.31,7.82]	[-∞,-2.65]U[0.67,∞]	[0.60,3.61]
AR confidence interval, clustered	[0.51,6.91]	[0.18,0.85]	(-∞,∞)	[-∞,-0.55]U[0.58,∞]	[-∞,-7.33]U[0.52,∞]
F-stat, first stage	8.67	8.67	4.63	2.20	6.39
F-stat, first stage, clustered	4.92	30.92	3.28	1.11	3.55
With malaria	0.62	0.55	0.53	1.08	0.76
AR confidence interval	[0.32,1.40]	[0.37,0.82]	[0.20,1.28]	[-∞,-0.49]U[0.41,∞]	[0.42,2.85]
AR confidence interval, clustered	[0.27,2.24]	[0.41,0.78]	[-0.06,1.10]	[-∞,∞]	[0.16,29.48]
F-stat, first stage	8.64	8.64	7.95	1.39	5.82
F-stat, first stage, clustered	5.63	45.65	6.04	0.63	4.23

2SLS regressions, one observation per country. Coefficients and standard errors for covariates, where included, are not reported to save space. Original settler mortality series and covariates are from AJR (2001); Albouy series is from Albouy (2006). The minimally corrected Albouy series corrects his inconsistencies for Sudan, Egypt and Madagascar; the four countries in what Albouy calls "Central Africa" are set equal to missing; his Mali-based changes are accepted. More details for construction of alternative series are provided in the text and summarized here in the column heading; corresponding first stages are in Table 1. AR confidence intervals are Anderson-Rubin confidence intervals.

AJR (2006):

Reply to the Revised (May 2006) version of David Albouy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data."

AJR además acusan a Albouy de varias inconsistencias:

- Usa datos tardíos en escenarios donde hay tasas anteriores disponibles, etc
- Categoriza inconsistentemente barracas y campaña
- Ocupa tasas puntuales en USA y Canadá que se basan en hambrunas puntuales y que según la propia admisión de Albouy no debe ser tomada en serio.

Round 3

2008

Albouy (2008): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

capital expropriation risk. However 36 of the 64 countries in their sample are assigned mortality rates from other countries, typically based on mistaken or conflicting evidence. Also, incomparable mortality rates from populations of laborers, bishops, and soldiers - often on campaign - are combined in a manner favoring their hypothesis. When these data issues are controlled for, the relationship between mortality

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Albouy (2008): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

Albouy acusa a AJR de confundir y asignar tasas de manera conjeturada:

- Mali: 6 paises, malentendido geográfico
- Obispos en LATAM (16), 19 muertes multiplicados por 4.25?
- Otros (14): ie Hong Kong (tasa incorrecta, similar a argumento Sudán)

> Although this evidence suggests that mortality in Latin America was not much higher than in Europe, AJR scale up all of the bishop rates by 325 percent. AJR's justification for this adjustment is that campaigning French soldiers in Mexico from 1862 to 1863 incurred a mortality rate of 71, 4.25 times the low-temperature bishop rate of 16.7.[5] In defense of this "benchmarking" method, AJR (2001, p. 1383) claim that "alternative methods produce remarkably similar results." However, as I document in my Appendix, using similar assumptions, alternative benchmarking methods produce remarkably dissimilar results. Of the many methods possible, AJR report those that produce relatively high rates.[6]

Albouy (2008): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

- Albouy básicamente hace 2 modificaciones:
- **1. Elimina TODOS los países con tasas "conjeturadas"**
- **2. Añade dummies de campaña y trabajadores,** para capturar sesgo sistemático de la misma forma que Albouy lo hizo anteriormente.

Muestra	Sin controles (β)	Con latitud (β)	Con continentes (β)
Panel A: Original AJR	-0.61 (p=0.001)	-0.52 (p=0.01)	-0.44 (p=0.04)
Panel B: Sin conjeturados	-0.46 (p=0.03)	**-0.31 (p=0.21)**	**-0.18 (p=0.43)**
Panel C: +Dummies fuente	-0.45 (p=0.02)	**-0.39 (p=0.06)**	**-0.37 (p=0.09)**
Panel D: Ambos checks	**-0.28 (p=0.24)**	**-0.06 (p=0.81)**	**+0.03 (p=0.90)**

Resumen de tabla 1 con ayuda de DeepSeek, a modo de facilitar lectura. Y = Expropiacion, X = Log Mortalidad

Albouy (2008): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

- Albouy luego hace los intervalos AR para revisar la estabilidad de los instrumentos luego de hacer sus cambios.

Muestra	Sin controles	Con latitud	Con continentes
Panel A: Original	[0.66, 1.84]	[0.62, 2.90]	[0.49, 10.08]
Panel B: Sin conjeturados	[0.68, 7.48]	**(-∞, -2.17] U [0.74, ∞)**	**(-∞, -0.47] U [0.68, ∞)**
Panel C: +Dummies fuente	**(-∞, -2.24] U [0.70, ∞)**	**(-∞, -0.63] U [0.70, ∞)**	**(-∞, -0.21] U [0.63, ∞)**
Panel D: Ambos checks	**(-∞, -0.24] U [0.68, ∞)**	**(-∞, ∞)**	**(-∞, 0.01] U [0.60, ∞)**

Resumen de tabla 2 con ayuda de DeepSeek, a modo de facilitar lectura.

Albouy (2008): The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data

- Albouy cuestiona la lógica del argumento de AJR respecto a la robustez de resultados eliminando África
- Dentro de África, la relación nunca es significativa. Sin África, sólo quedan 13 países, la mayoría Neo Europas. Sin esas Neo Europas, los resultados no son significativos = efecto viene de comparar extremos.

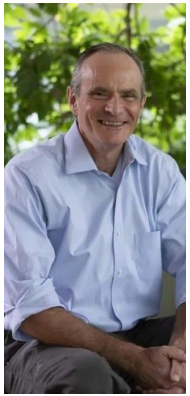
Muestra	Sin África	Solo África	Sin África ni Neo-Europes
Panel A: Original	β = -1.21 (p=0.001)	β = -0.12 (p=0.57)	β = -0.83 (p=0.01)
Panel B: Sin conjeturados	β = -1.00 (p=0.004)	β = -0.03 (p=0.90)	**β = -0.32 (p=0.21)**
Panel C: +Dummies fuente	β = -0.88 (p=0.02)	β = +0.03 (p=1.00)	**β = -0.12 (p=0.71)**

Resumen de tabla 3 con ayuda de DeepSeek, a modo de facilitar lectura.

AJR (2008):

Reply to The Revised (2008) version of David Albuoy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data"

David Albouy is now on the fourth distinct version of his "comments" on Acemoglu, Johnson, and Robinson (2001). Like the previous three efforts, Albouy (2008) is based on a misunderstanding of the underlying data and what appears to be a recoding designed with a particular purpose in mind - to undermine our results. We assess his claims here and find


systematic and meaningful distinction between "campaign" and "barrack" mortality rates, we also show that a minimal correction to Albouy's "campaign dummy" implies that using this variable has no effect on our results.

AJR (2008):

Reply to The Revised (2008) version of David Albuoy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data"

- AJR discuten fuertemente el hecho de que Albouy decida eliminar los datos de LATAM, y apuntan a diversas fuentes que reportan tasas iguales o similares a las usadas.
- **AJR destinan la mayoría del paper a corregir e interpelar la codificación de la dummy de "fuente de información" utilizada por Albouy.**
- Ie: Nueva Zelanda (Curtin dice muchas muertes, Albouy codifica como barracas), Hong Kong (Curtin le llama China Field Force en campaña, Albouy codifica como barracas).

AJR (2008):

Reply to The Revised (2008) version of David Albuoy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data"

- AJR muestran que incluso en el trabajo propio de Albouy, las dummies no eran (razonablemente) significativas.

Modelo	Campaign Dummy		Forced Labor Dummy	
	P-Valor	Sig.	P-Valor	Sig.
(1) No controls	0.117		0.070	*
(2) Latitude	0.123		0.126	
(3) Without neo-Europes	0.306		0.132	
(4) Continent Dummies	0.213		0.119	
(5) Continent Dummies & Latitude	0.229		0.206	
(6) Mean Temp & Min Rain	0.085	*	0.043	**
(7) Percent European in 1975	0.094	*	0.117	
(8) Malaria in 1994	0.116		0.150	

Resumen del Panel A con ayuda de DeepSeek, a modo de facilitar lectura.

AJR (2008):

Reply to The Revised (2008) version of David Albuoy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data"

- Sólo corrigiendo las inconsistencias de NZ y HK, **LogMortality siempre es significativo y las dummies de fuente nunca lo son.**

Table 1: First Stage Estimates, Dependent Variable is Expropriation Risk
Correcting Albouy's Campaign Dummy

	No controls (1)	Latitude (2)	Without neo-Europes (3)	Continent Dummies (4)	Continent Dummies & Latitude (5)	Mean Temp & Min Rain (6)	Percent European 1975 (7)	Malaria in 1994 (8)
Panel B: Correcting campaign dummy								
Log mortality	-0.60	-0.53	-0.39	-0.46	-0.38	-0.27	-0.42	-0.46
	(0.18)	(0.19)	(0.17)	(0.21)	(0.21)	(0.19)	(0.19)	(0.25)

AJR (2008):

Reply to The Revised (2008) version of David Albuoy's “The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data”

- AJR comentan también que el tiempo que Albouy le dedica a recodificar la tasa de Mali es irrelevante (SE de LogMortalidad pasa de 0.19 a 0.24, T pasa de 3.1 a 2.5).
- También discuten el hecho de que Albouy insista con eliminar datos de trabajadores forzados, ya que la variable nunca es significativa y no afecta la significancia de ningún coeficiente relevante.
- Además, muestran que Albouy comete errores garrafales en (no) asignaciones de campaña en 10 observaciones.

País	Período	Evidencia de campaña
Jamaica	1817-36	Rebelión de esclavos (Baptist War, 1831)
Sri Lanka	1817-36	3ª Guerra Kandiana (1817-18)
Malasia/Singapur	1829-38	Guerra de Naning (1831-32)
Senegal	1819-38	Conflictos con los Trarza Moors
Trinidad y Tobago	1817-36	Rebeliones de esclavos (1816, 1823)
Sudáfrica	1818-36	Guerras Xhosa (5ª y 6ª)
EE.UU.	1829-38	Guerras Indias (Seminole, Black Hawk, Creek)

AJR (2008):

Reply to The Revised (2008) version of David Albuoy's "The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data"

The new version continues to make the same incorrect, and frankly quite insulting, accusations of the previous versions such as "six assignments are based upon AJR's misunderstanding of former names of countries in Africa." We understand very well the historical geography of Africa, and we suspect that we understand it much better than Albouy does.

On page 3 he states again "when more than one rate is available, they take the earliest rate". As we have explained in every response over the past 4 years this is not what we did. We took the first peacetime rate if it was possible to discern this. But Albouy continues to repeat what is not true. We really don't understand what the issue is here. Albouy also continues to argue as if it were significant.

Hither Thou Shalt Come, But No Further

2012

Albouy (2012): The Colonial Origins of Comparative Development: An Empirical Investigation: Comment

The American Economic Review

depend on them. First, out of 64 countries in the sample, only 28 countries have mortality rates that originate from within their own borders. The other 36 countries in the sample are assigned rates based on conjectures the authors make as to which countries have similar disease environments. These assignments are generally unfounded and potentially contradictory. Six assignments are based on an

mortality from disease. This causes problems as AJR uses rates campaigns more often in countries with greater expropriation risk and lower GDP, artificially favoring the article's hypothesis. In a few countries, the data include the peak mortality

Albouy (2012): The Colonial Origins of Comparative Development: An Empirical Investigation: Comment

- Albouy parte por criticar duramente la asignación de Mali y países vecinos. AJR asignan 3 tasas del oeste de Mali a Angola y Uganda, que no son colindantes con Mali.

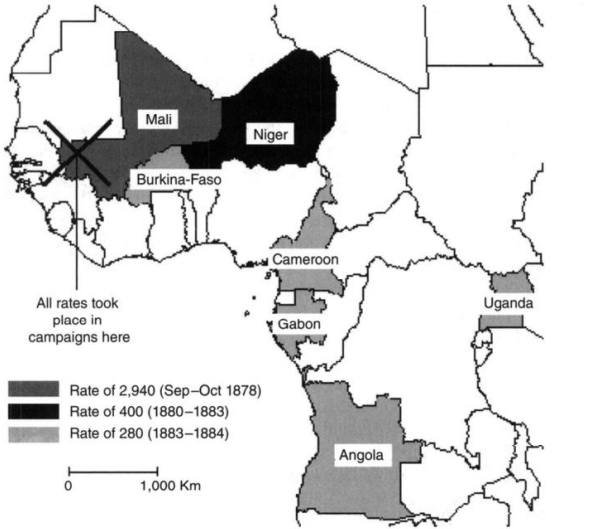


FIGURE 1. ASSIGNMENT OF MORTALITY RATES FROM MALI

Albouy (2012): The Colonial Origins of Comparative Development: An Empirical Investigation: Comment

- Albouy argumenta que las tasas de campaña y trabajadores se usan en países con mayor mortalidad, **pero también en países con peores instituciones y peor PIB**.
- Esto sería lo que estaría causando el sesgo sistemático.

Variable	Campaign indicator	Laborer indicator
Log mortality	1.51 (0.30)	1.68 (0.27)
Expropriation risk	-1.40 (0.43)	-2.36 (0.74)
Log GDP	-1.04 (0.28)	-1.96 (0.33)

Resumen de la tabla 1 con ayuda de DeepSeek, a modo de facilitar lectura.

Albouy (2012): The Colonial Origins of Comparative Development: An Empirical Investigation: Comment

- Albouy reitera que AJR hacen conjeturas para 36 de los países.
- Si se retiran a los países conjeturados, y se incluye la dummy de fuente, la primera etapa pierde significancia. Incluso usando los datos de AJR (*removing conjectured rates, adding campaign and laborer indicators, new data from AJR (2005) and revising with new data)* la primera fase no es significativa.

Muestra	Sin controles (β)	Con latitud (β)	Con continentes (β)
Panel A: Original AJR	-0.61 (p=0.001)	-0.52 (p=0.01)	-0.44 (p=0.04)
Panel B: Sin conjeturados	-0.59 (p=0.01)	**-0.42 (p=0.07)**	**-0.31 (p=0.13)**
Panel C: +Dummies fuente	-0.45 (p=0.02)	**-0.39 (p=0.06)**	**-0.37 (p=0.09)**
Panel D: Ambos checks	**-0.35 (p=0.12)**	**-0.21 (p=0.42)**	**-0.25 (p=0.28)**
Panel E: +Datos AJR (2005)	**-0.41 (p=0.05)**	**-0.30 (p=0.17)**	**-0.31 (p=0.16)**

Resumen de la tabla 2 con ayuda de DeepSeek, a modo de facilitar lectura. Y = expropiation risk, X = LogMortality

Albouy (2012): The Colonial Origins of Comparative Development: An Empirical Investigation: Comment

- Si se aplican ambos checks, los intervalos de AR nuevamente son inestables.

Muestra	Sin controles	Con latitud	Con continentes
Panel A: Original	[0.66, 1.83]	[0.64, 2.39]	[0.50, 9.02]
Panel B: Sin conjeturados	[0.58, 2.01]	**(-∞, -7.92] U [0.38, ∞)**	**(-∞, -2.25] U [0.37, ∞)**
Panel C: +Dummies fuente	[0.62, 5.07]	**(-∞, -17.6] U [0.60, ∞)**	**(-∞, -3.28] U [0.45, ∞)**
Panel D: Ambos checks	**(-∞, -1.82] U [0.36, ∞)**	**(-∞, ∞)**	**(-∞, ∞)**
Panel E: +Datos AJR	**(-∞, -2.86] U [0.41, ∞)**	**(-∞, ∞)**	**(-∞, -0.24] U [0.14, ∞)**

Resumen de la tabla 3 con ayuda de DeepSeek, a modo de facilitar lectura.

Albouy (2012):

The Colonial Origins of Comparative Development: An Empirical Investigation: Comment

- Albouy argumenta que los datos de mortalidad más elevados son de campaña o trabajadores. Las tasas conjeturadas (en blanco) refuerzan el patrón (?)

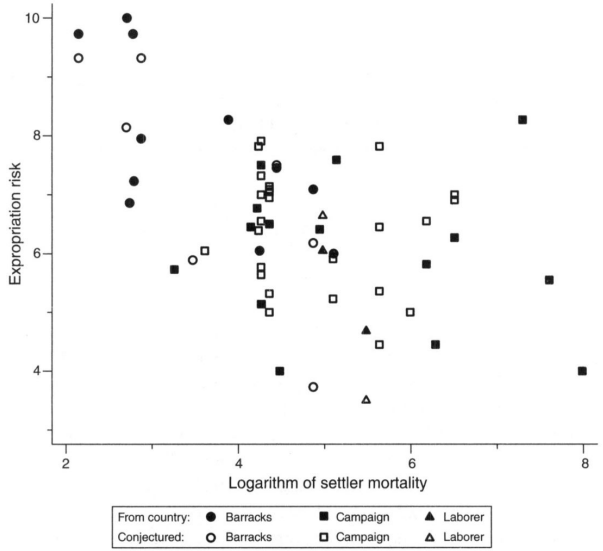


FIGURE 2A. EXPROPRIATION RISK AND SETTLER MORTALITY ACCORDING TO MORTALITY RATE CHARACTERISTICS

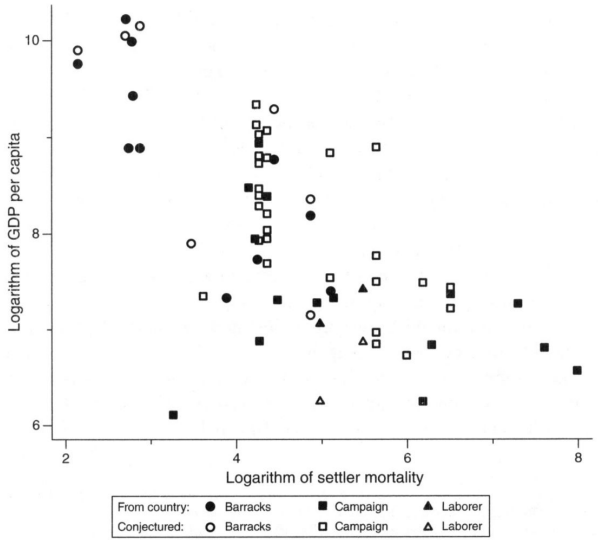


FIGURE 2B. INCOME PER CAPITA AND SETTLER MORTALITY ACCORDING TO MORTALITY RATE CHARACTERISTICS

Albouy (2012):

The Colonial Origins of Comparative Development: An Empirical Investigation: Comment

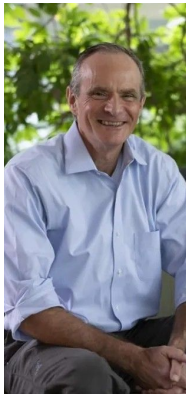
Given the paucity of instrumental variables in the cross-country growth literature, it is regrettable that the AJR mortality series suffers from severe measurement problems. While broad regions like West Africa and the Caribbean were clearly unhealthy for Europeans, the mortality differences in the series between neighboring countries are largely unreliable. Much of the variation in the mortality data is due

Given the limited data sources currently available, it seems unlikely that a convincing set of settler mortality rates can be constructed. As such, cross-country growth regressions cannot disentangle the effect of settler mortality from that of

AJR (2012):

Hither Thou Shalt Come, But No Further: Reply to "The Colonial Origins of Comparative Development: An Empirical Investigation: Comment"

their colonial empires. David Albouy argues that this relationship is not robust. Specifically, he wants to drop all data from Latin America and much of the data from Africa, making up almost 60% of our sample. This is unwarranted - there is a great deal of specific information


on the mortality of Europeans in those places during the colonial period. He also includes a "campaign" dummy that is coded inconsistently and seriously at odds with the historical record; even modest corrections undermine his claims. We also show that limiting the effect of outliers significantly strengthens our results, making them robust to even more extreme versions of Albouy's critiques.

AJR (2012):

Hither Thou Shalt Come, But No Further: Reply to “The Colonial Origins of Comparative Development: An Empirical Investigation: Comment”

- Albouy elimina 36 países. De esos, 16 son de LATAM (datos de obispos y no claramente identificados), y el resto son de fuentes dudosas.
- AJR presentan 7 series de datos alternativos para LATAM. Utilizando esto y capping, los resultados del paper original se fortalecen. Los P valores son casi cercanos a 0, y los intervalos AR se estrechan.

Serie	Descripción	Resultado con capping
(1) Original AJR	Benchmarking con México	Fuerte
(2) Original + cap 250	-	**Más fuerte**
(3) Benchmarking con Caribe	Usando Jamaica como base	Similar a original
(4) Caribe + cap 250	-	**Más fuerte**
(5) Naval Stations, Método 1	Tasas navales convertidas	Robusta
(6) Naval Stations + cap 250	-	**Más fuerte**
(7) Naval Stations, Método 2	Con datos de seguros de vida	Robusta
(8) Naval Stations 2 + cap 250	-	**Más fuerte**

Resumen de la tabla 1A y 1B con ayuda de DeepSeek, a modo de facilitar lectura.

AJR (2012): Hither Thou Shalt Come, But No Further: Reply to "The Colonial Origins of Comparative Development: An Empirical Investigation: Comment"

- AJR indican también que la serie preferida de Albouy depende mucho de Gambia, y de la codificación que le hace (outlier extremo de mortalidad, y puntaje de instituciones sospechosamente alto considerando dos golpes militares).
- Sin Gambia y ocupando capping, el instrumento es robusto (F y AR estable)

Muestra	β (sin controles)	AR CI cluster
Col 1: Muestra Albouy (28 países)	-0.59	[0.60, 1.82]
Col 2: Sin Gambia (27 países)	**-0.74**	**[0.55, 1.02]**
Col 3: Cap 250	**-0.95**	**[0.59, 1.35]**
Col 4: Sin Gambia + cap 250	**-1.06**	**[0.56, 1.07]**
Col 5: Sin África Occidental/Central	-0.66	[0.62, 1.62]
Col 6: + cap 250	-1.02	[0.57, 1.12]

Resumen de la tabla 2A y 2B con ayuda de DeepSeek, a modo de facilitar lectura.

AJR (2012): Hither Thou Shalt Come, But No Further: Reply to "The Colonial Origins of Comparative Development: An Empirical Investigation: Comment"

- AJR nuevamente indican que Albouy ignora información contextual respecto a HK y NZ y las clasifica incorrectamente como barracas. Si se corrige este error, las variables dummy de fuente dejan de ser significativas.

Muestra	β (sin controles)	AR CI cluster	Dummies significativas?
Col 1: Albouy original	-0.45	[0.62, 5.07]	**NO** (p > 0.15)
Col 2: + cap 250	**-0.77**	**[0.60, 1.19]**	NO
Col 3: Corrección mínima (NZ + HK)	**-0.52**	**[0.60, 1.85]**	NO
Col 4: Corrección mínima + cap 250	**-0.84**	**[0.63, 1.29]**	NO
Col 5: Corrección extendida (10 países)	**-0.60**	**[0.69, 1.50]**	NO
Col 6: Extendida + cap 250	**-0.91**	**[0.64, 1.31]**	NO
Col 7: Muestra Albouy 28	-0.35	(-∞, ∞)	-
Col 8: Muestra 27 + cap 250 + corrección	**-0.96**	**[0.58, 2.40]**	**SÍ robusto**

Resumen de la tabla 3A y 3B con ayuda de DeepSeek, a modo de facilitar lectura.

AJR (2012): Hither Thou Shalt Come, But No Further: Reply to "The Colonial Origins of Comparative Development: An Empirical Investigation: Comment"

- Albouy intenta eliminar muchas observaciones por falta de fuentes.
- AJR dedican secciones enteras a documentar que hay abundante información sobre mortalidad en los países que Albouy quiere eliminar.

País	Fuente adicional
Australia	Tulloch (1847): tasa independiente de 14
Singapur	Statistical Society of London (1841)
Guyana	Tulloch (1838a), literatura de seguros
Rep. Dominicana/Haití	Institute of Actuaries (1851-52)
Bahamas	Tulloch (1838b), Meikle (1876)
Hong Kong	Army Medical Department (1862), Tulloch (1847)
Pakistán	Institute of Actuaries (1851-52)

Resumen de sección 3.3 Does Discarding Data Make Sense? Remaining Countries con ayuda de DeepSeek, a modo de facilitar lectura.

AJR (2012):

Hither Thou Shalt Come, But No Further: Reply to "The Colonial Origins of Comparative Development: An Empirical Investigation: Comment"

In addition, Albouy claims that we mistakenly thought countries such as Gabon and Cameroon border Mali. But we never made any such statement. In Appendix B of AJR (2000), we wrote "Angola, Cameroon, Rwanda, and Uganda receive the [mortality] estimate from French Soudan..." The French Soudan was, during the colonial period, a large area that included Mali but also other parts of West Africa, much of central Africa, and some of eastern Africa well down into what is now the Congo.[53] We were quite explicit on this usage of the

In any case, all of this discussion is completely inconsequential. Once again as shown in detail in AJR (2005) - and as ignored by Albouy in his Comment - the modification to these rates and changing the rate for Mali in general makes no difference to the results, and we refer to reader to AJR (2005) for details.

AJR (2012):

Hither Thou Shalt Come, But No Further: Reply to "The Colonial Origins of Comparative Development: An Empirical Investigation: Comment"

The AJR (2001) results on the relationship between potential settler mortality and institutions are highly robust to a range of checks and variations. Firstly, limiting the effect of high mortality outliers has no impact on the main results in AJR (2001). Capping mortality rates at 250 (or 150 or 280 or 350) per 1000 per annum not only leaves our results unchanged but by reducing the effect of outliers, it increases their robustness. In fact, this procedure to limit

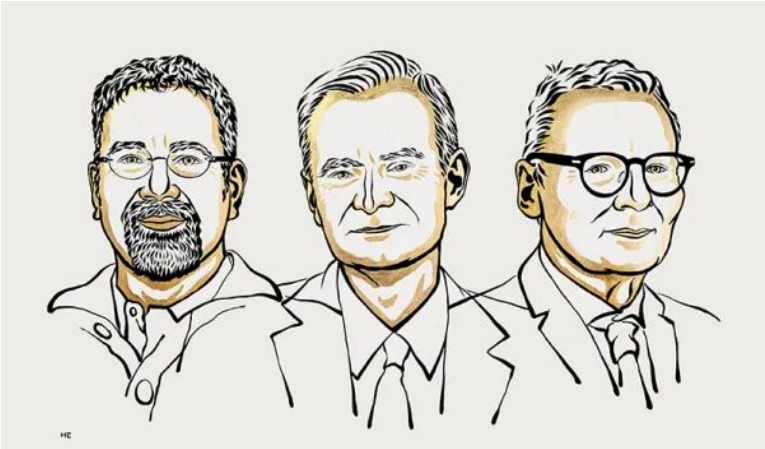
Secondly, Albouy's critiques are simply unfounded. His arguments that there is no reliable information on settler mortality for much of the world are at odds with the historical record.

Albouy's other concerns about Mali are minor, are based on a misreading of our work - as clearly explained in AJR (2005) - and in any case have no meaningful effect on our results.

Por qué hablar de esto?

Y todo esto para...?

- Resultados reproducibles es algo fundamental para la Economía.
- Tener discusiones abiertas sobre ello fortalece a la disciplina completa
- **Ni siquiera los Nobel están a salvo!**
- Es importante tener buenos checks de robustez de resultados…
- … y hay que tener ojo con usar info histórica.



Fin

Por fin!