

Method and Data Appendix

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Our method of estimating gamos, g , in heterogenous populations is provided in Section I. Section II describes the data tables used or derived in the paper “Polygamy, the commodification of women, and underdevelopment”, accompanied by an explanation of their contents and relevant sources. The tables themselves follow in Section III and IV.

I. Estimating g in heterogeneous populations

As a general rule the West is $n\mathcal{P}$ and polygamy was prohibited by customary or religious law in 1900. There are a few exceptions. Haiti, for instance, is decidedly polygamous while its island twin, the Dominican Republic, is not. We concern ourselves here, not with how this stark contrast came to be, but only with how to estimate gamos in Haiti today. From Levine and Renelt’s 1992 survey of the immigrant origins of contemporary populations, we find that Haiti’s population is overwhelmingly African. We denote this as $f_{\text{Africa}}^{\text{Haiti}} = 0.97$.

This suggests that we infer g of the Haitians from g in 21 countries of their origin, which we conservatively estimate as $g = 15\%$. In the case of Guyana, where the $f_{\text{Africa}}^{\text{Guyana}} = 0.39$ and $f_{\text{India}}^{\text{Guyana}} = 0.54$, it seems equally reasonable that we estimate g using a g -weighted average over populations, for instance

$$g^i = f_T^i * g_T + f_2^i * g_2 \text{ if and only if } g_2 > g_T, \text{ otherwise } g^i = g_T.$$

In this equation, g_T^i is the population fraction (in state i) practicing that state’s prevailing tradition characterized by g in Table 2 (in the manuscript). f_2^i is the population fraction practicing a second tradition characterized by g_2 . By this logic, low g migrants practice in the tradition of their adopted home, and high g migrants practice as they did prior to migration, to the extent that that practice is legal or tolerated in the new location. This is consistent with the world as McDermott has characterized it. Specifically, in the Philippines, Thailand, Sri Lanka, Russia, India, Singapore, Suriname, and Mauritius, it is the case that minority Muslims, constituting 5% to 16% of the population, are free to practice customary Islamic marriage law, under which g is typically 10%, even though national civil law prohibits it and $g_T = 0$. In Belize, Guyana, and Haiti, this procedure yields $g = 2.9\%$, 9.6% , and 14.6% , respectively.

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II. General discussion of data tables

The data utilized in the paper is documented in the tables of this appendix for 177 states. Apart from Taiwan and Palestine which are excluded for reasons of insufficient data, the 177 states includes those 172 whose population exceeds 300,000, and 5 smaller ones, too. A sensitivity analysis, not shown here, informs us that the inclusion or exclusion of any one state does not alter any aspect of our findings.

The first table is devoted to the elements of g_s , the suite of polygamous conventions. The second table is devoted to the model of development, its dependent and independent variables and its residuals. In each table, the state is identified by an index, a plain English reference name, for which there is no convention, and its associated three-letter country code used by the UN and the World Bank.

III. g_s : The gamos suite and its inputs

Table 1 has 16 columns, three of which were identified above. Column 4 is the $\mathcal{P}/n\mathcal{P}$ binary characterization. It assumes a value of 1 if polygamy was legal by customary or religious law in 1900, and 0 otherwise. The source of the original data is McDermott, available at womanstats.org. We have augmented it as described in the text. Column 5 is g_s or gamos, the suite of polygamous conventions in z-scored units. In 83 of 104 $\mathcal{P}$ states, $g_s > 0$. In 72 of 73 $n\mathcal{P}$ states, $g_s < 0$. g_s is derived, via principal components analysis, from the entries in columns 6 through 16. We itemize these below.

- Bride\$ is Hudson's 0 to 10, integer index of wealth transfers at marriage, and may be found at womanstats.org. Bride\$ ≤ 5 in dowry societies and Bride\$ > 5 in bride price societies.
- Δ Age is the age difference, measured in years, between groom and bride at first marriage. It is derived from UN data on sex-specific singulate mean age at marriage in the mid-2010s¹. There being no data on Turkmenistan, we averaged the data from its homophilic neighbors, Kazakhstan, Kyrgystan, Tajikistan, and Uzbekistan.
- Fertil, or female fertility in 2016, is measured in births per 1000 women. Data is obtained from the World Bank.
- Seques is a measure of sequestration, or restrictions on a woman's rights to intermingle in public. It is a 0 to 4, integer scale developed by Hudson (womanstats.org), in which 4 implies that "There are legal restrictions on women's movements; women by law cannot appear in certain public places or perform certain public activities. Women may face legal punishment or

¹<https://www.un.org/en/development/desa/population/publications/dataset/marriage/age-marriage.asp>

severely threatening harassment or even assault from police, from strangers or from her own family members if they appear in such public spaces.” North Korea was one of several states Hudson does not classify. We classify it as 1, “There are no legal restrictions on women’s movements, but in practice women often face prevalent harassment when they move in public space. However, her family members do not have the right, nor do they attempt, to limit her access outside of her household,” in keeping with its similars, Russia and South Korea, both 1. Israel, a 4 on this scale, seems to be misclassified by Hudson, as that classification does not square with our lived experience there, but we leave it as it is.

- fgm/c is female genital mutilation or cutting. In 38 nations, all of them $\mathcal{P}$, the tabulated value is the reported percentage of adult females subject to fgm/c. In an additional 11 nations, all of them $\mathcal{P}$, fgm/c is practiced but no estimate of prevalence is reported. For these, we tabulate a value of 1%, equivalent to the lowest non-zero prevalence. We use $\log_2(1 + \text{fgm}/c)$ as the input to the computation of g_s . The effect of the logarithm is to make more rather than less significant the distinction between states with zero prevalence and states with lowest non-zero prevalence, and to compress the scale at the high end. Of states with non-zero prevalence, the data source is Unicef (2016), with the following exceptions:
 - For United Arab Emirates, Saudi Arabia, and Kuwait we rely on The Orchid Project (www.orchidproject.com)
 - For Iran, Pakistan, Palestine, and Sri Lanka we rely on the United Nations Population Fund (www.unfpa.org)
 - For Afghanistan, the Democratic Republic of the Congo, India, Jordan, the Philippines, Qatar, Syria, Thailand, and Zimbabwe we rely on INFIB-SCALE-3 assembled by Rose McDermott (www.womanstats.org)
 - For Bangladesh, Malaysia, and the Maldives (www.28toomany.org).
- Secur is Womanstats’ assessment, on an integer scale from 0 to 4, of the physical insecurity of women (womanstats.org). In this system, 0 means “There are laws against domestic violence, rape, and marital rape; these laws are enforced; there are no taboos or norms against reporting these crimes, which are rare. There are no honor killings or femicides,” and 4 means “There are no or weak laws against domestic violence, rape, and marital rape, and these laws are not generally enforced. Honor killings and/or femicides may occur and are either ignored or generally accepted. (Examples of weak laws — need 4 male witnesses to prove rape, rape is only defined as sex with girls under 12 — all other sex is by definition consensual, etc.)” By Hudson’s accounting, no states are deserving of 0 coding. Of the 104 $\mathcal{P}$ states, all but Mauritius code as 3 or 4.
- Capit is a binary measure of national attitude toward capital punishment.

- 1 if capital punishment is legal by national law as documented by Amnesty International.
- 1 if honor killing is permissible under customary law as evidenced by a score of 4 on the index of physical insecurity, womanstats.org.
- 0 otherwise
- Patri is an integer, 0 to 2 index of patrilocality; MARR-SCALE-1 as documented on www.womanstats.org.
 - 0: No expectation of living with either his or her family (no evidence that more than 5% of marriages are patrilocal)
 - 1: Softening patrilocality, a young couple may be expected in exigency to live with his family. More than 5%, but less than or equal to 20% of marriages are patrilocal.
 - 2: Strong presence of patrilocality; young couples are expected to live with the husband's family, greater than 20% of marriages are patrilocal.
- Laws is “a holistic look at women’s property rights both in practice and in law.” Developed by Valerie Hudson, it is hosted on womanstats.org under the heading LO-SCALE-3. An integer, 0 to 4 index, the coding is such that discrimination against women is systematically more severe as the index value increases.
- ΔEdu is the normalized difference of the educational attainment (measured in years) of boys and girls in 2013. The normalization is to the attainment of boys, and the result is, as such, a fraction. The data (for boys and girls separately) is hosted by UN Development Programme [sic].
- UnFree is a measure of ‘lack of freedom’ derived from the Freedom Index by Freedom House (www.freedomhouse.org). The scale of that index is 0 to 60, where 60 is the most free. In keeping with the other conventions, all of which (we posit) will increase as the prevalence of polygamy increases for reasons explained in the paper, we report here 60 - Freedom.

Gamos Suite and Inputs (1 of 5)

	State	Code	$\mathcal{P}/n, \mathcal{P}$ 1/0	g_S z	Bride\$ 0 to 10	Δ Gap yrs	Fertil /100k	Seques 0 to 4	fgm/c %	Secur 0 to 4	Capit 1/0	Patri 0 to 2	Laws 0 to 4	Δ Edu yrs	UnFree 0 to 60
1	Afghanistan	AFG	1	1.94	8	5.3	37.9	4	0	4	N/A	2	4	0.76	14
2	Albania	ALB	1	-0.61	0	4.1	13.2	1	0	3	N/A	2	4	0.04	40
3	Algeria	DZA	1	0.66	8	3.9	22.2	2	0	4	N/A	2	2	0.24	24
4	Angola	AGO	1	0.31	8	5.1	44.2	1	0	3	N/A	2	1	N/A	14
5	Antigua & Barbuda	ATG	0	-0.79	N/A	1.8	15.7	N/A	0	N/A	1	N/A	N/A	N/A	50
6	Argentina	ARG	0	-0.94	0	2.5	16.7	2	0	3	0	0	1	-0.04	49
7	Armenia	ARM	0	0.12	4	4.0	12.9	2	0	4	1	2	1	0.00	29
8	Australia	AUS	0	-1.46	0	2.2	12.1	1	0	2	0	0	0	0.05	58
9	Austria	AUT	0	-1.46	0	3.8	9.5	1	0	1	0	0	0	0.16	58
10	Azerbaijan	AZE	1	-0.17	2	3.5	15.8	2	0	3	1	2	1	0.06	10
11	Bahamas	BHS	0	-0.97	0	2.6	15.3	1	0	3	0	0	0	0.00	53
12	Bahrain	BHR	1	0.43	8	3.2	13.3	2	0	4	0	0	4	0.05	10
13	Bangladesh	BGD	1	1.31	10	7.1	18.8	3	0	4	0	2	4	0.18	27
14	Barbados	BRB	0	-1.06	0	2.7	11.7	1	0	3	1	0	0	-0.03	57
15	Belarus	BLR	0	-0.33	0	2.6	10.3	1	0	4	1	1	1	0.03	15
16	Belgium	BEL	0	-1.33	0	2.5	11.3	1	0	2	1	0	1	0.02	55
17	Belize	BLZ	1	-0.83	0	2.5	24.0	1	0	3	1	1	1	0.01	51
18	Benin	BEN	1	1.19	8	6.4	35.0	2	9	3	1	2	3	0.55	49
19	Bhutan	BTN	1	-0.24	0	3.6	17.3	2	0	3	0	2	1	N/A	27
20	Bolivia	BOL	0	-0.71	0	2.1	22.0	2	0	3	0	0	1	0.16	39
21	Bosnia	BIH	1	-0.54	0	3.7	8.8	1	0	3	1	2	1	0.24	34
22	Botswana	BWA	1	0.55	8	4.4	22.1	2	0	4	0	2	3	0.03	44
23	Brazil	BRA	0	-1.09	0	2.7	14.1	1	0	3	0	0	1	-0.01	48
24	Brunei	BRN	1	0.63	6	2.7	17.0	3	52	4	0	0	3	0.02	22
25	Bulgaria	BGR	0	-1.10	0	3.4	8.7	1	0	2	1	1	1	-0.01	47
26	Burkina Faso	BFA	1	0.96	8	8.2	41.2	2	75	4	0	2	2	N/A	40
27	Burundi	BDI	1	0.94	8	2.6	41.3	2	0	4	1	2	2	0.33	14
28	Cambodia	KHM	1	0.36	8	2.1	23.0	2	0	4	0	1	1	0.36	20
29	Cameroon	CMR	1	1.15	8	6.1	35.4	2	1	4	1	2	2	0.24	15
30	Canada	CAN	0	-1.40	0	2.3	10.3	1	0	2	1	0	1	-0.01	59
31	Cape Verde	CPV	0	-0.57	0	4.5	20.0	1	0	3	1	0	2	N/A	53
32	Central African Rep.	CAF	1	1.47	8	4.9	34.3	2	24	4	1	2	2	0.53	6
33	Chad	TCD	1	1.82	8	6.2	35.6	2	44	4	0	2	3	0.74	14
34	Chile	CHL	0	-1.05	0	2.3	13.6	1	0	3	0	0	2	0.03	57
35	China	CHN	1	0.12	8	1.8	12.3	1	0	4	1	2	1	0.16	14

Gamos Suite and Inputs (2 of 5)

	State	Code	$\mathcal{P}/n\mathcal{P}$ 1/0	g_S z	Bride\$ 0 to 10	Δ Gap yrs	Fertil /100k	Seques 0 to 4	fgm/c %	Secur 0 to 4	Capit 1/0	Patri 0 to 2	Laws 0 to 4	Δ Edu yrs	UnFree 0 to 60
36	Colombia	COL	0	-0.47	0	3.5	16.1	1	0	4	1	0	1	0.01	35
37	Comoros	COM	1	-0.16	2	6.5	26.1	2	0	3	0	0	1	N/A	31
38	Costa Rica	CRI	0	-1.06	0	3.3	15.5	1	0	3	1	0	1	-0.01	53
39	Croatia	HRV	0	-0.76	0	3.5	8.9	1	0	3	1	2	1	0.09	50
40	Cuba	CUB	0	-0.90	0	3.8	10.7	1	0	3	0	0	0	0.02	14
41	Cyprus	CYP	0	-0.91	0	2.8	11.3	N/A	0	2	0	0	1	0.15	56
42	Czech Republic	CZE	0	-1.31	0	2.6	9.3	1	0	3	0	0	0	0.03	56
43	Dem. Rep. Congo	COD	1	1.13	8	4.9	33.5	2	1	4	0	1	3	0.49	15
44	Denmark	DNK	0	-1.50	0	2.4	10.5	1	0	1	0	0	1	0.03	57
45	Djibouti	DJI	1	0.87	8	2.9	23.4	2	93	4	0	2	3	N/A	19
46	Dominican Rep.	DOM	0	-0.88	0	4.3	18.4	1	0	3	1	0	1	-0.07	41
47	Ecuador	ECU	0	-0.58	0	3.3	17.9	1	0	3	0	1	2	0.05	33
48	Egypt	EGY	1	1.47	8	5.5	29.6	3	87	4	1	1	3	0.29	17
49	El Salvador	SLV	0	-0.39	0	3.9	16.2	1	0	4	0	0	1	0.12	36
50	Equatorial Guinea	GNQ	1	0.67	8	5.4	32.2	2	0	3	0	2	2	N/A	7
51	Eritrea	ERI	1	1.24	8	5.8	29.6	3	83	4	1	2	2	N/A	2
52	Estonia	EST	0	-0.83	0	2.5	10.1	1	0	4	1	0	1	-0.05	56
53	Ethiopia	ETH	1	1.68	8	5.6	36.5	3	74	3	1	2	2	0.61	8
54	Fiji	FJI	1	-0.45	0	3.2	18.6	2	0	3	1	1	2	0.02	34
55	Finland	FIN	0	-1.41	0	2.3	10.7	1	0	2	1	0	1	-0.01	60
56	France	FRA	0	-1.58	0	2.1	12.2	1	0	1	1	0	0	0.04	52
57	Gabon	GAB	1	0.22	8	3.9	34.2	2	0	3	0	2	3	-0.31	24
58	Gambia	GMB	1	1.84	8	8.8	29.4	2	74	4	0	2	3	0.44	12
59	Georgia	GEO	0	-0.51	0	3.4	12.3	2	0	3	0	2	1	0.04	37
60	Germany	DEU	0	-1.34	0	2.6	8.6	1	0	2	0	0	1	0.05	56
61	Ghana	GHA	1	0.63	8	5.6	30.5	2	3	4	1	1	1	0.27	46
62	Greece	GRC	0	-0.58	0	4.5	8.4	2	0	3	0	1	2	0.05	49
63	Grenada	GRD	0	-0.53	N/A	3.5	15.5	N/A	0	N/A	0	N/A	N/A	N/A	51
64	Guatemala	GTM	0	-0.02	0	2.4	24.1	1	0	4	1	2	1	0.22	31
65	Guinea	GIN	1	1.98	8	8.6	35.1	2	96	4	0	2	3	0.69	24
66	Guinea Bissau	GNB	1	1.80	8	8.4	32.5	2	44	4	1	2	3	0.59	24
67	Guyana	GUY	1	-0.39	7	5.3	15.4	1	0	3	1	0	1	-0.11	42
68	Haiti	HTI	1	0.19	0	4.6	23.0	1	0	4	1	0	2	0.52	24
69	Honduras	HND	0	-0.14	0	3.7	22.4	1	0	4	1	1	1	0.07	27
70	Hungary	HUN	0	-1.21	0	3.2	9.0	1	0	3	1	0	0	0.02	47

	State	Code	$\mathcal{P}/n\mathcal{P}$ 1/0	g_S z	Bride\$ 0 to 10	Δ Gap yrs	Fertil /100k	Seques 0 to 4	fgm/c %	Secur 0 to 4	Capit 1/0	Patri 0 to 2	Laws 0 to 4	Δ Edu yrs	UnFree 0 to 60
71	Iceland	ISL	0	-1.43	0	1.9	13.7	1	0	2	1	0	1	-0.08	59
72	India	IND	1	1.04	10	4.6	19.0	3	0	4	0	2	3	0.43	42
73	Indonesia	IDN	1	0.77	8	3.5	16.2	2	80	4	0	1	3	0.15	34
74	Iran	IRN	1	1.06	6	3.7	17.9	4	0	4	1	2	3	0.17	10
75	Iraq	IRQ	1	1.43	8	3.1	30.4	4	8	4	1	2	3	0.34	15
76	Ireland	IRL	0	-1.54	0	1.3	14.1	1	0	2	1	0	0	-0.02	57
77	Israel	ISR	0	-0.40	0	2.9	18.1	4	0	3	1	1	1	-0.01	44
78	Italy	ITA	0	-1.23	0	3.5	8.6	1	0	2	0	0	1	0.08	53
79	Ivory Coast	CIV	1	1.38	8	7.5	27.7	2	38	4	0	2	2	0.43	32
80	Jamaica	JAM	0	-0.58	0	5.0	17.9	1	0	3	0	0	1	-0.07	41
81	Japan	JPN	0	-0.95	0	2.7	7.7	1	0	2	1	1	1	0.05	56
82	Jordan	JOR	1	0.78	8	4.1	23.9	2	0	4	1	2	3	0.10	25
83	Kazakhstan	KAZ	1	-0.04	6	2.7	18.1	2	0	3	1	2	2	0.03	17
84	Kenya	KEN	1	0.98	8	4.8	23.9	2	21	4	1	2	2	0.24	29
85	Kosovo	XKX	1	-0.20	0	3.0	16.0	2	0	3	0	2	2	N/A	28
86	Kuwait	KWT	1	0.65	8	3.4	19.2	2	38	4	1	1	3	-0.16	23
87	Kyrgyzstan	KGZ	1	0.17	8	2.8	22.1	3	0	3	0	2	2	0.00	24
88	Laos	LAO	1	0.48	8	3.1	23.6	2	0	4	1	1	1	0.30	11
89	Latvia	LVA	0	-1.18	0	2.5	9.7	1	0	3	0	0	1	0.00	51
90	Lebanon	LBN	1	0.37	8	3.7	14.3	2	0	4	1	1	3	0.07	30
91	Lesotho	LSO	1	0.33	8	4.3	24.6	2	0	4	0	2	3	-0.48	37
92	Liberia	LBR	1	1.48	8	6.1	38.3	2	49	3	1	2	3	0.59	34
93	Libya	LYB	1	0.60	8	4.4	17.5	2	0	4	1	2	2	0.00	10
94	Lithuania	LTU	0	-1.33	0	2.5	9.9	0	0	3	1	0	1	0.01	53
95	Luxembourg	LUX	0	-1.45	0	3.0	11.5	1	0	1	1	0	1	0.07	60
96	Macedonia	MKD	1	-0.20	0	3.8	11.4	1	0	4	0	2	1	0.07	36
97	Madagascar	MDG	1	0.37	8	3.8	31.6	2	0	3	0	1	2	0.14	32
98	Malawi	MWI	1	0.75	8	4.7	41.0	2	0	3	1	1	3	0.33	37
99	Malaysia	MYS	1	0.01	6	3.0	19.1	1	57	3	1	0	1	0.07	26
100	Maldives	MDV	1	0.30	0	3.6	16.1	1	13	4	1	1	3	0.13	23
101	Mali	MLI	1	1.88	8	8.1	43.9	3	88	3	1	2	3	0.46	28
102	Malta	MLT	0	-0.97	0	3.0	10.1	1	0	2	1	0	N/A	0.08	57
103	Mauritania	MRT	1	1.84	8	7.9	30.4	2	69	4	1	2	4	0.47	21
104	Mauritius	MUS	1	-0.80	3	6.3	13.0	1	0	2	0	1	0	0.12	52
105	Mexico	MEX	0	-0.21	0	2.5	18.3	2	0	4	1	1	1	0.08	37

Gamos Suite and Inputs (4 of 5)

	State	Code	$\mathcal{P}/n\mathcal{P}$ 1/0	g_S z	Bride\$ 0 to 10	Δ Gap yrs	Fertil /100k	Seques 0 to 4	fgm/c %	Secur 0 to 4	Capit 1/0	Patri 0 to 2	Laws 0 to 4	Δ Edu yrs	UnFree 0 to 60
106	Moldova	MDA	0	-0.66	0	3.4	11.5	1	0	3	0	2	1	0.04	35
107	Mongolia	MNG	1	-0.67	0	2.3	18.9	1	0	3	1	1	1	-0.04	49
108	Montenegro	MNE	0	-0.64	0	4.0	10.0	1	0	3	0	2	1	0.12	43
109	Morocco	MAR	1	0.74	8	4.5	17.7	2	0	4	1	2	2	0.43	26
110	Mozambique	MOZ	1	0.62	8	4.6	38.1	2	0	3	0	2	2	0.53	33
111	Myanmar	MMR	1	0.33	8	2.2	18.1	4	0	4	1	0	2	-0.08	18
112	Namibia	NAM	1	-0.19	8	3.1	27.3	2	0	3	0	2	1	-0.03	47
113	Nepal	NPL	1	0.74	10	3.5	19.5	4	0	3	1	2	3	0.43	28
114	Netherlands	NLD	0	-1.33	0	2.7	10.9	1	0	2	0	0	1	0.05	59
115	New Zealand	NZL	0	-1.50	0	1.8	13.2	1	0	2	0	0	0	0.01	58
116	New Zealand Nicaragua	NIC	0	-0.54	0	3.6	17.7	2	0	3	0	0	1	0.28	33
117	Niger	NER	1	1.78	8	7.4	44.2	3	2	4	0	2	3	0.62	28
118	Nigeria	NGA	1	1.66	8	6.5	36.9	3	24	4	0	2	3	0.33	25
119	North Korea	PRK	0	0.08	0	3.5	14.6	1	0	4	1	2	1	N/A	3
120	Norway	NOR	0	-1.38	0	2.4	12.2	1	0	2	1	0	1	-0.01	60
121	Oman	OMN	1	0.92	8	3.4	24.0	2	90	4	1	2	3	N/A	17
122	Pakistan	PAK	1	1.06	10	3.9	21.9	3	0	4	0	2	2	0.46	22
123	Panama	PAN	0	-0.55	0	3.9	17.9	1	0	4	1	0	1	-0.04	48
124	Papua New Guinea	PNG	1	0.93	8	4.2	23.7	2	0	4	1	2	3	0.62	38
125	Paraguay	PRY	0	-0.95	0	4.4	16.6	1	0	2	1	0	1	0.05	37
126	Peru	PER	0	-0.05	0	3.2	17.8	2	0	4	1	1	2	0.11	41
127	Philippines	PHL	1	-0.57	0	2.6	23.7	1	0	3	0	1	2	-0.04	36
128	Poland	POL	0	-1.43	0	3.0	9.5	1	0	2	1	0	0	-0.02	52
129	Portugal	PRT	0	-1.52	0	2.4	9.0	1	0	1	0	0	1	0.06	58
130	Qatar	QAT	1	0.53	8	2.6	9.6	3	0	4	0	2	3	-0.16	17
131	Rep. of the Congo	COG	1	0.66	8	5.4	34.4	2	0	4	0	1	1	0.18	22
132	Romania	ROU	0	-0.93	0	3.4	8.9	1	0	3	1	1	1	0.05	49
133	Russia	RUS	0	-0.18	0	2.6	11.0	1	0	4	1	2	1	0.01	15
134	Rwanda	RWA	1	0.17	8	3.0	30.7	2	0	3	0	2	1	0.14	16
135	Samoa	WSM	1	-0.34	N/A	4.2	20.4	N/A	0	N/A	1	N/A	N/A	0.00	50
136	Saudi Arabia	SAU	1	1.29	8	3.4	18.3	4	18	4	0	2	3	0.13	7
137	Senegal	SEN	1	1.16	8	9.4	33.4	2	24	3	1	2	3	0.39	46
138	Serbia	SRB	0	-0.74	0	3.6	9.0	1	0	3	0	2	1	0.07	47
139	Seychelles	SYC	0	-0.57	N/A	2.9	13.7	N/A	0	N/A	0	N/A	N/A	0.00	43
140	Sierra Leone	SLE	1	1.46	8	6.8	36.3	2	89	3	1	2	3	0.47	38
141	Singapore	SGP	0	-0.45	8	3.0	8.6	1	0	3	1	0	1	0.09	32

Gamos Suite and Inputs (5 of 5)

	State	Code	$\mathcal{P}/n\mathcal{P}$ 1/0	g_S z	Bride\$ 0 to 10	Δ Gap yrs	Fertil /100k	Seques 0 to 4	fgm/c %	Secur 0 to 4	Capit 1/0	Patri 0 to 2	Laws 0 to 4	Δ Edu yrs	UnFree 0 to 60
142	Slovakia	SVK	0	-1.19	0	2.6	9.7	1	0	3	0	0	1	-0.01	53
143	Slovenia	SVN	0	-1.09	0	2.2	8.2	1	0	3	0	1	1	0.02	53
144	Solomon Islands	SLB	1	0.51	8	4.3	24.9	2	0	4	1	2	3	N/A	44
145	Somalia	SOM	1	1.68	8	6.1	39.6	4	97	4	1	2	4	N/A	5
146	South Africa	ZAF	1	-0.04	8	2.2	20.2	2	0	4	1	1	1	0.03	45
147	South Korea	KOR	0	-0.59	2	3.3	8.3	1	0	3	1	1	1	0.11	50
148	South Sudan	SSD	1	1.11	8	6.7	35.5	2	0	4	1	2	4	N/A	6
149	Spain	ESP	0	-1.48	0	2.9	9.2	1	0	1	0	0	1	0.02	56
150	Sri Lanka	LKA	1	0.24	10	3.9	15.2	2	1	3	1	1	3	-0.14	32
151	Sudan	SDN	1	1.76	8	6.5	27.9	2	86	4	1	2	4	0.34	4
152	Suriname	SUR	1	-0.78	0	3.2	15.8	1	0	3	0	1	1	0.09	43
153	Swaziland	SWZ	1	0.63	8	2.0	24.0	2	0	4	1	2	4	-0.09	17
154	Sweden	SWE	0	-1.67	0	2.3	12.1	1	0	1	0	0	0	-0.04	60
155	Switzerland	CHE	0	-1.43	0	2.7	10.5	1	0	1	0	0	1	0.12	57
156	Syria	SYR	1	1.20	8	5.5	21.2	4	0	4	1	1	3	0.14	2
157	Tajikistan	TJK	1	0.39	8	2.4	23.3	2	0	4	1	2	1	-0.03	10
158	Tanzania	TZA	1	1.18	8	4.7	35.6	2	14	4	1	2	3	0.22	33
159	Thailand	THA	1	-0.20	8	2.8	11.0	1	0	3	1	0	2	0.09	25
160	Timor Leste	TLS	1	0.74	8	3.6	33.4	2	0	4	1	2	2	0.32	36
161	Togo	TGO	1	1.41	8	6.8	33.3	2	4	4	1	2	3	0.51	30
162	Trinidad & Tobago	TTO	0	-0.99	0	3.0	12.7	1	0	2	1	0	1	-0.03	48
163	Tunisia	TUN	1	0.33	8	4.2	18.2	2	0	3	1	1	3	0.27	42
164	Turkey	TUR	1	-0.00	7	3.2	15.7	2	0	3	0	2	1	0.26	20
165	Turkmenistan	TKM	1	0.39	8	2.6	19.1	2	0	4	1	2	1	N/A	4
166	United Arab Emirates	ARE	1	1.10	8	3.5	15.1	4	34	4	1	2	3	-0.17	13
167	Uganda	UGA	1	0.90	8	4.1	42.9	2	1	3	1	1	3	0.33	24
168	Ukraine	UKR	0	-0.86	0	3.0	10.3	1	0	3	0	1	1	0.02	36
169	United Kingdom	GBR	0	-1.40	0	2.1	12.1	1	0	2	0	0	1	-0.08	55
170	United States	USA	0	-1.15	0	1.3	12.5	1	0	2	1	0	1	-0.01	53
171	Uruguay	URY	0	-0.90	0	2.5	13.0	N/A	0	3	0	0	1	-0.06	58
172	Uzbekistan	UZB	1	0.38	8	2.4	16.8	2	0	4	1	2	1	0.04	3
173	Venezuela	VEN	0	-0.33	0	3.7	18.8	1	0	4	1	0	1	-0.04	19
174	Vietnam	VNM	1	0.28	8	2.7	15.5	2	0	3	1	2	2	0.09	17
175	Yemen	YEM	1	1.86	8	3.8	28.4	4	18	4	1	2	4	0.68	12
176	Zambia	ZMB	1	0.71	8	4.7	41.5	2	0	3	1	1	3	0.19	33
177	Zimbabwe	ZWE	1	1.03	8	4.7	34.2	2	0	4	1	2	3	0.14	20

temperature is very high, $r = 0.93$. Model selection rejects the other two; T , mean monthly high temperature from 1900 to 2016⁴ and ϕ , the absolute value of latitude measured in degrees.

- Column 10, designated h and specified in units of 100 m, is a nation's mean elevation. Data is obtained by country-averaging over a 1-sec resolution global relief model (known as ETOPO1) developed by the National Oceanic and Aeronautics Administration, www.ngdc.noaa.gov/mgg/global/.
- Column 11, designated NRR and specified in natural log units, is a measure of natural resource rents, or income in excess of extraction costs. Principally, this is oil rent. The raw data, sourced from the World Bank, is specified as a fraction of GDP. We convert it to per capita dollars and take the log.
- Column 12, designated $CommRule$ and specified in decades, is the duration of Marxist-Leninist (or Maoist) rule. We assembled this dataset from publicly available records. For Germany, we report a population weighted sum over the two post-war Germanys.
- Column 13, designated δ is the model residual, the difference between the selection model output and the target value in Column 4. The variance of the residuals is 0.26, about 1/4 of the variance of μ , and its standard deviation is one eighth or 12% of the range of μ . The two countries with the largest residuals are Singapore, which greatly outperforms the model, and North Korea, which greatly underperforms.

⁴Climate Research Unit of East Anglia, CRUCY 3.25

Table II: Summary and Model Inputs (1 of 5)

	State	Code	μ_z	HDI _z	$g_{\%}$	PET $^{\circ}\text{C}$	T $^{\circ}\text{C}$	ϕ deg	h 100 m	NRR log	CommRule decades	δ
1	Afghanistan	AFG	-1.57	-1.26	10.0	23.3	19.8	33.9	18	1.4	1.4	-0.6
2	Albania	ALB	0.00	0.46	8.2	15.6	17.0	41.2	7	4.6	4.7	0.1
3	Algeria	DZA	-0.11	-0.01	10.0	34.7	29.8	28.0	6	6.9	0.0	0.3
4	Angola	AGO	-0.80	-1.18	10.0	32.9	28.4	11.2	11	7.4	1.7	-0.2
5	Antigua & Barbuda	ATG	0.77	0.29	0.0	22.1	29.3	17.1	0	0.0	0.0	0.3
6	Argentina	ARG	0.52	0.88	0.0	24.1	21.4	38.4	7	5.9	0.0	-0.2
7	Armenia	ARM	-0.06	0.59	0.0	13.5	12.9	40.1	19	4.5	7.4	0.2
8	Australia	AUS	1.72	1.69	0.0	32.0	28.5	25.3	3	8.4	0.0	1.0
9	Austria	AUT	1.58	1.46	0.0	11.4	10.4	47.5	9	4.6	0.0	0.3
10	Azerbaijan	AZE	-0.02	0.56	10.0	16.9	17.1	40.1	6	7.5	7.4	0.3
11	Bahamas	BHS	0.93	0.32	0.0	22.3	30.0	25.0	0	1.5	0.0	0.3
12	Bahrain	BHR	0.83	0.35	10.0	26.1	33.7	25.9	0	7.3	0.0	0.5
13	Bangladesh	BGD	-0.88	-0.80	9.7	26.0	29.6	23.7	0	2.4	0.0	-0.8
14	Barbados	BRB	0.82	0.30	0.0	27.2	29.6	13.2	1	4.0	0.0	0.3
15	Belarus	BLR	0.09	1.05	0.0	10.0	10.5	53.7	2	4.5	7.1	-0.5
16	Belgium	BEL	1.47	1.48	0.0	10.5	14.1	50.5	2	2.1	0.0	0.2
17	Belize	BLZ	0.01	0.02	2.9	25.5	29.8	17.2	2	5.1	0.0	-0.5
18	Benin	BEN	-0.96	-1.36	22.5	35.6	33.6	9.3	3	4.0	1.4	0.6
19	Bhutan	BTN	-0.08	-0.68	6.7	17.2	13.7	27.5	28	4.5	0.0	0.1
20	Bolivia	BOL	-0.37	-0.42	0.0	31.7	27.9	16.3	13	5.6	0.0	-0.4
21	Bosnia	BIH	-0.02	0.47	4.2	14.1	14.9	43.9	6	4.7	4.8	-0.3
22	Botswana	BWA	0.57	-0.65	10.0	33.5	29.6	22.3	10	5.9	0.0	1.1
23	Brazil	BRA	0.34	0.04	0.0	31.1	30.4	14.2	3	6.1	0.0	-0.1
24	Brunei	BRN	1.30	0.77	8.4	25.8	30.9	4.5	1	9.1	0.0	0.6
25	Bulgaria	BGR	0.46	0.82	1.3	15.1	15.8	42.7	5	5.1	4.4	-0.1
26	Burkina Faso	BFA	-1.18	-1.58	22.5	37.5	35.2	12.2	3	4.6	0.0	0.3
27	Burundi	BDI	-1.81	-1.53	22.5	27.9	25.9	3.4	15	4.0	0.0	-0.4
28	Cambodia	KHM	-0.91	-0.72	6.7	29.2	31.6	12.6	1	3.0	1.7	-0.6
29	Cameroon	CMR	-1.05	-1.12	22.5	30.0	30.3	7.4	6	4.8	0.0	0.1
30	Canada	CAN	1.64	1.55	0.0	4.6	-0.5	56.1	4	7.3	0.0	-0.5
31	Cape Verde	CPV	0.05	-0.17	0.0	20.3	27.2	16.0	3	3.0	0.0	-0.7
32	Central African Rep.	CAF	-2.04	-1.92	22.5	35.2	31.7	6.6	6	3.9	0.0	-0.5
33	Chad	TCD	-1.49	-1.72	22.5	39.6	34.8	15.5	5	5.5	0.0	0.1
34	Chile	CHL	1.07	0.67	0.0	15.4	13.5	35.7	12	7.7	0.0	-0.2
35	China	CHN	0.00	0.20	6.7	15.2	13.2	35.9	18	5.6	7.1	0.6

Table II: Summary and Model Inputs (2 of 5)

	State	Code	μ_z	HDI _z	$g_{\%}$	PET $^{\circ}\text{C}$	T $^{\circ}\text{C}$	ϕ deg	h 100 m	NRR log	CommRule decades	δ
36	Colombia	COL	0.02	-0.04	0.0	29.9	29.5	4.6	6	6.0	0.0	-0.4
37	Comoros	COM	-1.28	-1.54	15.0	23.5	29.7	11.9	5	3.7	0.0	-0.9
38	Costa Rica	CRI	0.57	0.35	0.0	28.8	30.1	9.7	6	4.7	0.0	0.2
39	Croatia	HRV	0.66	1.06	0.1	14.6	15.9	45.1	3	4.7	4.8	0.1
40	Cuba	CUB	-0.16	0.23	0.0	28.6	30.1	21.5	1	5.2	6.2	0.1
41	Cyprus	CYP	1.13	1.14	2.3	22.1	23.8	35.1	4	2.8	0.0	0.7
42	Czech Republic	CZE	1.10	1.49	0.0	11.0	11.9	49.8	5	4.9	4.1	0.2
43	Dem. Rep. Congo	COD	-1.96	-1.49	22.5	31.0	29.7	4.0	7	4.9	0.0	-0.8
44	Denmark	DNK	1.78	1.68	0.0	6.9	11.0	56.3	0	6.7	0.0	-0.3
45	Djibouti	DJI	-0.98	-1.32	15.0	30.7	33.2	11.8	4	2.6	0.0	-0.1
46	Dominican Rep.	DOM	0.04	-0.02	0.0	29.7	29.2	18.7	4	4.4	0.0	-0.3
47	Ecuador	ECU	-0.11	0.11	0.0	28.1	29.1	1.8	11	6.4	0.0	-0.5
48	Egypt	EGY	-0.15	-0.14	10.0	33.6	29.7	26.8	3	5.6	0.0	0.2
49	El Salvador	SLV	-0.15	-0.34	0.0	32.7	30.6	13.8	4	3.1	0.0	-0.2
50	Equatorial Guinea	GNQ	-0.35	-0.79	22.5	26.6	28.7	1.7	5	8.8	0.0	0.1
51	Eritrea	ERI	-1.68	-1.53	15.0	35.5	32.2	15.2	8	3.4	0.0	-0.5
52	Estonia	EST	1.13	1.27	0.0	6.9	8.9	58.6	1	5.1	4.8	-0.0
53	Ethiopia	ETH	-1.40	-1.30	15.0	34.5	29.1	9.1	13	4.2	1.7	0.1
54	Fiji	FJI	-0.04	0.36	15.0	21.8	27.9	16.6	2	4.4	0.0	0.0
55	Finland	FIN	1.66	1.55	0.0	5.7	6.2	61.9	2	5.6	0.0	-0.3
56	France	FRA	1.38	1.43	0.0	13.2	15.2	46.2	3	3.0	0.0	0.2
57	Gabon	GAB	0.04	-0.17	22.5	28.7	29.3	0.8	4	8.0	0.0	0.6
58	Gambia	GMB	-1.19	-1.34	22.5	37.7	34.8	13.4	0	3.8	0.0	0.3
59	Georgia	GEO	-0.03	0.56	1.1	14.1	11.3	42.3	12	3.9	7.4	0.2
60	Germany	DEU	1.61	1.66	0.0	10.6	12.6	51.2	3	4.2	1.0	0.3
61	Ghana	GHA	-0.44	-0.89	15.0	32.7	32.5	7.9	2	5.4	0.0	0.1
62	Greece	GRC	0.93	1.14	0.5	17.8	20.4	39.1	5	4.2	0.0	-0.0
63	Grenada	GRD	0.41	0.15	0.0	26.5	30.3	12.3	2	0.0	0.5	0.4
64	Guatemala	GTM	-0.41	-0.58	0.0	27.5	28.9	15.8	7	4.2	0.0	-0.7
65	Guinea	GIN	-1.62	-1.58	22.5	36.5	32.0	9.9	4	5.2	0.0	-0.2
66	Guinea Bissau	GNB	-1.52	-1.62	22.5	33.8	32.8	11.8	0	4.6	0.0	-0.4
67	Guyana	GUY	-0.31	-0.16	9.6	28.9	30.4	4.9	2	6.5	0.0	-0.4
68	Haiti	HTI	-1.39	-1.39	14.6	29.0	29.7	19.0	4	1.9	0.0	-0.6
69	Honduras	HND	-0.63	-0.75	0.0	28.8	28.2	15.2	6	3.8	0.0	-0.9
70	Hungary	HUN	0.94	1.20	0.0	14.4	15.0	47.2	1	4.2	4.0	0.2

Table II: Summary and Model Inputs (3 of 5)

	State	Code	μ_z	HDI	g_z	PET °C	T °C	ϕ deg	h 100 m	NRR log	CommRule decades	δ
71	Iceland	ISL	1.58	1.62	0.0	2.0	5.0	65.0	5	-2.4	0.0	0.4
72	India	IND	-0.37	-0.63	7.2	31.1	29.7	20.6	6	4.0	0.0	-0.1
73	Indonesia	IDN	-0.17	0.05	9.6	28.0	30.7	0.8	3	5.3	0.0	-0.1
74	Iran	IRN	-0.04	-0.23	10.0	27.3	24.4	32.4	13	7.3	0.0	0.1
75	Iraq	IRQ	-0.53	-0.21	10.0	32.1	28.9	33.2	3	7.7	0.0	-0.5
76	Ireland	IRL	1.59	1.57	0.0	8.2	12.8	53.4	1	4.3	0.0	-0.1
77	Israel	ISR	1.08	1.23	1.7	24.8	25.2	31.0	3	4.3	0.0	0.5
78	Italy	ITA	1.07	1.22	0.0	14.7	17.6	41.9	5	3.8	0.0	-0.0
79	Ivory Coast	CIV	-1.11	-1.44	22.5	32.6	31.8	7.5	3	4.5	0.0	0.1
80	Jamaica	JAM	0.03	0.23	0.0	22.8	29.5	18.1	3	4.3	0.0	-0.7
81	Japan	JPN	1.37	1.26	0.0	14.2	15.3	36.2	4	2.1	0.0	0.4
82	Jordan	JOR	0.21	0.41	10.0	27.9	25.7	30.6	8	4.4	0.0	0.5
83	Kazakhstan	KAZ	0.25	0.79	8.5	14.2	12.1	48.0	4	7.6	7.4	0.2
84	Kenya	KEN	-0.89	-0.94	15.0	35.8	30.6	0.0	8	3.5	0.0	0.3
85	Kosovo	XKX	0.19	0.39	9.2	14.7	13.5	42.6	8	4.4	4.8	0.4
86	Kuwait	KWT	1.12	0.32	10.0	34.0	32.3	29.3	1	10.0	0.0	0.9
87	Kyrgyzstan	KGZ	-0.72	0.06	9.6	10.6	7.6	41.2	26	4.4	7.4	0.3
88	Laos	LAO	-0.77	-0.66	6.7	27.7	27.6	19.9	7	5.3	4.5	-0.2
89	Latvia	LVA	0.85	0.99	0.0	7.7	9.5	56.9	1	5.0	7.4	0.1
90	Lebanon	LBN	0.14	0.32	10.0	20.0	22.2	33.9	10	-2.2	0.0	0.8
91	Lesotho	LSO	-0.68	-1.26	10.0	21.5	18.4	29.6	22	3.9	0.0	-0.2
92	Liberia	LBR	-1.69	-1.47	22.5	31.9	30.8	6.4	2	5.5	0.0	-0.7
93	Libya	LYB	-0.23	-0.06	10.0	33.7	29.4	26.3	4	8.6	0.0	-0.2
94	Lithuania	LTU	0.97	1.12	0.0	9.0	10.3	55.2	1	4.2	7.4	0.4
95	Luxembourg	LUX	1.75	1.49	0.0	10.8	13.6	49.8	4	4.5	0.0	0.3
96	Macedonia	MKD	0.13	0.40	3.5	16.1	15.3	41.6	8	5.3	4.8	-0.0
97	Madagascar	MDG	-1.12	-0.97	15.0	30.8	27.6	18.8	5	3.7	0.0	-0.3
98	Malawi	MWI	-1.36	-1.37	15.0	28.5	27.4	13.3	9	3.4	0.0	-0.6
99	Malaysia	MYS	0.66	0.43	8.7	27.6	29.8	4.2	3	6.7	0.0	0.4
100	Maldives	MDV	0.13	-0.10	9.9	21.2	30.5	3.2	0	-0.6	0.0	0.3
101	Mali	MLI	-1.19	-1.53	22.5	40.2	35.7	17.6	3	4.5	0.0	0.5
102	Malta	MLT	1.17	1.19	0.0	17.4	23.5	35.9	1	0.0	0.0	0.5
103	Mauritania	MRT	-0.84	-1.16	15.0	39.6	35.2	21.0	3	6.5	0.0	0.1
104	Mauritius	MUS	0.74	0.64	7.2	21.6	26.2	20.3	2	-0.8	0.0	0.9
105	Mexico	MEX	0.30	0.20	0.0	30.6	28.6	23.6	10	6.3	0.0	0.0

Table II: Summary and Model Inputs (4 of 5)

	State	Code	μ z	HDI z	g %	PET °C	T °C	ϕ deg	h 100 m	NRR log	CommRule decades	δ
106	Moldova	MDA	-0.31	0.38	0.0	13.0	14.0	47.4	1	1.6	7.4	-0.3
107	Mongolia	MNG	0.14	0.46	6.8	11.6	6.2	46.9	15	6.8	6.7	0.3
108	Montenegro	MNE	0.42	0.98	1.9	12.3	13.2	42.7	10	4.1	4.8	0.1
109	Morocco	MAR	-0.25	-0.59	10.0	25.6	23.3	31.8	7	4.5	0.0	-0.1
110	Mozambique	MOZ	-1.30	-1.51	15.0	31.8	29.4	18.7	4	4.1	1.5	-0.3
111	Myanmar	MMR	-1.08	-0.99	6.8	27.5	28.5	21.9	6	4.2	0.0	-1.0
112	Namibia	NAM	0.09	-1.07	10.0	33.0	27.4	23.0	11	5.0	0.0	0.8
113	Nepal	NPL	-0.97	-0.81	6.8	21.5	14.9	28.4	20	1.9	0.0	-0.5
114	Netherlands	NLD	1.72	1.70	0.0	9.6	13.2	52.1	0	6.0	0.0	-0.1
115	New Zealand	NZL	1.65	1.02	0.0	13.5	14.9	40.9	5	6.4	0.0	0.2
116	Nicaragua	NIC	-0.52	-0.38	0.0	27.7	29.6	12.9	2	4.0	0.0	-1.0
117	Niger	NER	-1.56	-1.66	22.5	39.4	35.2	17.6	5	4.1	0.0	0.1
118	Nigeria	NGA	-0.90	-1.26	22.5	34.7	33.0	9.1	3	6.1	0.0	0.3
119	North Korea	PRK	-1.28	-1.17	0.0	13.5	11.1	40.3	6	2.0	7.3	-1.2
120	Norway	NOR	1.89	1.88	0.0	2.8	5.2	60.5	5	9.0	0.0	-0.5
121	Oman	OMN	0.81	0.22	10.0	31.4	30.4	21.5	3	8.9	0.0	0.7
122	Pakistan	PAK	-0.84	-0.94	9.9	32.1	27.2	30.4	10	3.2	0.0	-0.1
123	Panama	PAN	0.48	0.30	0.0	26.5	29.7	8.5	3	2.9	0.0	0.1
124	Papua New Guinea	PNG	-0.97	-0.78	22.5	27.7	30.4	6.3	6	6.7	0.0	-0.2
125	Paraguay	PRY	-0.34	-0.11	0.0	31.7	29.5	23.4	2	4.6	0.0	-0.7
126	Peru	PER	0.07	0.07	0.0	30.2	25.8	9.2	15	6.3	0.0	-0.1
127	Philippines	PHL	-0.20	-0.01	6.8	27.1	30.0	12.9	3	4.1	0.0	-0.3
128	Poland	POL	0.93	1.15	0.0	10.7	12.1	51.9	2	5.2	4.5	-0.0
129	Portugal	PRT	1.11	1.06	0.0	17.7	19.9	39.4	3	4.1	0.0	0.1
130	Qatar	QAT	1.47	0.45	10.0	30.8	33.0	25.4	0	9.6	0.0	1.1
131	Rep. of the Congo	COG	-0.73	-0.63	22.5	29.7	29.4	0.2	4	7.1	2.2	0.4
132	Romania	ROU	0.49	0.88	0.0	14.0	14.1	45.9	4	5.0	4.2	-0.2
133	Russia	RUS	0.24	0.90	1.2	5.3	-0.0	61.5	3	7.5	7.4	-0.7
134	Rwanda	RWA	-1.16	-1.20	15.0	27.9	24.0	1.9	17	3.7	0.0	-0.1
135	Samoa	WSM	0.07	0.09	15.0	21.0	29.6	13.8	4	2.7	0.0	0.3
136	Saudi Arabia	SAU	0.78	0.40	10.0	34.9	31.3	23.9	6	9.1	0.0	0.9
137	Senegal	SEN	-0.88	-1.34	15.0	38.4	35.0	14.5	1	4.1	0.0	0.1
138	Serbia	SRB	0.12	0.79	0.4	15.3	15.2	44.0	4	4.7	4.8	-0.4
139	Seychelles	SYC	0.60	0.16	0.0	18.4	29.7	4.7	0	2.8	0.0	-0.4
140	Sierra Leone	SLE	-1.35	-1.69	22.5	31.4	31.3	8.5	2	4.4	0.0	-0.3
141	Singapore	SGP	1.80	1.01	1.5	27.9	30.8	1.4	0	-1.5	0.0	2.0

Table II: Summary and Model Inputs (5 of 5)

	State	Code	μ_z	HDI _z	$g_{\%}$	PET °C	T °C	ϕ deg	$h_{100\text{ m}}$	NRR log	CommRule decades	δ
142	Slovakia	SVK	0.96	1.32	0.0	12.4	11.6	48.7	5	4.0	4.8	0.4
143	Slovenia	SVN	1.17	1.53	0.0	12.9	13.7	46.2	6	4.1	4.8	0.6
144	Solomon Islands	SLB	-1.07	-0.90	22.5	25.1	29.7	9.6	2	5.8	0.0	-0.5
145	Somalia	SOM	-2.01	-1.51	15.0	36.1	33.0	5.2	3	3.7	2.1	-0.7
146	South Africa	ZAF	0.27	-0.66	10.0	27.4	25.0	30.6	10	6.1	0.0	0.5
147	South Korea	KOR	1.16	1.10	0.0	16.8	16.4	35.9	3	2.0	0.0	0.3
148	South Sudan	SSD	-1.51	-1.31	22.5	36.9	33.9	6.9	5	6.2	0.0	-0.2
149	Spain	ESP	1.22	1.23	0.0	17.5	18.7	40.5	7	3.0	0.0	0.4
150	Sri Lanka	LKA	0.05	0.65	7.0	26.8	30.6	7.9	2	1.4	0.0	0.2
151	Sudan	SDN	-1.24	-1.20	15.0	39.9	34.9	12.9	5	5.2	0.0	-0.1
152	Suriname	SUR	0.25	-0.04	9.6	29.2	30.2	3.9	2	7.4	0.0	0.1
153	Swaziland	SWZ	-0.62	-1.07	10.0	26.2	27.3	26.5	6	4.6	0.0	-0.5
154	Sweden	SWE	1.71	1.62	0.0	5.7	6.6	60.1	3	6.0	0.0	-0.2
155	Switzerland	CHE	1.82	1.70	0.0	9.4	9.3	46.8	13	2.4	0.0	0.8
156	Syria	SYR	-1.01	-0.45	10.0	27.3	24.8	34.8	5	6.1	0.0	-1.0
157	Tajikistan	TJK	-1.01	-0.19	10.0	10.0	7.8	38.9	29	2.4	7.4	0.3
158	Tanzania	TZA	-0.88	-0.93	15.0	29.7	28.0	6.4	10	4.0	0.0	-0.0
159	Thailand	THA	0.19	0.14	6.9	30.7	31.6	15.9	3	4.8	0.0	0.3
160	Timor Leste	TLS	-0.60	-0.75	6.7	26.0	30.3	8.9	5	1.0	0.0	-0.3
161	Togo	TGO	-1.34	-1.25	22.5	33.7	32.7	8.6	3	4.6	0.0	-0.1
162	Trinidad & Tobago	TTO	0.64	0.57	0.0	27.6	29.9	10.7	1	8.0	0.0	-0.3
163	Tunisia	TUN	0.09	0.07	10.0	25.6	25.0	33.9	3	5.5	0.0	-0.0
164	Turkey	TUR	0.37	0.50	10.0	17.4	16.9	39.0	11	4.0	0.0	0.2
165	Turkmenistan	TKM	-0.41	0.27	9.8	23.3	21.4	39.0	2	7.5	7.4	0.2
166	United Arab Emirates	ARE	1.18	0.39	10.0	33.8	33.0	23.4	1	9.1	0.0	1.1
167	Uganda	UGA	-1.16	-1.16	15.0	31.7	29.1	1.4	11	4.5	0.0	-0.2
168	Ukraine	UKR	-0.15	0.76	0.0	11.7	12.8	48.4	2	5.4	7.2	-0.7
169	United Kingdom	GBR	1.54	1.53	0.0	7.9	12.0	55.4	2	5.9	0.0	-0.3
170	United States	USA	1.60	1.15	0.0	16.6	15.1	37.1	7	6.3	0.0	0.4
171	Uruguay	URY	0.81	0.70	0.0	23.9	22.7	32.5	1	5.2	0.0	-0.1
172	Uzbekistan	UZB	-0.71	0.10	9.9	20.4	18.3	41.4	3	5.8	7.4	-0.1
173	Venezuela	VEN	-0.10	0.34	0.0	31.3	30.4	6.4	3	7.5	0.0	-0.7
174	Vietnam	VNM	-0.41	-0.00	6.7	24.7	28.5	14.1	4	4.8	4.3	-0.0
175	Yemen	YEM	-1.09	-1.21	10.0	30.6	29.1	15.6	9	5.6	2.2	-0.4
176	Zambia	ZMB	-0.58	-0.91	15.0	31.6	28.5	13.1	11	5.6	0.0	0.3
177	Zimbabwe	ZWE	-1.41	-0.98	15.0	30.8	28.1	19.0	10	4.7	0.0	-0.6