Online Appendix Material

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The following pages contain two separate appendices. Appendix A contains detailed information on our empirical models, including the variables, samples, and differences between our results and Acemoglu, Johnson, and Robinson's (AJR hereafter) results[1]. Appendix B contains two tables of supplementary analyses.

Appendix A: Variables, Sample, and Replication

This appendix is divided into three parts. In Section 1 we describe the sources for all variables used in the empirical analyses. Section 2 lists all countries employed in our empirical analyses. Section 3 discusses the specific differences between our results and AJR's original analyses.

1) Variables

Variables Coded Directly from AJR:

Wherever possible, we have used AJR's published data appendices to construct the dataset employed in our empirical analysis.

The following variables are coded directly from AJR's (2001) data appendix:

Expropriation Risk
Log European Settler Mortality
Log GDP per capita in 1995

[1] Daron Acemoglu, Simon Johnson, and James A. Robinson, 'The Colonial Origins of Comparative Development: An Empirical Investigation', *American Economic Review*, 91 (2001), 1369-1401; Daron Acemoglu, Simon Johnson, and James A. Robinson, 'Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution', *Quarterly Journal of Economics*, 117 (2002), 1231-1294.

We use AJR's (2002) data appendix to code the following:

Population Density in 1500
Urbanization in 1500

Finally, we use AJR's working paper data appendix[2] in their working paper to code the following:

Settlers as a % of Total Population

As we describe in Section Two below, AJR's 2002 sample consists of 63 countries from the 2001 sample plus eight additional countries. Because AJR (2002) do not re-publish values of *Expropriation Risk*, we use our own copies of their cited source to fill in values of this variable for the additional observations. This source is the International Country Risk Guide published by Political Risk Services[3] and originally described by Knack and Keefer.[4]

Other Variables:
Our empirical models in the manuscript and in Appendix B (below) also have additional variables whose raw values are not published by AJR.

For models including the variable *Latitude*, we follow AJR and use La Porta et al.'s data.[5]

AJR use as control variables 'the identity of the colonial power' as well as the colonial origin of legal traditions.[6] For both variables they cite La Porta et al.[7] as a source, but these authors only provide legal origins and not colonial identity per se. For this reason we create our own *British* and *French colony* dummy variables, relying on Mitchell.[8]

[2] Daron Acemogly, Simon Johnson, and James A. Robinson, 'The Colonial Origins of Comparative Development: An Empirical Investigation', *NBER Working Paper* No. 7771, (2000).
[3] These data are available from http://prsgroup.com/ICRG.aspx.
[4] Stephen Knack and Philip Keefer, 'Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures', *Economics and Politics*, 7 (1995), 207-227.
[5] Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 'The Quality of Government', *Journal of Law, Economics, and Organization*, 15 (1999), 222-282.
[6] Acemoglu, Johnson, and Robinson, 'Colonial Origins', p. 1388-9.
[7] La Porta et al., 'Quality of Governance'.
[8] Brian R. Mitchell, *International Historical Statistics: Africa, Asia, and Oceania 1750-1993 (3 Vol. set)* (New York: Palgrave Macmillan, 1998).

2) Sample Composition

In this section, we list the countries comprising the samples for our empirical analysis. The samples differ between AJR (2001) and AJR (2002), so we discuss each separately.

AJR (2001) Replication:
Panel C in Figure 1 and Figure 2, along with the 2SLS regression results reported in Table 4, use AJR's (2001) base sample of 64 countries. They are listed below.

1. Algeria
2. Angola
3. Argentina
4. Australia
5. Bahamas
6. Bangladesh
7. Bolivia
8. Brazil
9. Burkina Faso
10. Cameroon
11. Canada
12. Chile
13. Colombia
14. Congo
15. Costa Rica
16. Cote d'Ivoire
17. Dominican Republic
18. Ecuador
19. Egypt
20. El Salvador
21. Ethiopia
22. Gabon
23. Gambia
24. Ghana
25. Guatemala
26. Guinea
27. Guyana
28. Haiti
29. Honduras
30. Hong Kong
31. India
32. Indonesia
33. Jamaica
34. Kenya
35. Madagascar
36. Malaysia
37. Mali
38. Malta
39. Mexico
40. Morocco
41. New Zealand
42. Nicaragua
43. Niger
44. Nigeria
45. Pakistan
46. Panama
47. Paraguay
48. Peru
49. Senegal
50. Sierra Leone
51. Singapore
52. South Africa
53. Sri Lanka
54. Sudan
55. Tanzania
56. Togo
57. Trinidad and Tobago
58. Tunisia
59. Uganda
60. United States
61. Uruguay
62. Venezuela
63. Vietnam
64. Zaire

AJR (2002) Replication:

In this paper, AJR use two different instrumental variables, *Population Density in 1500* and *Urbanization in 1500*. The samples differ across usage of each instrument.

Models using *Population Density in 1500* as instrument:

AJR's first instrument for property rights institutions in *Population Density in 1500*. The authors report raw values of this instrument for the following 91 countries.

1. Algeria
2. Angola
3. Argentina
4. Australia
5. Bahamas, The
6. Bangladesh
7. Barbados
8. Belize
9. Benin
10. Bolivia
11. Botswana
12. Brazil
13. Burkina Faso
14. Burundi
15. Cameroon
16. Canada
17. Cape Verde
18. Central African Republic
19. Chad
20. Chile
21. Colombia
22. Comoros
23. Congo, Dem. Rep.
24. Congo, Rep.
25. Costa Rica
26. Cote d'Ivoire
27. Dominica
28. Dominican Republic
29. Ecuador
30. Egypt, Arab Rep.
31. El Salvador
32. Eritrea
33. Ethiopia
34. Gabon
35. Gambia, The
36. Ghana
37. Grenada
38. Guatemala
39. Guinea
40. Guyana
41. Haiti
42. Honduras
43. Hong Kong, China
44. India
45. Indonesia
46. Jamaica
47. Kenya
48. Lao PDR
49. Lesotho
50. Madagascar
51. Malawi
52. Malaysia
53. Mali
54. Mauritania
55. Mexico
56. Morocco
57. Mozambique
58. Namibia
59. Nepal
60. New Zealand
61. Nicaragua
62. Niger
63. Nigeria
64. Pakistan
65. Panama
66. Paraguay
67. Peru
68. Philippines
69. Rwanda
70. Senegal
71. Sierra Leone
72. Singapore
73. South Africa
74. Sri Lanka
75. St. Kitts and Nevis
76. St. Lucia
77. St. Vincent and the Grenadines
78. Sudan
79. Suriname
80. Swaziland
81. Tanzania
82. Togo
83. Trinidad and Tobago
84. Tunisia
85. Uganda
86. United States
87. Uruguay
88. Venezuela
89. Vietnam
90. Zambia
91. Zimbabwe

However, their regression models have a smaller sample, since many of these 91 countries do not have data for the dependent variable *Expropriation Risk*. In their published results, AJR (2002) report a sample size of 75 observations when regressing *Expropriation Risk* on *Population*

Density in 1500, although they do not indicate precisely which of the 91 countries are actually used to obtain this $N = 75$.

To establish this, we first used AJR's (2001) appendix to provide *Expropriation Risk* data for 63 of the 91 countries.[9] Using our own copy of the original data source for *Expropriation Risk*, we obtained data for an additional 8 observations, taking our total sample to $N = 71$.

This leaves 20 remaining countries that have data for *Population Density in 1500* (and hence are listed above in the sample of 91) but do not have data for *Expropriation Risk*. These 20 countries are:

1. Barbados
2. Belize
3. Benin
4. Burundi
5. Cape Verde
6. Central African Republic
7. Chad
8. Comoros
9. Dominica
10. Eritrea
11. Grenada
12. Laos, PDR
13. Lesotho
14. Mauritania
15. Nepal
16. Rwanda
17. St. Kitts and Nevis
18. St. Lucia
19. St. Vincent and the Grenadines
20. Swaziland

If AJR (2002) are correct that they use 75 observations, then 4 countries from the above list are in their original empirical models. However, according to Political Risk Services, none of these 20 countries have ever been included in the ICRG data. The documentation at (http://prsgroup.com/ICRG_CountriesMonitored.aspx) details the history and coverage of the ICRG data. We are unsure how AJR (2002) have 75 observations, rather than 71.

Models Using *Urbanization in 1500* as an instrument:
AJR's (2002) second instrument for institutions is *Urbanization in 1500*. The authors' results in Table VII, which serve as our template for the replication, report a sample size of 42 countries when regressing *Expropriation Risk* on *Urbanization*. However, their published data appendix and Table I containing descriptive statistics list only 41 countries with data on this indicator. Given this, we assume that the 42 listed in Table VII was simply a typographical error.

[9] AJR (2001) have a sample size of 64. All countries except for Malta are included in the 2002 analysis.

The 41 countries they list in the appendix for *Urbanization* are listed below:

1. Algeria
2. Argentina
3. Australia
4. Bangladesh
5. Belize
6. Bolivia
7. Brazil
8. Canada
9. Chile
10. Colombia
11. Costa Rica
12. Dominican Republic
13. Ecuador
14. Egypt, Arab Rep.
15. El Salvador
16. Guatemala
17. Guyana
18. Haiti
19. Honduras
20. Hong Kong, China
21. India
22. Indonesia
23. Jamaica
24. Lao PDR
25. Malaysia
26. Mexico
27. Morocco
28. New Zealand
29. Nicaragua
30. Pakistan
31. Panama
32. Paraguay
33. Peru
34. Philippines
35. Singapore
36. Sri Lanka
37. Tunisia
38. United States
39. Uruguay
40. Venezuela
41. Vietnam

In their 2001 appendix, AJR report *Expropriation Risk* data for all of these countries except Belize and Laos. As noted in the above discussion regarding the instrument *Population Density*, Belize and Laos have never been included in the data source for *Expropriation Risk.* Therefore, our models using *Urbanization in 1500* report an $N = 39$, instead of the 41 observations AJR (2002) describe. It is unclear how the authors obtain 41 observations instead of 39.

3) Replication Differences

Finally, we discuss the slight differences between our reported results and AJR's published results which we attempted to replicate. In the case of our replications of their 2002 paper (Panels A and B in Figure 1, and Table 3), the difference is presumably attributable to the change in sample size, described above. Without knowing exactly how AJR obtained the samples they reported, we are simply left with the results we present. However, as we note in the text, our results are very close to the original AJR results and have all the same substantive and statistical interpretations.

Our replications of the 2001 paper (Panel C in Figure 1 and Figure 2, and Table 4) use an identical sample size as AJR. As we note, the results we report in the manuscript cluster the standard errors on mortality rates, which AJR do not do in their analyses. Given this, the standard errors will differ. There are also very slight differences between estimated coefficients. While it is difficult to know exactly why these small (and inconsequential) differences in coefficients arise, we suspect it is related to the values of *Log European Settler Mortality*. Specifically, it appears as though the reported values of settler mortality in AJR's appendix differ slightly from those that they actually employ in the analyses. AJR's descriptive statistics table (2001, Table 1, p. 1377) claims that the settler mortality variable has a mean of 4.7 and a standard deviation of 1.1. When we calculate the descriptives for this variable (coded directly from their published appendix), we get a mean of 4.6 and a standard deviation of 1.25. It is possible that AJR's empirical analyses relied on slightly different values of settler mortality than they report in the data appendices. Although this did not affect our ability to replicate their substantive findings, this may account for the very slight differences in our replication efforts.

Appendix B: Supplementary Tables

The following tables correspond to footnotes throughout the manuscript.

Table 3b: (Re)Evaluating the Institutional Reversal – Regression Analysis, Including Latitude

	Full Sample			Excluding Neo-Britains			Excluding Neo-Britains & City-States		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Urbanization in 1500	-0.09*	-	0.002	-0.03	-	0.000	-0.01	-	-0.02
	(0.04)		(0.06)	(0.04)		(0.06)	(0.04)		(0.05)
Log population density in 1500	-	-0.25*	-0.32*	-	-0.12	-0.14	-	-0.01	0.02
		(0.10)	(0.15)		(0.11)	(0.16)		(0.11)	(0.16)
Latitude	3.19*	3.50**	2.89	-0.72	1.15	-0.37	0.15	1.59	0.12
	(1.53)	(1.29)	(1.48)	(1.81)	(1.51)	(1.86)	(1.72)	(1.47)	(1.78)
R-squared	0.22	0.22	0.30	0.03	0.03	0.05	0.01	0.02	0.01
Number of Observations	39	71	39	35	67	35	33	65	33

Dependent variable is Average Protection Against Expropriation Risk, 1985-95
Unstandardized coefficients, standard errors in parentheses. Constants estimated but not reported.
* = significant at 0.05; ** = significant at 0.01
Neo-Britains: US, Canada, Australia, New Zealand
City-States: Hong Kong and Singapore

Table 4b: 2SLS Regressions, dependent variable is log GDP per capita (PPP) in 1995, No Clustering

	Full Sample			Excluding Neo-Britains			Excluding Neo-Britains & City-States		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
AJR (2001) Model:	T4, col 1	T4, col 2	T5, col 2	T4, col 3	T4, col 4	--	--	--	--
				Second stage					
Avg. protection against	0.93**	0.96**	1.05**	1.24**	1.16**	1.24**	1.40*	1.34*	1.40
expropriation risk, 1985-95	(0.15)	(0.21)	(0.28)	(0.34)	(0.33)	(0.43)	(0.54)	(0.59)	(0.82)
Latitude		-0.42	-0.29		1.11	1.03		0.58	0.54
		(1.27)	(1.39)		(1.39)	(1.45)		(1.86)	(2.12)
British colonial dummy			-0.92**			-0.84*			-0.83
			(0.34)			(0.38)			(0.43)
French colonial dummy			-0.32			-0.25			-0.18
			(0.35)			(0.42)			(0.56)
				First stage					
Log European settler	-0.61**	-0.52**	-0.45**	-0.40**	-0.40**	-0.36*	-0.30*	-0.28	-0.23
Mortality	(0.13)	(0.14)	(0.16)	(0.13)	(0.14)	(0.16)	(0.14)	(0.15)	(0.17)
Latitude		2.01	1.90		-0.09	0.07		0.70	0.90
		(1.33)	(1.35)		(1.48)	(1.51)		(1.49)	(1.54)
British colonial dummy			0.63			0.40			0.23
			(0.36)			(0.36)			(0.36)
French colonial dummy			0.05			-0.04			-0.19
			(0.44)			(0.43)			(0.43)
Partial R^2 (first stage)	0.27	0.18	0.12	0.13	0.12	0.08	0.08	0.06	0.03
Number of Observations	64	64	64	60	60	60	58	58	58
F-test of significance of excluded instruments:	23.34	13.48	8.25	8.89	8.07	5.02	4.84	3.59	1.85
P-value for F-test	<0.001	<0.001	0.006	0.004	0.006	0.030	0.032	0.063	0.179

Unstandardized coefficients, standard errors in parentheses. Constants estimated but not reported.

Neo-Britains: US, Canada, Australia, and New Zealand

City-States: Hong Kong and Singapore

* = significant at 0.05; ** = significant at 0.01