Replication by Kareena Satia
Paper: The Colonial Origins of Comparative Development: An Empirical Investigation
Author(s): Daron Acemoglu, Simon Johnson, James A. Robinson
Source: The American Economic Review, Vol. 91, No. 5 (Dec., 2001), pp. 1369-1401
Published by: American Economic Association
URL: http://www.jstor.org/stable/2677930

TABLE 1—DESCRIPTIVE STATISTICS

•	Whole world	Base sample	By quartiles of mortality (1)	(2)	(3)	(4)
Log GDP per capita (PPP) in 1995	8.303	8.062	8.888	8.408	7.778	7.199
	(1.105)	(1.043)	(1.290)	(0.639)	(0.802)	(0.626)
Log output per worker in 1988 (with level of United States normalized to 1)	-1.731	-1.934	-1.025	-1.463	-2.195	-3.026
	(1.084)	(0.981)	(0.861)	(0.422)	(0.801)	(0.477)
Average protection against expropriation risk, 1985-1995	7.066	6.516	7.904	6.468	5.973	5.891
	(1.804)	(1.469)	(1.548)	(0.954)	(1.320)	(1.296)
Constraint on executive in 1990	3.636	3.967	5.333	5.118	3.313	2.267
	(2.340)	(2.262)	(2.103)	(1.799)	(2.182)	(1.580)
Constraint on executive in 1900	1.857	2.250	3.667	3.278	1.125	1
	(1.823)	(2.112)	(2.995)	(2.109)	(0.500)	(0)
Constraint on executive in first year of independence	3.591	3.400	5.167	2.444	3.125	3.429
	(2.415)	(2.395)	(2.758)	(1.917)	(2.277)	(2.138)
Democracy in 1900	1.149	1.644	3.917	2.765	0.188	0
	(2.577)	(3.004)	(4.582)	(2.905)	(0.403)	(0)
European settlements in 1900	30.47	16.18	31.73	25.56	8.171	0.533
	(42.39)	(25.53)	(43.92)	(17.98)	(11.80)	(2.066)
Log European settler mortality	4.596	4.657	3.009	4.283	4.919	6.347
	(1.303)	(1.258)	(0.593)	(0.0500)	(0.401)	(0.754)
Number of observations	163	64	14	18	17	15

TABLE 2—OLS REGRESSIONS

	Whole world (1)	Base sample (2)	Whole world (3)	Base sample (4)	Whole world (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 1998	
Average protection against expropriation risk, 1985-1995	0.53	0.52	0.46	0.47	0.39	0.40	0.45	0.46
	(0.03)	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.03)	(0.05)
Latitude			0.87	1.58	0.33	0.88		
			(0.50)	(0.65)	(0.44)	(0.61)		
Asia dummy					-0.15	-0.58		
					(0.18)	(0.30)		
Africa dummy					-0.92	-0.88		
					(0.15)	(0.16)		
”Other” continent dummy					0.30	0.11		
					(0.17)	(0.22)		
R^2	0.61	0.54	0.62	0.57	0.72	0.71	0.55	0.49
Number of observations	111	64	111	64	111	64	108	61

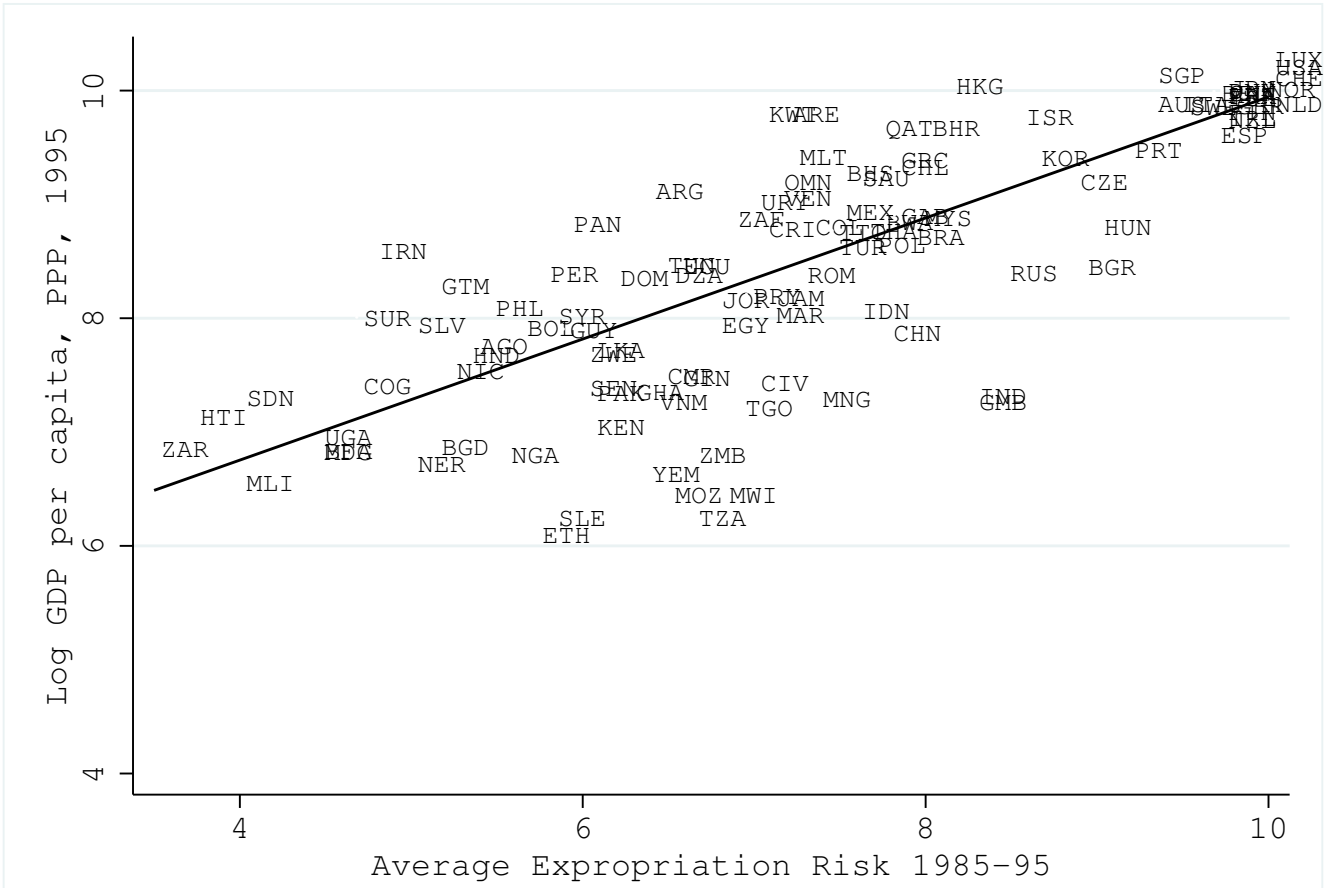

FIGURE 2. OLS RELATIONSHIP BETWEEN EXPROPRIATION RISK AND INCOME

TABLE 3—DETERMINANTS OF INSTITUTIONS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A	Dependent Variable Is Average Protection Against Expropriation Risk in 1985-1995									
Constraint on executive in 1900	0.32	0.26								
	(0.08)	(0.09)								
Democracy in 1900			0.24	0.21						
			(0.06)	(0.07)						
Constraint on executive in first year of independence					0.25	0.22				
					(0.08)	(0.08)				
European settlements in 1900							3.18	3.00		
							(0.61)	(0.78)		
Log European settler mortality									-0.61	-0.51
									(0.13)	(0.14)
Latitude		2.18		1.55		2.72		0.58		2.00
		(1.42)		(1.47)		(1.43)		(1.51)		(1.34)
R^2	0.2	0.23	0.24	0.25	0.19	0.24	0.3	0.3	0.27	0.3
Number of observations	63	63	62	62	63	63	66	66	64	64
Panel B	Dependent Variable is Constraint on Executive in 1900				Dependent Variable Is Democracy in 1900				Dependent Variable Is European Settlements in 1900	
European settlements in 1900	5.49	5.39			8.57	8.06				
	(0.73)	(0.93)			(0.93)	(1.19)				
Log European settler mortality			-0.82	-0.65			-1.22	-0.88	-0.11	-0.07
			(0.17)	(0.18)			(0.24)	(0.25)	(0.02)	(0.02)
Latitude		0.33		3.63		1.61		7.57		0.87
		(1.81)		(1.72)		(2.32)		(2.42)		(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

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	0.94	1.00	1.28	1.21	0.58	0.58	0.98	1.11	0.98
expropriation risk 1985-1995	(0.15)	(0.22)	(0.35)	(0.35)	(0.10)	(0.11)	(0.29)	(0.44)	(0.17)
Latitude		-0.65		0.94		0.04		-1.18	
		(1.30)		(1.43)		(0.80)		(1.67)	
Asia dummy							-0.92	-1.05	
							(0.38)	(0.50)	
Africa dummy							-0.46	-0.44	
							(0.34)	(0.40)	
”Other” continent dummy							-0.94	-0.99	
							(0.81)	(0.95)	
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	-1.21	-1.14	-0.43	-0.34	-0.61
	(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		2.01	
		(1.34)		(1.49)		(1.43)		(1.39)	
Asia dummy							0.33	0.47	
							(0.50)	(0.50)	
Africa dummy							-0.27	-0.26	
							(0.41)	(0.41)	
”Other” continent dummy							1.24	1.06	
							(0.84)	(0.84)	
R^2	0.27	0.30	0.13	0.13	0.47	0.47	0.30	0.33	0.27
Panel C: Ordinary Least Squares									
Average protection against	0.52	0.47	0.49	0.47	0.48	0.47	0.42	0.40	0.46
expropriation risk 1985-1995	(0.06)	(0.06)	(0.08)	(0.07)	(0.07)	(0.07)	(0.06)	(0.06)	(0.06)
Number of observations	64	64	60	60	37	37	64	64	61

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*Name: Kareena Satia

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*The following codes attempt to replicate some of the important results from the paper.

**********TABLE 1 - DESCRIPTIVE STATISTICS**************

clear
use "C:\Users\18575\Downloads\Programming\Replication\table1.dta"

label var euro1900 "European settlements in 1900"
label var avexpr "Average protection against expropriation risk, 1985-1995"
label var logpgp95 "Log GDP per capita (PPP) in 1995"
label var cons1 "Constraint on executive in first year of independence"
label var cons90 "Constraint on executive in 1990"
label var democ00a "Democracy in 1900"
label var cons00a "Constraint on executive in 1900"
label var logem4 "Log European settler mortality"
label var loghjypl "Log output per worker in 1988 (with level of United States normalized to 1)"

*Column 1 - Whole world*
estpost sum logpgp95 loghjypl avexpr cons90 cons00a cons1 democ00a euro1900 logem4
eststo m1


keep if baseco==1

*Column 2 - Base sample*
estpost sum logpgp95 loghjypl avexpr cons90 cons00a cons1 democ00a euro1900 logem4
eststo m2
drop if extmort4== .
drop if logpgp95 == .
drop if avexpr == .
drop if excolony == 0

*Columns 3 - 6 (quartiles of mortality)
estpost sum euro1900 avexpr logpgp95 cons1 cons90 democ00a cons00a logem4 loghjypl if extmort4 < 65.4
eststo q1
estpost sum euro1900 avexpr logpgp95 cons1 cons90 democ00a cons00a logem4 loghjypl if extmort4 >=
65.4 & extmort4 < 78.1
eststo q2
estpost sum euro1900 avexpr logpgp95 cons1 cons90 democ00a cons00a logem4 loghjypl if extmort4 >=
78.1 & extmort4 < 280
eststo q3
estpost sum euro1900 avexpr logpgp95 cons1 cons90 democ00a cons00a logem4 loghjypl if extmort4 >= 280
eststo q4

*Latex export*
esttab m1 m2 q1 q2 q3 q4 using desc1, booktabs style(tex) label nostar main(mean) aux(sd) nonumbers
replace

*******FIGURE 2 - OLS GRAPH********************

clear
use "C:\Users\18575\Downloads\Programming\Replication\table2.dta"

graph set window fontface "Times New Roman"

```

```
*OLS graph
graph twoway scatter logpgp95 avexpr if !missing(logpgp95, avexpr), mlabel(shortnam) mcolor(white) msize(0) mlabcolor(black) || lfit logpgp95 avexpr, ylabel(4(2)10) ytitle("Log GDP per capita, PPP, 1995") xtitle("Average Expropriation Risk 1985-95") lcolor(black) legend(off) b1title("FIGURE 2. OLS RELATIONSHIP BETWEEN EXPROPRIATION RISK AND INCOME", size(small)) plotregion(fcolor(white)) graphregion(fcolor(white))

*Latex export graph
graph export filename, as(eps) preview(off) replace
!epstopdf filename


******TABLE 2 - OLS REGRESSION*******

clear
use "C:\Users\18575\Downloads\Programming\Replication\table2.dta"

*Label variables*
label var avexpr "Average protection against expropriation risk, 1985-1995"
label var lat_abst "Latitude"
label var asia "Asia dummy"
label var africa "Africa dummty"
label var other "Other continent dummy"

*Column 1 - Whole world
reg logpgp95 avexpr, robust
outreg2 using myfile, replace bdec(2) sdec(2) rdec(2) noaster

*Column 2- Base sample
reg logpgp95 avexpr if baseco == 1, robust
outreg2 using myfile, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 3 - Whole world
reg logpgp95 avexpr lat_abst, robust
outreg2 using myfile, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 4 - Base sample
reg logpgp95 avexpr lat_abst if baseco == 1, robust
outreg2 using myfile, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 5 - Whole world
reg logpgp95 avexpr lat_abst asia africa other, robust
outreg2 using myfile, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 6 - Base sample
reg logpgp95 avexpr lat_abst asia africa other if baseco == 1, robust
outreg2 using myfile, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 7 - Whole world
reg loghjypl avexpr, robust
outreg2 using myfile, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 8 - Base sample
reg loghjypl avexpr if baseco == 1, robust
outreg2 using myfile, append tex bdec(2) sdec(2) rdec(2) noaster

****TABLE 3 - DETERMINANTS OF INSTITUTIONS*****

clear
use "C:\Users\18575\Downloads\Programming\Replication\table3.dta"

keep if excolony==1
keep if extmort4!=.
```

```
gen euro19 = euro1900/100

*Panel A*

*Column 1
reg  avexpr cons00a
outreg2 using table3, replace bdec(2) sdec(2) noaster

*Column 2
reg  avexpr lat_abst cons00a
outreg2 using table3, append tex bdec(2) sdec(2) noaster

*Column 3
reg  avexpr democ00a
outreg2 using table3, append tex bdec(2) sdec(2) noaster

*Column 4
reg  avexpr democ00a lat_abst
outreg2 using table3, append tex bdec(2) sdec(2) noaster

*Column 5
reg  avexpr indtime cons1
outreg2 using table3, append tex bdec(2) sdec(2) noaster

*Column 6
reg  avexpr indtime cons1 lat_abst
outreg2 using table3, append tex bdec(2) sdec(2) noaster

*Column 7
reg  avexpr euro19
outreg2 using table3, append tex bdec(2) sdec(2) noaster

*Column 8
reg  avexpr euro19 lat_abst
outreg2 using table3, append tex bdec(2) sdec(2) noaster

*Column 9
reg  avexpr logem4 if logpgp95!=.
outreg2 using table3, append tex bdec(2) sdec(2) noaster

*Column 10
reg  avexpr logem4 lat_abst if logpgp95!=.
outreg2 using table3, append tex bdec(2) sdec(2) noaster


*****Panel B******

*Column 1
reg cons00a euro19 if logpgp95~=.
outreg2 using panelb, replace bdec(2) sdec(2) noaster

*Column 2
reg cons00a euro19 lat_abst if logpgp95!=.
outreg2 using panelb, append tex bdec(2) sdec(2) noaster

*Column 3
reg  cons00a logem4
outreg2 using panelb, append tex bdec(2) sdec(2) noaster

*Column 4
reg  cons00a lat_abst logem4
outreg2 using panelb, append tex bdec(2) sdec(2) noaster

```

```
*Column 5
reg democ00a euro19 if logpgp95!=.
outreg2 using panelb, append tex bdec(2) sdec(2) noaster

*Column 6
reg democ00a lat_abst euro19 if logpgp95!=.
outreg2 using panelb, append tex bdec(2) sdec(2) noaster

*Column 7
reg democ00a logem4 if logpgp95!=.
outreg2 using panelb, append tex bdec(2) sdec(2) noaster

*Column 8
reg democ00a lat_abst logem4 if logpgp95!=.
outreg2 using panelb, append tex bdec(2) sdec(2) noaster

*Column 9
reg euro19 logem4 if logpgp95!=.
outreg2 using panelb, append tex bdec(2) sdec(2) noaster

*Column 10
reg euro19 lat_abst logem4 if logpgp95!=.
outreg2 using panelb, append tex bdec(2) sdec(2) noaster


*****TABLE 4 - IV REGRESSION*******

clear
use "C:\Users\18575\Downloads\Programming\Replication\table4.dta"

*Label Variables*

label var avexpr "Average protection against expropriation risk, 1985-1995"
label var lat_abst "Latitude"
label var asia "Asia dummy"
label var africa "Africa dummy"

keep if baseco == 1

*PANEL A - 2SLS*

*Column 1
ivregress 2sls logpgp95 (avexpr=logem4)
outreg2 using IV, replace bdec(2) sdec(2) rdec(2) noaster

*Column 2
ivregress 2sls logpgp95 (avexpr=logem4) lat_abst
outreg2 using IV, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 3
ivregress 2sls logpgp95 (avexpr=logem4) if rich4!=1
outreg2 using IV, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 4
ivregress 2sls logpgp95 (avexpr=logem4) lat_abst if rich4!=1
outreg2 using IV, append tex bdec(2) sdec(2) rdec(2) noaster

*Columns 5
ivregress 2sls logpgp95 (avexpr=logem4) if africa!=1
outreg2 using IV, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 6
ivregress 2sls logpgp95 (avexpr=logem4) lat_abst if africa!=1
```

```
outreg2 using IV, append tex bdec(2) sdec(2) rdec(2) noaster

gen othercontdum=0
replace othercontdum=1 if (shortnam=="AUS" | shortnam=="MLT" | shortnam=="NZL")
label var othercontdum "Other continent dummy"

*Column 7
ivregress 2sls logpgp95 (avexpr=logem4) africa asia othercontdum
outreg2 using IV, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 8*
ivregress 2sls logpgp95 lat_abst (avexpr=logem4) africa asia othercontdum
outreg2 using IV, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 9
ivregress 2sls loghjypl (avexpr=logem4)
outreg2 using IV, append tex bdec(2) sdec(2) rdec(2) noaster

*PANEL B - FIRST STAGE*

*Column 1*
reg avexpr logem4
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 2*
reg avexpr logem4 lat_abst
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 3*
reg avexpr logem4 if rich4!=1
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 4*
reg avexpr logem4 lat_abst if rich4!=1
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Columns 5
reg avexpr logem4 if africa!=1
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 6
reg avexpr logem4 lat_abst if africa!=1
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Columns 7
reg avexpr logem4 africa asia othercontdum
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 8*
reg avexpr logem4 lat_abst africa asia othercontdum
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 9
reg avexpr logem4
outreg2 using panelb1, append tex bdec(2) sdec(2) rdec(2) noaster

*Panel C - OLS*

*Column 1
reg logpgp95 avexpr
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster

*Columm 2
```

```
reg logpgp95 lat_abst avexpr
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 3
reg logpgp95 avexpr if rich4!=1
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster

*Columm 4
reg logpgp95 lat_abst avexpr if rich4!=1
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 5
reg logpgp95 avexpr if africa!=1
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster

*Columm 6
reg logpgp95 lat_abst avexpr if africa!=1
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 7
reg logpgp95 avexpr africa asia othercontdum
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster

*Columm 8
reg logpgp95 lat_abst avexpr africa asia othercontdum
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster

*Column 9
reg loghjypl avexpr
outreg2 using OLS, append tex bdec(2) sdec(2) rdec(2) noaster
```